SAN DIEGO STATE COLLEGE

BULLETIN

Circular of Information

ANNOUNCEMENT OF COURSES

FOR THE YEAR 1947-1948
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## CALENDAR 1947-48

### SUMMER SESSION, 1947
- Term I, June 28-August 1
- Term II-A, August 4-22
- Term II, August 4-September 5

### FALL SEMESTER, 1947-48
- **August 1** Applications for admission must be filed on or before this date.
- **August 27-28** Qualifying examinations for all entering freshmen.
- **September 11** First day of Orientation Program. All entering freshmen must appear on the campus at 8:30 a.m. and remain until 3 P.M. All other new students are urged to attend the Orientation Program.
- **September 12** Second day of Orientation Program. All entering freshmen must appear on campus at 8:30 a.m. and remain until 3 P.M.
- **September 12** 8:30 a.m.-12 m. Fundamentals tests.
- **1:00-2:30 p.m.** College aptitude test for students entering with advanced standing.
- **September 15-16** Registration and payment of fees.
- **September 17** Instruction begins. Late registration fee becomes effective.
- **September 29** Last date for late registration.
- **November 27-29** Thanksgiving recess.
- **December 13** Last day for filing application for graduation.
- **December 19** Last day before Christmas recess begins.
- **January 5** Classwork resumes.
- **January 21-27** Semester examinations.

### SPRING SEMESTER, 1947-48
- **January 5** Applications for admission must be filed on or before this date.
- **February 3** First day of the Orientation Program. All entering freshmen must appear on campus at 8:30 a.m. and remain until 3 P.M. All other new students are urged to attend the Orientation Program.
- **February 3** 8:30 a.m.-12 m. Fundamentals tests.
- **1:00-2:30 p.m.** College aptitude test for students entering with advanced standing.
- **February 4** Second day of the Orientation Program. All entering freshmen must appear on campus at 8:30 a.m. and remain until 3 P.M.
- **February 4-5** Registration and payment of fees.
- **February 6** Instruction begins. Late registration fee becomes effective.
- **February 16** Last date for late registration.
- **March 22-27** Spring recess.
- **May 1** Last day for filing application for graduation.
- **May 31** Observed holiday—Memorial Day.
- **June 3-10** Semester examinations.
- **June 11** Commencement.

### SUMMER SESSION, 1948
- Term I, June 21-July 30
- Term II-A, August 20
- Term II, August 2-September 3
FUNCTIONS OF THE STATE COLLEGES OF CALIFORNIA

The state colleges have three major functions, namely: (1) To help the individual student to develop a well-rounded and adjusted personality; (2) to promote civic intelligence and competence; and (3) to create supplies of trained men and women, some to serve as teachers in the elementary and secondary schools, some to fill intermediate places of leadership, and some to transfer to graduate institutions to equip themselves to extend the frontiers of knowledge and to occupy the higher positions of leadership. In terms of publicly supported higher education, the State colleges and the university together make provision for the realization of all the essential objectives of higher education in our State.

To achieve their unique purposes the state colleges have developed and are improving offerings as follows:

1. Teacher education curricula for those students who plan to teach in the elementary school, the junior high school, and in secondary schools.
2. Preprofessional curricula.
3. Curricula of varying lengths in such fields as business, industry, governmental services, homemaking, and social service.
4. General education for students who take work which leads toward the baccalaureate degree in the higher professions through graduate work.
5. Guidance services to assist the individual student to plan his educational program and to make his college and life adjustments.
6. Extension courses in appropriate fields.

The state colleges accept the principle that higher education should be available to all capable high school graduates. The preservation and improvement of democracy depends upon the growth of all potential citizenship and leadership resources. In keeping with this principle the state colleges maintain flexible entrance requirements. Each applicant is treated individually in terms of his potential capacity and his potential contribution and not in terms of past academic pattern or accomplishment alone.

The state colleges purposely maintain not only flexible entrance requirements, but also, advisory curricula, and adequate and effective guidance and counseling services to promote the personal and educational development of worthy students. The state colleges modify traditional academic restrictions and provide new curricula and services whenever such modifications and additions seem to serve the legitimate desirable needs of individuals and society.

The promotion of civic intelligence and competence is the underlying aim of all activities on state college campuses. Special emphasis centers on warm personal relationships between instructors and students, on friendly counsel in time of need, and on the day-to-day routine of living in a friendly atmosphere. Because the majority of state college students live at home, it is possible to link together the college, the home, and the community in realistic democratic relationships.

The democratic controls exercised over the state colleges make them readily and effectively responsive to individual and community needs and encourage them continuously to make significant improvements in both curriculum and personal services. The state colleges are thus laboratories in which the facts and theories developed in research, in community living, and in daily association with students are reflected in the instructional program.

The state colleges plan their program of higher education so as to provide educational services inherent in the principle of equality of opportunity.

THE COLLEGE

LOCATION AND ENVIRONMENT

Renowned as a winter resort with a mild but invigorating climate, San Diego has become equally famous for its cool summers. High cultural standards in art, music, literature, and science create a stimulating environment for a college. Many of these advantages are to be found in the heritage resulting from the expositions of 1915-16 and 1933-34, including the buildings themselves, which portray the best types of Spanish colonial art and architecture. Housed in these buildings are the Fine Arts Gallery, exhibits in anthropology, natural history, and American archaeology, which are in many respects unsurpassed. The outdoor organ, the Ford Bowl, and the horticultural gardens make Balboa Park, in which all these facilities are located, world renowned. The Scripps Institute of Oceanography, operated by the University of California at La Jolla, gives opportunity for important cooperation in the biological sciences.

BUILDINGS AND EQUIPMENT

On February 1, 1853, the college was moved to the new campus, located one mile north of the city's principal east-west boulevard, El Cajon Boulevard. The buildings are of Spanish-Moorish architecture which is well suited to the landscape and climate of this region. They include the Academic Building (which houses lecture halls, classrooms, and administrative offices); the Science Building, the Library; the Little Theater; the Music Building; the Campus Elementary School; Scripps Cottage (a social club house for women students); the Cafeteria and Book Store; and the Physical Education Building (a structure with adequate facilities for both men and women). The gymnasium contains a very fine basketball floor with stands that will accommodate 5,500 spectators. A fine concrete stadium, constructed in a natural site, has a seating capacity that is adequate for present needs. The open-air theater, seating 4,200 persons, serves as a meeting place for large groups.

FACILITIES FOR THE EDUCATION OF TEACHERS

The college maintains a modern elementary school on the campus where it has developed an extensive program for the education of elementary school teachers. The classroom-laboratory plan which calls for the use of work-rooms, the library, and shops, affords unusual opportunities for the induction of students into teaching. By arrangement with the San Diego city schools, directed teaching is provided in the elementary and secondary schools.

THE FACULTY

The professional education of the faculty places the college in the 97 percentile position among teacher education institutions of the Country. For listing and further details see the directory on page 125.

THE LIBRARY

The library facilities of this college are noteworthy for an institution of its size. The Library consists of over 100,000 volumes selected to meet the requirements of a modern educational institution. Professional trained librarians are available to render assistance to students in their reading and reference work.

The library service has been further augmented by the loan of a librarian and three special libraries, namely, a collection of 3,000 volumes on anthropology and ethnology from the San Diego Museum of Man, the U. S. Grant Memorial Library of 1,375 volumes, and the 25,000 volume Scientific Library of the San Diego Society of Natural History.

The Campus Elementary School Library, representing a collection of 11,000 volumes, possesses equipment and building facilities that are unique.
LIVING ACCOMMODATIONS

Living arrangements for students whose homes are not in San Diego or within commuting distance are made through the offices of the Dean of Women or the Dean of Men. Women students are urged to live in the residence hall adjoining the campus. Careful consideration is given to study conditions, healthful living, and adequate social opportunities. Room and board may be secured for approximately $275 per semester, payable in four installments. Opportunities to reduce this figure by working a few hours each week are occasionally available. Reservations should be made in advance through the Manager of Quetzal Hall, 5192 College Avenue, San Diego 5, California. Where students find other accommodations more desirable, written permission from parents must be secured and filed with the Dean of Women or Dean of Men.

VETERANS' EDUCATION AND HOUSING

The college has been approved by various accrediting agencies to offer courses for veterans leading toward the A.B. Degree in some 19 major fields and to the General Secondary Credential upon the completion of a graduate year. A veterans' office is maintained on the campus to facilitate registration, aid in the establishment of benefits, assist in securing counseling services, and serve as an information center. A joint student-faculty committee on veterans' affairs serves as a clearing house for suggestions relating to policies and procedures affecting veterans.

Through the City of San Diego, 400 family units formerly under the jurisdiction of the Federal Public Housing Authority have been made available to the college for the housing of its married veterans. These units are located some eight miles from the campus proper at Astor Terrace, midway between Old Town and Lomas Portal. Applications for housing at Astor Terrace are made through the office of the Dean of Men.

STUDENT LIFE

A rich field of extra-curricular activities is available to the student throughout his college life. The student is urged to select these activities carefully in order that he may profit by these extracurricular experiences without lowering his standards of scholarship. The Student Handbook, available at the time of registration, gives information concerning activities which include organizations in every department of the college, and opportunities for individual and group experience in the social, athletic, fraternal, religious and governmental life of the campus.

STUDENT HEALTH SERVICE

The Health Department is maintained for the protection and care of student health. A complete physical examination is required of each student upon admission to college. Careful attention is given to cases undergoing remedial treatment or to cases in which a modification of study load or in the amount of participation in physical activities seems advisable.

A college physician and school nurse are available for consultation and emergency treatment. Students who have been absent because of illness should receive clearance from the Health Office before returning to classes.

A group plan for accident insurance is in operation for students who desire to participate.

PLACEMENT SERVICE

A Placement Office is maintained by the college, which serves as a clearing house for part-time and full-time jobs. Employers notify this office of available openings in their organizations, and also turn to the office for information concerning graduates or nongraduates whom they are considering for employment.

Included in the service of the office are the listing of part-time jobs of all types available, including opportunities to work for board and room, teacher placement, and full-time jobs in commerce and industry.

This service is free to students, who are invited to arrange for interviews with members of the placement staff if in need of assistance in finding work. Students who know of jobs in which they are not themselves interested are encouraged to notify the office of such vacancies.

The Placement Secretary should be seen or called regarding vacancies or work applications.

VOCA TIONAL REHABILITATION SERVICE

The Bureau of Vocational Rehabilitation, California State Department of Education, offers its service to students who have an employment handicap resulting from physical disability of any kind. Included are vocational counseling, the payment of tuition and fees, and the providing of textbooks without charge to the trainee. Details of the service may be obtained from the Registrar's Office.

LOANS AND SCHOLARSHIPS

A limited number of scholarships for both men and women have been made available through the efforts of the alumni, civic organizations, business and professional groups, and other friends of the college. Superiority in achievement and worthiness from the point of view of need are the standards upon which selection is based. Scholarship aid is therefore limited for the most part to students who have completed at least one semester at the San Diego State College. Except for athletic scholarships, which are initiated through the Director of Athletics, scholarship applications are made through the office of the Dean of Women. The faculty committee on Loans and Scholarships passes upon all applications.

Both long- and short-term loans are available to students who have attended the San Diego State College for at least one semester and who have demonstrated ability to do satisfactory college work. Applications for loans are made to the Committee on Loans and Scholarships through the offices of the Dean of Men or Dean of Women.
ADMISSION AND REGISTRATION

GENERAL ADMISSION REQUIREMENTS

High school graduates and other applicants possessing equivalent preparation may be admitted to this college upon evidence of fitness to profit by college instruction, such evidence to be shown by previous scholastic records, by evidence of good moral character and personal qualifications, and by satisfactory scores on tests which the college may require. Due to crowded conditions the college probably will have to refuse all qualified applicants who do not file application blanks and official transcripts prior to the dates indicated in the calendar on page 5.

ADMISSION OF HIGH SCHOOL GRADUATES

1. A high school transcript must be presented showing satisfactory scholarship, and (2) applicants must demonstrate readiness for college instruction by making satisfactory scores on such tests as the college may designate.

Regular status will be granted if the student has earned A or B grades in not less than 16 semester courses in English, social sciences, foreign languages, mathematics, natural sciences, and related fields, during the tenth, eleventh, and twelfth grades.

Regular-provisional status will be granted if the student has earned A or B grades in not less than 12 semester courses in the above subjects. The student will attain full regular status at the first semester in college if a scholarship average of C or better is maintained in at least 12 units of work. Failure to secure a .75 average will disqualify the student for further attendance.

Provisional status will be granted students who do not qualify for regular-provisional status if they have earned A or B grades in at least 12 semester courses of any type during the tenth, eleventh, and twelfth grades. These students will be enrolled in two-year curricula. Individuals who fall slightly below the above standard may be admitted to the two-year curricula if qualifying examination scores indicate probable success in these courses.

Special status may be granted an applicant who is over 21 years of age or is a war veteran provided he demonstrates through qualifying examinations satisfactory ability to do college work. Such students may be transferred to regular status after completion of one year of satisfactory work and receive full credit for all work completed.

ADMISSION BY EXAMINATION

Certificates of successful examination before the College Entrance Examination Board will be accepted when candidates cannot meet the above scholarship requirements.

ADMISSION OF NON-HIGH SCHOOL GRADUATES

A high school diploma is not required for admission as an adult special student but if a non-high school graduate is so admitted he may be required to complete, in addition to the usual requirements for the A.B. Degree, three semester units of college work for each two semester courses which he lacks for high school graduation.

ADMISSION OF VETERANS

Applicants who are veterans may be enrolled in any of the above classifications. Lack of a high school diploma will not prevent admission of a veteran provided he can pass the examinations at the college or of the United States Armed Forces Institute that he is capable of doing satisfactory college work. The college cooperates with the local high schools by helping plan study for a veteran which can lead to the issuance of a diploma by the high school.

SPECIAL STUDENTS

Persons over 21 years of age may be admitted on the basis of maturity, provided they present satisfactory evidence of good moral character and intelligence. Full matriculation will be granted only upon removal of all entrance deficiencies, and the completion of a full semester of satisfactory college work.

AUDITORS

Properly qualified persons may apply for admission to attend classes as auditors. Such students pay the same fees as those who take equivalent work for credit.

ADMISSION WITH ADVANCED STANDING

Credit earned in recognized institutions of collegiate grade will be evaluated and advanced standing allowed accordingly toward the graduation requirements of this institution. Applicants must show an average grade of C or better for all college work, for the last college attended, and for the last semester of attendance in order to qualify for advanced standing. A student who enters with advanced standing is one who has completed at least 15 units of passing work in another collegiate institution. However, no applicant may disregard his collegiate record and apply for admission only on the basis of his high school work. Not more than 90 semester hours of junior college work may be allowed for credit.

Students seeking admission with advanced standing must furnish complete transcripts for all work attempted beyond the eighth grade. A $2 evaluation deposit must accompany the application for admission provided the student has completed 50 units or more work. This deposit will be refunded if the student enrolls at the next regular registration period.

ADMISSION TO GRADUATE STATUS

 Persons seeking admission to graduate status should write the Registrar for details. General requirements include a bachelor’s degree from an accredited institution and maintenance of a grade point average of 3.00 during the period of graduate work for continuing enrollment.

EXTENDED DAY PROGRAM

In order to meet the needs of adults in the community for certain types of college work, this institution offers late afternoon and evening classes under an extended day program. Most of the courses are on the upper division and graduate levels and all carry full college credit. Among the fields in which work is offered are: Education, commerce, social work, and engineering. Courses may be set up to meet the need of a particular group who desire special instruction. Requests for such courses should be made directly to the Dean of General Education. A bulletin describing the current offerings is issued each semester from the above office.

TESTS REQUIRED AT REGISTRATION TIME AND LATER

1. A physical examination is required of all students to complete their registration upon entering the college. Appointments for this examination are made during registration.

2. All entering students are required to take a college aptitude test. Exceptions may be made for graduate students and for those who register for five units or less.

3. All college transfer students who present less than a minimum of 15 units of college credit must take a high school achievement examination, and a standard English examination in addition to the college aptitude test. Students whose tests indicate that they are not qualified for the regular English 1B must take English 1A. Exceptions may be made for students transferring English credit from other colleges.

4. Passing the fundamentals test in reading, spelling, arithmetic and handwriting, and a speech test, are prerequisites for admission to upper division courses in teacher education curricula. These tests should be taken at the beginning of the second semester of the freshman year, in order that deficiencies, if any, may be made up before applying for admission to the upper division of teacher education curricula. Exceptions may be made for graduates of California state teacher education institutions who have been teachers in service.

5. A satisfactory score on a general culture test is required for admission to candidacy for the General Secondary Credential. This test should be taken at the time of application for admission to this program of teacher education.

LATE REGISTRATION

Students who register after the scheduled registration days are subject to a late registration fee of $1. Students may be accepted for late registration with the approval of the Dean of Student Affairs, and two weeks after scheduled registration days. Late registration applications will be closed after that date. Students failing to complete all registration requirements within the period allowed, as announced in registration instructions, are subject to cancellation of registration.

CHANGES IN REGISTRATION

Petitions for changes in program may be secured at the Registrar’s office. A fee is charged for changes in program after registration books are filed.
FEES AND EXPENSES

PROBABLE EXPENSES FOR ONE SEMESTER

An estimate of the expense of attendance for one semester is given below. No
estimate is made as to the cost of clothing, or other personal items, since these figures
vary with the demands of the individual. Laboratory fees are additional.

A Partial Estimate of Expenses

One Semester

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<tr>
<th>Item</th>
<th>Minimum</th>
<th>Maximum</th>
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<tr>
<td>Fees and deposits</td>
<td>$25.50</td>
<td>$90.00</td>
</tr>
<tr>
<td>Books</td>
<td>18.00</td>
<td>50.00</td>
</tr>
<tr>
<td>Board and room</td>
<td>275.00</td>
<td></td>
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<tr>
<td>Transportation, lunches, incidentals</td>
<td>20.00</td>
<td>60.00</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>5.00</td>
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Before enrolling in college, the student should possess sufficient resources to meet
the minimum expenses for one semester. A limited amount of clerical work in offices
and in the library may be offered from time to time, but ordinarily it is not sufficiently
remunerative to reduce expenses materially.

LIST OF FEES AND DEPOSITS (SUBJECT TO REVISION)

Enrollment Fees and Deposits
(Payable at time of registration)

By all students:

Tuition (auditors pay same fees as other students):  $6.50
Regular students (carrying over 5 units) : 2.50
Limited students (carrying 5 units or less) per unit:

Materials and service:

Regular students: 4.00
Limited students per unit: 5.00

General service deposit (unexpended portion is refunded): 3.00
Personal examination (new students only): 2.00
(Limited students and graduate students exempted)

Student activity fees (not required by the State):

Regular students: 10.00
Limited students: 3.50
Associated Students Group Accident Insurance: 2.50

Miscellaneous Fees and Deposits
(Fees payable when service is rendered)

Change of program:  $0.50
College Bulletin: 35
Duplicate library card: 25
Duplicate registration book: 50
Evaluation of transfer records for advanced standing: 2.00
Fundamentals test: 50
Late filing of registration book: 1.00
Late registration: 1.00
Transcript of record (1st copy free): 1.00
Chemistry (Deposits payable before laboratory work is started): 5.00

Graduation Fees

State teaching credentials (each credential):  $3.00
Diploma: 1.00

The credential fee is collected through the college by the cashier’s check or post office
money order made payable to the State Department of Education.

GENERAL REGULATIONS

INFORMATION

All inquiries relative to the college should be directed to the Registrar’s Office.

CLASSIFICATION

Full-time students are those who are registered in more than five units of work.
They are expected to carry a minimum of 12 units unless excused.

Limited students are those who, for acceptable reasons, have been permitted to
register for five or fewer units of work.

Class: Students who have completed 0 to 29 units of work are classified as
freshmen; 30 to 69 units as sophomores; 70 to 89 units as juniors; and 90 or more
as seniors.

SCHOLARSHIP, GRADES, AND GRADE POINTS

The following grades are used in reporting the standing of students at the end of
each semester: A, excellent; B, good; C, fair; D, passed; F, conditioned; F, failed;
I, incomplete; Cr, credit; and W, withdrawn.

The grade F is recorded for work which is of low order but which may be made
passable. If the work is raised to passing level by the close of the next semester, the
grade is changed to D; otherwise it is changed automatically to F.

The grade I is recorded for work of high order but which is incomplete for an
acceptable reason. To change an I to another grade, the work must be completed
within the next semester of residence; otherwise it is changed to F.

Grade points are assigned as follows: Grade A, 3 points per unit; B, 2 points
per unit; C, 1 point per unit; D, no points; E, minus 1 point per unit; F, minus 1
point per unit. The number of grade points a student has earned in a subject is
determined by multiplying the number of points he has received by the number of
units allowed. The grade point average is determined by dividing the grade points
earned by the number of units attempted. Courses in which the student received an
I or Cr. or W are disregarded in computing grade point averages. A student must
earn at least a C average in all work undertaken at the college to qualify for a
degree or a transcript of record with recommendation to another collegiate insti-
tution. Any course may be repeated, but not for additional credit; however, only the
second grade earned is considered in the student's average.

UNITS OF WORK, AND STUDY LISTS LIMITS

A unit of credit represents one hour of lecture or recitation combined with two
hours of preparation per week through one semester, or three hours of laboratory or
field work in the case of laboratory credit.

Students are not ordinarily permitted to enroll for more than 16 units* for credit
toward graduation. This constitutes a normal semester's program.

Certain exceptions to this rule exist. If during the preceding semester the student
has carried at least 12 units*: (1) If a grade point average of at least 1.5
was earned, 17 units* may be carried for credit toward graduation; and (2) If a grade
point average of 2.0 (B) was earned, 18 units* may be carried.

Exceptions to the above regulations may be secured only through a petition to the
Scholarship Committee.

No student may register for less than 12 units without the approval of the Dean
of General Education or the Dean of Professional Education.

PROBATION AND DISQUALIFICATION

Prohibition

Any student whose scholarship record shows a cumulative deficit of 12 or
more grade points below a C average for all work undertaken in the college will be
placed on probation. A limited student will be placed on probation if his cumulative
deficit below a C average equals or exceeds the average number of units carried per
semester. Probationary status may be continued provided that the student does not
add further toward his grade point deficiency.

* In addition to the required one-half unit physical education activity courses.
GENERAL REGULATIONS

THE DEGREE WITH HONORS AND WITH DISTINCTION

Upon recommendation of the Committee on Honors, graduation with honors shall be granted to the upper 10 percent of the graduating class. Each department shall determine which students it will recommend for distinction in the major field at graduation, and report its recommendation to the Committee on Honors for transmission to the faculty.

EXAMINATIONS

No final examinations shall be given to individual students before the regular time. Any student who finds it impossible to take a final examination on the date scheduled must make arrangements with the instructor to have an incomplete grade reported and must take the deferred final examination not later than the end of the first semester following that in which the incomplete was given. No exception shall be made to this rule without the approval of an academic dean and the instructor concerned.

CREDIT FOR EXTENSION COURSES

The amount of credit for extension and correspondence courses acceptable in fulfillment of the requirements for the Bachelor of Arts Degree will depend upon the nature of the courses, the quality of the work done, and the student’s preparation for work in the field of the course. The college reserves the right to limit credit to such courses as have been approved, and the total of such acceptable credit to 12 units.
THE BACHELOR OF ARTS DEGREE

GENERAL REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE IN TEACHER EDUCATION AND IN LIBERAL ARTS

San Diego State College offers the following types of curricula leading to the A.B. Degree:

1. The curricula leading to the California teaching credentials,
2. The liberal arts curricula.

With slight variations in definition, many of the basic requirements are the same.

A minimum of 120 units of college work, representing a four-year course, is required for the Bachelor of Arts Degree. At least 30 units must be earned in this college, and not less than 24 of these residence units must ordinarily be taken with the rank of senior. Not fewer than 12 units of this work must be completed during a single semester; or in lieu of this at least 16 units must be completed in not less than two consecutive summer sessions. At least a C average in scholarship must be maintained in the major, in all work applied toward the degree, and in all work taken at this college. At least 40 units must be completed in the upper division, 30 of which must be earned after all lower division requirements have been satisfied.

CREDIT GRANTED FOR MILITARY SERVICE

Six units of lower division elective credit will be granted to students who have served in the armed forces of this country upon the completion of the prescribed basic training program. Documentary evidence bearing the signature of the proper commanding officer must be filed before credit will be accorded to the student.

Additional units of credit will be granted to students who can document the fact that they have completed officer's or other specialized training, and have been assigned to active military duty.

SUBJECT MATTER REQUIREMENTS IN THE LOWER DIVISION

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
</tr>
<tr>
<td>Health Education 21</td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Psychology</td>
</tr>
<tr>
<td>Foreign Language (not required in commerce, general engineering, or in teacher education in the elementary, junior high and and special secondary curricula)</td>
</tr>
<tr>
<td>Mathematics A and B, 6 units, or high school algebra and geometry</td>
</tr>
<tr>
<td>Social Sciences</td>
</tr>
<tr>
<td>Natural Sciences</td>
</tr>
<tr>
<td>Electives to make total of 60 units, including lower division preparation for the major and minor.</td>
</tr>
</tbody>
</table>

Explanation of Lower Division Requirements

English

This requirement may be satisfied in either the freshman year or the sophomore year. Unless departmental regulations specify other courses, the student should satisfy this requirement by taking English 1A or 1B, and English 1C.

Psychology

Psychology 1 may be completed at any time in the lower division.

Foreign Languages

At least 10 units in one foreign language are required in the lower division except that no language is required in commerce, general engineering, or in teacher education given for only the beginning college semester of a foreign language (except Spanish 70).
also enables the graduate to satisfy undergraduate requirements for the general secondary credential which, with graduate work, will enable the holder to teach in a secondary high school or junior college.

Subject Matter Requirements in the Upper Division

<table>
<thead>
<tr>
<th>Unit</th>
<th>Minor (minimum in upper division courses)</th>
<th>Major (upper division courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9</td>
<td>24</td>
</tr>
</tbody>
</table>

At least 40 units in upper division courses must be completed, 20 of which must be earned after all lower division requirements have been satisfied. If a student is approaching upper division standing, he may carry sufficient upper division units to complete the required minimum of 00 and carry upper division units for the remainder of his study load. Upper division credit will be allowed for such courses.

Explanation of Requirements

Examination Requirements in the United States Constitution and American History, Institutions, and Ideals

Each student of a state college to qualify for graduation shall demonstrate competence in the United States Constitution and American history, institutions and ideals, by passing satisfactorily a comprehensive examination on these fields prepared and administered by the college. Students transferring from other institutions of collegiate grade who have already met this requirement may have this examination waived.

This examination ordinarily should be taken during the junior year. The following courses are recommended to assist in the preparation for the examination: History 11A-11B, Political Science 101 or its substitute courses, and an upper or lower division course in American literature.

Minor

Minors must be established in one of the following fields: anthropology, art, botany, chemistry, commerce, economics, education, English, a foreign language, geography, geology, health education, history, journalism, mathematics, music, philosophy, art, and zoology.

A minor consists of at least 15 units of work completed in one of the above fields. The entire requirement for a minor may be met with upper division courses. The courses have no lower division prerequisites. Prerequisites for each course are listed among the course descriptions on pages 90 to 151.

Minor in Education

A student who desires a minor in education must complete at least 16 units of professional education course work. This minor must include Education 102A-102B, 115A-115B and 121 units of education courses. Consultation with the Dean of Professional Education is recommended.

Majors

The specific requirements for each major are listed at the beginning of each departmental division among the description of courses. The student is advised to choose his major as early as possible. The student must be able to plan his work according to the major requirements.

A combination of the elementary school credential and the junior high school credential may be secured by completing the requirements for the elementary school credential and the following additional requirements:

(a) A teaching major
(b) Education 100B
(c) Three units of directed teaching, or equivalent, in a junior high school
(d) Education 115B
(e) A minimum total of 132 units

A candidate for either the general elementary credential or the kindergarten-primary credential may secure the other credential subsequently or concurrently by taking 12 additional units. Four of these units shall be in directed teaching (Education 116) at the new level and the remainder as prescribed by the Director of Elementary Education.

BACHELOR OF ARTS DEGREE

San Diego State College is authorized by the State of California to recommend students for the teaching credentials listed below. To be recommended, students must complete, or have completed, the A.B. Degree in one of the curricula offered for teachers.

The credentials

Subjects and grades for which it is valid

General Elementary

| Grade | All grades through the eighth. |

Kindergarten-Primary

| Grade | Kindergarten through third. |

General Junior High

| Grade | All subjects in grades seven, eight, and nine in all elementary or secondary schools. |

General Secondary

| Grade | All subjects in the public schools in grade 7 and above. |

Special Secondary in Art

| Grade | Art in all grades of the public schools. |

Special Secondary in Business Education

| Grade | Business education subjects in all grades of the public schools. |

Special Secondary in Music

| Grade | Music in all grades of the public schools. |

Special Secondary in Physical Education

| Grade | Physical education in all grades of the public schools. |

Supervision in Elementary Education

| Grade | Authorizes for certificate to administer and supervise elementary schools as superintendent, deputy superintendent, assistant superintendent, principal, supervisor, or curriculum coordinator in a county. |

Supervision in Business Education

| Grade | Authorizes for certificate to supervise or coordinate instruction in elementary schools in a county. |
Lower Division Requirements

Students in teacher education curricula shall complete the lower division requirements for the A.B. Degree as indicated on page 18. Additional pattern requirements are outlined under each specific curriculum on following pages.

High school work and examination equivalents will excuse a student from certain pattern requirements but will not give college degree credit in foreign language, science, social science, piano, and musicianship.

Upper Division Requirements

Minimum Units
A minimum of 40 units in upper division courses must be completed; 30 of these shall be earned after all lower division requirements have been met.

Credit Limitations
A maximum of 40 units of credit in any one subject matter field or in education courses may be applied toward the requirements of the A.B. Degree.

Examination Requirement in the United States Constitution and American History, Institutions, and Ideals
Each student of a State college to qualify for graduation shall demonstrate competence in the United States Constitution and American History, institutions and ideals, by passing satisfactorily a comprehensive examination in these fields prepared and administered by the college. Students transferring from other institutions of collegiate grade who have already met this requirement may have this examination waived, except for students who are to receive a teaching credential. These students must have demonstrated competence by having successfully completed a course in the United States Constitution in a California institution of collegiate grade or by having passed in California an authorized examination in this field. This examination ordinarily should be taken during the junior year. The following courses are recommended to assist in the preparation for the examination: History 1TA-1TB, Political Science 101B, its substitute courses, and an upper division course in American literature.

Preparation for Graduate Work
Students who take the A.B. Degree with a special credential and who contemplate doing graduate work for a master's degree in an academic field or for the general foundation for that work.

Majors and Minors
All teaching curricula require one major and one minor.

Major and Minor for the Elementary Credential
Education shall be the major for the kindergarten primary and general elementary school credentials. Its requirements are outlined under these curricula. It is recommended for these credentials that the chosen from the academic fields of English, foreign language, mathematics, science or social sciences. A second minor may be chosen from one of these fields or from art, music, physical education or speech arts. Students taking an elementary credential in combination elementary education.

Teaching Major for Junior High School and Special Secondary School Credentials
A teaching major for the Junior high school credential consists of a minimum of 24 units of which a minimum of 15 units must be in the upper division. An average major. Teaching majors may be established in the following fields: English, foreign language, geography, history, political science, sociology. A teaching major in the special and speech arts ranges from 24 to 40 units depending upon the curriculum. A Teaching Major in English shall include English 1B, 1C, and either 50A or 50B, in American Literature and 3 units in Shakespeare. Recommended: English 125.
Teaching Major for General Secondary Credential

Teaching majors may be established in the following fields: art, business education, economics, English, history, life science, music, physical education for men, physical education for women, physical science (chemistry or physics), and speech arts. In most fields, 6 semester units are required in the lower division and 24 semester units in the upper division. Some departments permit 6 units of their 24 upper division units to be selected from related fields with the approval of the departmental representative. In addition to these undergraduate requirements, 2 to 5 semester units of graduate work are required in the major field during the postgraduate year. Refer to pages 27 to 35 for the programs for each department. Credit for the General Secondary credential must have a program approved by the authorized departmental representative. Refer to page 27 for requirements for admission to candidacy for the General Secondary credential.

Teaching Minor for the General Secondary Credential

Teaching minors may be established in the following fields: art, business education, economics, English, French, health education, history, life science, mathematics, music, physical education for men, physical education for women, physical science, recreation, Spanish, and speech arts. In most fields, 6 semester units are required in the lower division and 9 semester units in the upper division for a total of 21 semester units to be completed by the date of recommendation for the credential. Refer to pages 27 to 35 for the programs for each department.

Admission to Teacher Education

Students who expect to become teachers should apply for admission to teacher education during the first semester of the sophomore year. Students entering the college at the end of the sophomore year will apply at the beginning of the junior year. No courses in education may be taken until admission is granted; any exception to this rule must have the approval of the Dean of Education. Admission to the college and teaching requires that the student will be admitted to teacher education. The following requirements must be met for admission to teacher education curriculum:

1. A satisfactory score in a college aptitude test taken at the college. (See college calendar for dates of test.)

2. Evidence of satisfactory ability in arithmetic, handwriting, reading and spelling as indicated by having passed the fundamentals test. (See college calendar for dates of test which should be taken in the freshman year.)

3. Assurance of correct speech habits and voice control by having satisfactorily completed a course in corrective speech or by having passed a speech test given by the college.

4. Assurance of physical fitness.

5. If the student is to be a candidate for the general secondary credential or one of the special secondary credentials, he must furnish a recommendation from the chairman of that department stating that the student has ability and shows promise of teaching success in his field and that the department looks favorably upon his application.

6. The completion of the first two years or more of a given curriculum, or its equivalent, and of subsequent work with a grade point average of 1.2 or better for all credentials except the general secondary, for which shall be a grade point average of 1.5 or better in all work and 1.75 in the major field.

7. If the student is a candidate for the General Secondary credential he must have a satisfactory score on a General Culture Test.

8. If the student is a candidate for the General Secondary credential he must have a tentative program approved by the authorized departmental representative of his major field, minor field, and the education department.

9. All applicants need to be approved by an interviewing committee of the college faculty. In its evaluation the committee will consider the following professional attitudes, personality and character, speech and language usage, and many-sided interests.
PROFESSIONAL AND PREPROFESSIONAL CURRICULUM

Professional and preprofessional courses, ranging in length from two years to five years of collegiate work, are offered. The following curricular outlines meet typical requirements for admission to professional schools of law, medicine, dentistry, nursing, pharmacy, optometry, social work, public service, agriculture, and engineering. The student should modify these suggested outlines of study whenever the requirements of the professional school of his choice make it seem advisable for him to do so.

The degree curricula in liberal arts may be modified to include the course outlines which follow. For a complete statement of the requirements for the junior certificate and the degree see page 16 and following pages.

CURRICULA LEADING TO TEACHING CREDENTIALS

All candidates in teacher education curricula should observe carefully the requirements for admission to teacher education and be prepared to meet them at the end of the sophomore year. Students in other colleges who contemplate transferring to San Diego State College should arrange their programs so as to meet the requirements of their particular curriculum as early as possible. See college calendar for dates when the fundamentals test will be given. See page 22 in this bulletin for requirements for admission to teacher education.

A.B. Degree with General Elementary or Kindergarten-Primary Credential

One teaching minor is required. See page 29 for statement.

Freshman Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Units for General</th>
<th>Units for Kdp.-Elem.</th>
<th>Units for Primary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 6A, Design</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Physical Science 1A, Introduction (if H. S. physics completed, substitute other science)</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>English 12 or 13</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Health Education 21</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Physical Education, Freshman Activities</td>
<td>1/2</td>
<td>1/2</td>
<td></td>
</tr>
<tr>
<td>Elective (advisable to start social science; see page 10 for requirement and also for natural science and minor)</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

Second Semester

<table>
<thead>
<tr>
<th>Second Semester</th>
<th>Units for General</th>
<th>Units for Kdp.-Elem.</th>
<th>Units for Primary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 8B, Design</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>English 1C</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Physical Science 1B (if H. S. chemistry completed, substitute other science)</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Psychology 1</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Elective (social science or minor)</td>
<td>3-5</td>
<td>3-5</td>
<td></td>
</tr>
</tbody>
</table>

Sophomore Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Units for General</th>
<th>Units for Kdp.-Elem.</th>
<th>Units for Primary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography 1, Elements (natural science credit)</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Music 1A, Musicianship—Fundamentals of Music</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Art 61A, Crafts in Elementary Schools</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Music 55A, Piano (or the equivalent by examination, but without credit. May be taken in junior year.)</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Physical Education, Sophomore Activities</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Biology 1, Survey of Biology (If no previous science laboratory, take Hist. 10A-10B or Botany 2A) (Not required if H. S. biology in junior or senior year.)</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Electives (for social science, natural science or minor)</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>(Preparation for examination in American history, institutions and ideals. History 17A-B and American Literature are recommended in freshman or sophomore year.)</td>
<td>6</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>

[24]
### SAN DIEGO STATE COLLEGE

**Summary**

<table>
<thead>
<tr>
<th>Units for General Education</th>
<th>Units for K-8 Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art 6A-6B, 61A</td>
<td>6</td>
</tr>
<tr>
<td>Educ. 102A, 102B, 115A, 116, 146, 147, 148</td>
<td>37</td>
</tr>
<tr>
<td>English</td>
<td>6</td>
</tr>
<tr>
<td>Speech Arts</td>
<td>3</td>
</tr>
<tr>
<td>Health Education 21, 151</td>
<td>4</td>
</tr>
<tr>
<td>Physical Education Activities and P.E. 53</td>
<td>4</td>
</tr>
<tr>
<td>Music 1A, 7A, 23A-B</td>
<td>6</td>
</tr>
<tr>
<td>Natural Sciences (including Geog. 1)</td>
<td>12</td>
</tr>
<tr>
<td>Psychology 1</td>
<td>3</td>
</tr>
<tr>
<td>Social Science (including Geog. 2)</td>
<td>12</td>
</tr>
<tr>
<td>Electives (including minor)</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
</tr>
</tbody>
</table>

**A.B. Degree With General Junior High School Credential**

Refer to page 20 for statements concerning teaching majors and minors. Students who expect to secure the General Secondary Credential should refer to pages 27 to 35, and use their elective units to work toward such programs outlined. Students who expect to secure the Master of Arts Degree should refer to page 17 and use their elective units to work toward a liberal arts major or minor. See statement on page 19 regarding combinations of this with other credentials.

### Freshman Year

#### First Semester

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology 1 (see p. 17)</td>
</tr>
<tr>
<td>English 1A or 1B</td>
</tr>
<tr>
<td>Geography 1, Elements (Natural Sciences)</td>
</tr>
<tr>
<td>Physical Education, Freshman Activities</td>
</tr>
<tr>
<td>Health Education, Health and Social Adjustment</td>
</tr>
<tr>
<td>Electives to meet Lower Division requirements</td>
</tr>
</tbody>
</table>

#### Second Semester

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Science 1A or 1B (see p. 17)</td>
</tr>
<tr>
<td>English 10</td>
</tr>
<tr>
<td>Geography 2, Regions (Social Science)</td>
</tr>
<tr>
<td>Physical Education, Freshman Activities</td>
</tr>
<tr>
<td>Electives to meet Lower Division requirements</td>
</tr>
</tbody>
</table>

### Sophomore Year

#### First Semester

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education, Sophomore Activities</td>
</tr>
<tr>
<td>Psychology 1, General</td>
</tr>
</tbody>
</table>

#### Second Semester

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education, Sophomore Activities</td>
</tr>
</tbody>
</table>

#### Either Semester

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Sciences (see p. 17)</td>
</tr>
<tr>
<td>Laboratory Science (see p. 17)</td>
</tr>
<tr>
<td>Electives to meet Lower Division requirements</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

---

### Junior Year

#### First Semester

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education 115B, Secondary Education</td>
</tr>
<tr>
<td>Education 102C, Growth and Development of the Adolescent</td>
</tr>
</tbody>
</table>

#### Second Semester

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education 102D, Measurement and Evaluation in Secondary Education</td>
</tr>
<tr>
<td>Education 115A, Educational Psychology</td>
</tr>
<tr>
<td>Education 100B, Methods in Major Subject</td>
</tr>
</tbody>
</table>

#### Either Semester

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Education 151, Health Education</td>
</tr>
<tr>
<td>Electives, including major and minor (for the year)</td>
</tr>
</tbody>
</table>

### Senior Year

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education 115A, History and Philosophy of Education</td>
</tr>
<tr>
<td>Education 116, Directed Teaching (3 units each semester)</td>
</tr>
<tr>
<td>Electives, including major and minor (for the year)</td>
</tr>
</tbody>
</table>

### Summary

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education 100B, 102C, 102D, 115A, 115B, 116, 130</td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Health Education 21, 151</td>
</tr>
<tr>
<td>Natural Sciences</td>
</tr>
<tr>
<td>Physical Education</td>
</tr>
<tr>
<td>Psychology 1</td>
</tr>
<tr>
<td>Social Sciences</td>
</tr>
<tr>
<td>Electives, including teaching major and minor</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

### Program for Recommendation for the General Secondary School Credential

A candidate for this credential must complete the requirements for the bachelor's degree from an accredited institution with a major and a minor commonly taught in the secondary schools of California. Admission to candidates for this credential should be sought during the second semester of the sophomore year or upon admission to San Diego State College with advanced or graduate status. Refer to page 22 for requirements for admission to teacher education programs. Students desiring a major in art, business education, music, physical education or speech arts should complete the requirements for the Special Secondary Credential in the respective area desired, then continue with the graduate program. Refer to pages 30 to 41 for further details regarding these majors. Students desiring one of the other areas as a major for which San Diego State College is authorized (refer to page 22 for a complete list of majors and minors authorized) should complete a program leading to the A.B. Degree at the end of four years and the General Secondary Credential upon completion of the graduate year requirements outlined on the following pages.

The candidate for this credential should consult with the Director of Secondary Education during his first semester of attendance at San Diego State College. As an undergraduate, the candidate should complete as many of the following professional education courses as possible:

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ed. 102C, Growth and Development of the Adolescent</td>
</tr>
<tr>
<td>Ed. 115B, Principles of Secondary Education</td>
</tr>
<tr>
<td>Ed. 102D, Measurement and Evaluation in Secondary Education</td>
</tr>
<tr>
<td>Ed. 115A, Educational Psychology</td>
</tr>
<tr>
<td>Ed. 115A, History and Philosophy of Education</td>
</tr>
<tr>
<td>Ed. 100B, Methods of Teaching</td>
</tr>
</tbody>
</table>
The graduate work must consist of a minimum of 24 semester units of upper division or graduate work including the following specific requirements:

1. At least 12 semester units must be completed at San Diego State College.
2. At least one course of graduate level work in the major field.
3. Enough units to complete a 21 semester unit minor. Refer to page 22.
4. Professional Education—completion of the courses listed above and the following:

   **Units**
   
   *Ed. 201, Curricular Problems of the Secondary School* 3
   *Ed. 202, Guidance Problems of the Secondary School* 3
   *Ed. 316, Directed Teaching (or equivalent)* 6

**Majors and Minors for the General Secondary Credential**

The following pages outline tentative programs for the majors and minors for which San Diego State College is authorized to recommend for the General Secondary Credential.

**Major in Art**

The requirements for the A.B. Degree and the Special Secondary Credential in Art should be completed simultaneously. (Students transferring from another institution with the A.B. Degree and a major in art should consult with the departmental representative for special program planning.) Refer to page 38 for the recommended program for the Special Secondary Credential in Art. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year (refer to page 22) including the following courses in his major:

**Graduate Year**

Art 200A-200B, Special Problems in Art ............................................. 4

**Minor in Art**

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

**Lower Division**

*Art 56A, Drawing and Composition* .................................................. 2
*Art 58A, Design* ............................................................................... 2
*Art 241, Lettering* ........................................................................... 2
*Aesthetics 20, Appreciation and History of Art* ............................... 2

**Upper Division**

Upper division electives in Art ............................................................. 2
*Aesthetics 150, Appreciation and History of Art* ............................... 2

**Major in Business Education**

The requirements for the A.B. Degree and the Special Secondary Credential in Business Education must be completed simultaneously. Refer to page 36 for the recommended program for the Special Secondary Credential in Business Education. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year (refer to page 22) including the following courses in his major:

**Graduate Year**

Select four units from the following:

*Commerce 203, Secretarial Administration* ...................................... 3
*Commerce 204, Problems in Merchandising* .................................. 2
*Commerce 206, Advanced Problem Analysis (Accounting)* ............ 2

**Minor in Business Education**

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

This minor is not approved as part of the requirements for the A.B. Degree unless the degree and a credential are awarded simultaneously. It is recommended as a second minor area only.

**Major in Economics**

**Lower Division**

*Economics 1A-1B, Principles of Economics* ..................................... 6

**Upper Division**

Upper division economics courses selected with approval of the departmental representative .......................................................... 9

**Graduate Year**

Economics 200A-200B, Seminar in Modern Economic Thought .......... 4

**Minor in Economics**

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses must be completed.

**Lower Division**

*Economics 1A-1B, Principles of Economics* ..................................... 6
*A year course in another social science area* .................................. 6

**Upper Division**

*Economics 100A, Modern Economic Thought* .................................. 3
*Upper division economics courses selected under the supervision of the departmental representative* .............................................. 6

**Major in English**

**Lower Division**

*English 1A, English Composition, or 1B, Freshman Composition, and 1C, Freshman Literature* ......................................................... 3-6
*English 9A-9B, The Study of Literature* ........................................... 6
*English 96A, Survey of English Literature or 96A-96B, The Literary Personality* ................................................................. 6

**Upper Division**

Upper Division English courses selected under the supervision of the departmental representative ................................................. 24

**Major in English**

**Lower Division**

*English 101, Shakespeare, or 221, Regionalism in American Literature* ................................................................. 2
*English 102, The English Language (if not taken as an undergraduate), or 101, 102A, 102B, 102C, 102D, 102E, 102F, 102G, 102H or 221* ........................................... 2-3

**Minor in English**

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

**Lower Division**

Upper division English courses to be selected under supervision of departmental representative ................................................. 12

**Upper Division**

Upper division English courses to be selected under supervision of the departmental representative ................................................. 9
Minor in French
A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

**Lower Division**
- French A, B, C, D or equivalent
- History 4A-4B, History of Modern Europe, or equivalent

**Upper Division**
- French 101A-101B, Conversation and Composition
- French Literature (select one course)

**Major in History**

**Lower Division**
- History 4A-4B, History of Modern Europe
- History 8A-8B, History of the Americas
- Political Science 1A-1B, Comparative Government, or Political Science 11A-11B, American Government and Politics, or Economics 1A-1B, Principles

**Upper Division**
- History 196, Special Course for Advanced Students
- Select from three of the following areas with approval of departmental representative
  - 1. Ancient and Medieval
  - 2. Modern European
  - 3. United States and Latin America
  - 4. Pacific Area and Far East

**Graduate Year**
- History 270A-270B, Seminar

**Minor in History**
A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

**Lower Division**
- History 4A-4B, History of Modern Europe
- Political Science 1A-1B, Comparative Government, or Political Science 11A-11B, American Government and Politics

**Upper Division**
- Upper Division History selected with approval of departmental representative

**Major in Life Science**

**Lower Division**
- Zoology 1A-1B, General Zoology or Biology 10A-10B
- Botany 2A-2B, General Botany
- Zoology 30, Human Anatomy and Physiology, or Physiology 1A, Human Physiology
- Chemistry 1A-1B or 2A-2B, General
- Physics 1A-1B and 2A-3B, General
- Geology 1A and Astronomy 1 recommended

**Upper Division**
- Upper division Zoology and Botany of which 6 units may be from a related field with the approval of the departmental representative

**Graduate Year**
- Zoology 200 Seminar
- Zoology 202, Hydrobiology, or Zoology 213, Advanced Studies in Ornithology

**Minor in Life Science**
A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

**Lower Division**
- Biology 10A-10B, General Biology, or Zoology 1A-1B, General Zoology
- Botany 2A-2B, General Botany
- Chemistry 1A or 2A-2B

**Upper Division**
- Upper division courses in Zoology and Botany to be selected with approval of the departmental representative

**Minor in Mathematics**
A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

**Lower Division**
- Mathematics 1, Trigonometry (or high school equivalent for which pattern credit may be allowed)
- Mathematics 3A, Plane Analytic Geometry
- Mathematics 3B, First Course in Calculus
- Commeres 2, Mathematics of Finance, or Engineering 1A, Plane Surveying, or Engineering 21, Descriptive Geometry, or Astronomy 1, Descriptive Astronomy, or Physics 1A, Mechanics of Solids, or Physics 2A, General

**Upper Division**
- Select 9 units from the following:
  - Mathematics 101, Elementary Geometry for advanced students
  - Mathematics 102, Elementary Algebra for advanced students
  - Mathematics 104, History of Mathematics
  - Mathematics 105, College Geometry
  - Mathematics 106, Projective Geometry
  - Mathematics 111, Theory of Algebraic Equations

**Major in Music**

The requirements for the A.B. Degree and the Special Secondary Credential in Music should be completed simultaneously. Students transferring from another institution with the A.B. Degree and a major in Music should consult with the departmental representative for special program planning. Refer to page 37 for the recommended program for the Special Secondary Credential in Music. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a graduate year (refer to page 22) including the following course in his major:

**Graduate Year**
- Music 203, Musicology, or Music 204, Composition

**Minor in Music**
A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

**Lower Division**
- Music 1A or equivalent, and 1B, Musicianship
- Music 4A-4B, Elementary Harmony
- Aesthetics 1A-1B, Survey of Music
- Music activities selected from Music 11, 12, 13, 15, 20, 26, 30

**Upper Division**
- Select 9 units with approval of departmental representative from:
  - Aesthetics 102A-102B, Music History
  - Aesthetics 103, Music Literature
  - Music 105A-105B, Advanced Harmony and Composition
  - Music 106, Conducting
  - Music 107, Form and Analysis
  - Music 110A, Instrumental Conducting
  - Music 120A, Vocal Conducting
  - Music 121A, Instrumentation
  - Music 117A-117B, Advanced Individual Study of Voice
  - Music 118A-118B, Advanced Individual Study of Piano or Organ
PROFESSIONAL AND PREPROFESSIONAL CURRICULA

Upper Division

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education 165, Administration of Community Recreation</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 170, Recreational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education 199, Special Study in Health, Physical Education or Recreation</td>
<td>1-3</td>
</tr>
</tbody>
</table>

Minor in Recreation for Men and Women (Physical Education Majors)

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses must be completed to secure the General Secondary Credential. Students majoring in physical education may use this only as a second minor. Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

Lower Division

- Electives from fields of dance, drama or music | 2     |
- Physical Education 165, Administration of Community Recreation | 3     |
- Physical Education 170, Recreational Leadership | 3     |
- Physical Education 199, Special Study in Health, Physical Education or Recreation | 3     |

Major in Physical Education for Women

The requirements for the A.B. Degree and the Special Secondary Credential in Physical Education must be completed simultaneously. Refer to page 40 for the recommended program for the Special Secondary Credential in Physical Education. After the above requirements have been met, the candidate for the General Secondary Credential shall complete a fifth year (refer to page 22) including the following courses in his major:

Graduate Year

Select two courses from the following:

- Physical Education 200, Evaluation Procedures in Health, Physical Education, and Recreation | 3     |
- Physical Education 201, Developmental Physical Education | 2     |
- Physical Education 202, Problems in Health Education | 2     |
- Physical Education 203, Problems in Physical Education | 2     |
- Physical Education 204, Problems in Recreation | 2     |

Minor in Physical Education for Women

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses must be completed. A student contemplating advanced degree work should plan to complete an academic minor as well as this minor.

Lower Division

- Physical Education 51, First Aid and Safety Education | 2     |
- Physical Education 58, Physical Education in the Elementary Schools | 2     |
- Physical Education 72, Introduction | 2     |

Minor in Health Education for Men and Women

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed. Students majoring in physical education may use this only as a second minor. Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

Lower Division

- Health Education 61A, Nutrition | 2     |
- Health Education 65, Community Health | 2     |

Upper Division

- Health Education 152, Health Education Programs | 3     |
- Health Education 153, Administration of School Health Program | 3     |
- Physical Education 190, Special Study in Health, Physical Education or Recreation | 1-3   |

Minor in Recreation for Men and Women (Non-Physical Education Majors)

A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed. Students majoring in Physical Education may use this only as a second minor. Students contemplating advanced degree work should plan to complete an academic minor as well as this minor.

Lower Division

- Electives selected from Art 61B, Crafts, or from the fields of dance, drama or music | 2     |

Major in Physical Science (Chemistry)

Lower Division

- Chemistry 1A-1B, General Chemistry | 10    |
- Chemistry 5, Quantitative Analysis | 3     |
- Mathematics 2A, 3A, Plane Analytic Geometry and First Course in Calculus | 6     |
- Physics 1A-1B, 1C-1D or 2A-2B and 3A-3B | 12-18 |
- German 1A-1B | 0-10  |
**Minor in Spanish**
A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

**Lower Division**
- Spanish A, B, C, D or equivalent..............................................15-16
- History 4A-4B, History of Modern Europe, or 8A-8B, History of America, or equivalent..................................................6

**Upper Division**
- Spanish 101A-101B, Conversation and Composition.................................................................6
- Spanish Literature (select one course).............................................3

**Major in Speech Arts**

**Lower Division**
- Speech Arts 1, Voice and Diction, or 2A, Fundamentals of Public Speaking, or 2B, Extemporaneous Speaking, or 11A or 11B, Interpretation........................................3
- Speech Arts 55A-55B, Elementary Acting, or 57A-57B, Radio Production........................................6
- Speech Arts 56A-56B, Dramatic Production, or 60A-60B, Argumentation and Debate........................................6

**Upper Division**
- Speech Arts 150, Phonetics.....................................................3
- Speech Arts 150A-150B, History of the Theater, or 140A-140B, Stage Design, or 170A-170B, Nervous Speech Disorders, or 192A-192B, Advanced Public Speaking........................................6
- Speech Arts 170A or 170B, Nervous Speech Disorders, or 155A or 155B, Advanced Radio Techniques, or 156A or 156B, Stage Direction, or 191, Organized Discussion (select two courses)........................................6
- Speech Arts 108, Advanced Interpretation, or 118A or 118B, Playwriting, or Speech Arts 155A, History of the Theater (select one course)........................................3
- A maximum of 6 units may be selected from related fields with approval of departmental representative..................0-6

**Graduate Year**
Select four units from the following courses:
- Speech Arts 201, Advanced Rhythm and Pantomime........................................2
- Speech Arts 221, Articulatory Problems of Speech........................................2
- Speech Arts 245, Seminar in Technical Practice........................................2
- Speech Arts 250, Seminar in Stage Direction........................................2

**Minor in Speech Arts**
A minimum of 21 semester units, of which at least 9 units shall be upper division or graduate courses, must be completed.

**Lower Division**
- Speech Arts 2A-2B, Fundamentals of Public Speaking and Extemporaneous Speaking; or 55A-55B, Elementary Acting; or 55A and 2A Fundamentals of Public Speaking, or 2B, Extemporaneous Speaking; or 55A and 11A or 11-B, Interpretation, or 1A, Voice and Diction; or 57A-57B, Radio Production........................................6

**Upper Division**
Upper division Speech Arts electives selected with approval of departmental representative from:
- Speech Arts 155A-155B, Radio Acting
- Speech Arts 157A-157B, Advanced Radio Production
- Speech Art 158A-158B, Advanced Radio Technique
- Speech Arts 155A-155B, Stage Direction
- Speech Arts 108, Advanced Interpretation
- Speech Arts 170A-170B, Nervous Speech Disorders
- Speech Arts 192A-192B, Advanced Public Speaking........................................9
A.B. Degree With Special Secondary Credential in Art

This course leads to the A.B. Degree and to the Special Secondary Credential in Art which entitles the holder to teach art in senior high, junior high, and elementary schools.

**Lower Division**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics 50, History and Appreciation of Art</td>
<td>2</td>
</tr>
<tr>
<td>Art: A-B, Drawing and Composition</td>
<td>4</td>
</tr>
<tr>
<td>Art: A-B, Design</td>
<td>2</td>
</tr>
<tr>
<td>Art 14A, Lettering</td>
<td>4</td>
</tr>
<tr>
<td>Art 61A, Crafts</td>
<td>2</td>
</tr>
<tr>
<td>Electives in Art</td>
<td>4</td>
</tr>
<tr>
<td>English 1A or 1B and 1C</td>
<td>6</td>
</tr>
<tr>
<td>Health Education 21, Health and Social Adjustment</td>
<td>2</td>
</tr>
<tr>
<td>Natural Sciences (see page 17)</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education, Freshman and Sophomore Activities</td>
<td>2</td>
</tr>
<tr>
<td>Psychology 1, General</td>
<td>4</td>
</tr>
<tr>
<td>Social Sciences (see page 17)</td>
<td>5</td>
</tr>
<tr>
<td>Electives, including courses for minor</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>9-12</td>
</tr>
</tbody>
</table>

**Upper Division**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics 120, Appreciation and History of Art</td>
<td>2</td>
</tr>
<tr>
<td>Art 121A and 121B or 121C</td>
<td>4</td>
</tr>
<tr>
<td>Art 121B, Design and Composition</td>
<td>2</td>
</tr>
<tr>
<td>Art 125A, Advanced Painting</td>
<td>4</td>
</tr>
<tr>
<td>Art 185, Interior Decoration</td>
<td>4</td>
</tr>
<tr>
<td>Electives in U.D. Art</td>
<td>4</td>
</tr>
<tr>
<td>Education 115A, History and Philosophy of Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 115B, Secondary Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 125C, Growth and Development of the Adolescent</td>
<td>2</td>
</tr>
<tr>
<td>Education 125D, Measurement in Secondary Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 130, Educational Psychology</td>
<td>2</td>
</tr>
<tr>
<td>Education 135A, Methods in Art</td>
<td>2</td>
</tr>
<tr>
<td>Education 140, Directed Teaching</td>
<td>2</td>
</tr>
<tr>
<td>Education 141A, Art in the Elementary School</td>
<td>2</td>
</tr>
<tr>
<td>Health Education 151</td>
<td>2</td>
</tr>
<tr>
<td>Electives, including minor</td>
<td>2-4</td>
</tr>
</tbody>
</table>

**Summary**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Aesthetics 50 and 120</td>
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<tr>
<td>Art major</td>
<td>4</td>
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<tr>
<td>Education</td>
<td>4</td>
</tr>
<tr>
<td>English</td>
<td>12</td>
</tr>
<tr>
<td>Health Education 21 and 151</td>
<td>2</td>
</tr>
<tr>
<td>Natural Sciences (see page 17)</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Psychology 1, General</td>
<td>4</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>2</td>
</tr>
<tr>
<td>Electives, including minor</td>
<td>2</td>
</tr>
</tbody>
</table>

A.B. Degree With Special Secondary Credential in Business Education

This course leads to the A.B. Degree and to the Special Secondary Credential in Business Education, which entitles the holder to teach business subjects in senior high and junior high schools.

In addition to the following academic requirements, satisfactory evidence of one must be submitted.

- Half year, or 1,000 hours of approved experience in the field named in the credential

**Lower Division**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 1A-1B, Principles</td>
<td>4</td>
</tr>
<tr>
<td>Commerce 14A-14B, Accounting</td>
<td>6</td>
</tr>
<tr>
<td>English 1C, Freshman Literature and English</td>
<td>6</td>
</tr>
<tr>
<td>Geography 1, Physical and Geography 10, Economic Geography</td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences (see page 17)</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education, Elementary and Sophomore Activities</td>
<td>2</td>
</tr>
<tr>
<td>Health Education 21, Health and Social Adjustment</td>
<td>2</td>
</tr>
<tr>
<td>Speech Arts 2A, Fundamentals of Public Speaking</td>
<td>2</td>
</tr>
<tr>
<td>Psychology 1, General</td>
<td>4</td>
</tr>
<tr>
<td>Commerce A, Business Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Commerce 1A-1B, Typewriting</td>
<td>6</td>
</tr>
<tr>
<td>Commerce 5A-5B, Shorthand</td>
<td>2</td>
</tr>
<tr>
<td>Social Science (Economics 1A-1B and Geography 10 included above)</td>
<td>10</td>
</tr>
</tbody>
</table>

**Upper Division**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
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<tbody>
<tr>
<td>Health Education 151</td>
<td>2</td>
</tr>
<tr>
<td>Commerce 3A, Office Methods and Appliances</td>
<td>3</td>
</tr>
<tr>
<td>Commerce 16A-16B, Commercial Law</td>
<td>6</td>
</tr>
<tr>
<td>Economics 1A-1B and 1A-1B</td>
<td>6</td>
</tr>
<tr>
<td>Commerce 121, Business Administration</td>
<td>3</td>
</tr>
<tr>
<td>Upper Division Accounting</td>
<td>2</td>
</tr>
<tr>
<td>Education 100B-BB, Methods in Accounting</td>
<td>2</td>
</tr>
<tr>
<td>Education 100C-B, Objectives and Curricula in Business Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 102B, Growth and Development of the Adolescent</td>
<td>2</td>
</tr>
<tr>
<td>Education 102C, Measurement in Secondary Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 115A, History and Philosophy of Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 115B, Secondary Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 116, Directed Teaching</td>
<td>2</td>
</tr>
<tr>
<td>Education 120, Educational Psychology</td>
<td>2</td>
</tr>
<tr>
<td>Education 130, Methods in Secretarial Subjects</td>
<td>2</td>
</tr>
<tr>
<td>Education 100M-ME, Methods in Merchandising (Recommended)</td>
<td>2</td>
</tr>
<tr>
<td>Minor</td>
<td>2</td>
</tr>
<tr>
<td>Electives</td>
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**Summary**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 1A-1B, 100, Commerce A, 1A-1B, 3A, 5A-5B, 14A-14B, 16A-16B, 121 and Upper Division Accounting</td>
<td>6</td>
</tr>
<tr>
<td>English 1C and 8</td>
<td>6</td>
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<tr>
<td>Geography 1, Physical and Geography 10</td>
<td>3</td>
</tr>
<tr>
<td>Natural Sciences (see page 17)</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Health Education 21 and 151</td>
<td>4</td>
</tr>
<tr>
<td>Speech Arts 2A</td>
<td>2</td>
</tr>
<tr>
<td>Psychology 1, General</td>
<td>2</td>
</tr>
<tr>
<td>Education 100B-BB, 100B-BF, 100B-ME, 100B-SS, 102C, 102D, 115A, 115B, 116, 120</td>
<td>24-26</td>
</tr>
<tr>
<td>Minor</td>
<td>15</td>
</tr>
<tr>
<td>Electives</td>
<td>5</td>
</tr>
</tbody>
</table>

A.B. Degree With Special Secondary Credential in Music

Students intending to become applicants for this credential must show evidence of musical ability, before entering the course. They must be able to play artistically upon any instrument of the grade of the simpler songs Without Words of Mendelssohn or else possess a corresponding degree of proficiency in voice or an orchestral instrument. No credit is given to music majors for the basic courses of Music 1A and Music 1B, but if a deficiency exists in the field of general musicianship, the student will be required to take either of both of these courses without credit.

All music majors are required to enroll in two musical activities each semester. In special cases this requirement may be waived by petition to the Music Department. All students are required to pass examinations in applied music in order to receive
credit. No credit is allowed to majors in voice or orchestral instruments for any work in piano which is below the level of artistic hymn playing.

Applicants for the Special Secondary Credential in Music must maintain a grade average of C or better in music courses.

All students majoring in music are required to pass a comprehensive examination in this field during their senior year. This course leads to the A.B. Degree with a Special Secondary Credential in Music which will authorize the holder to teach music in the elementary, junior, and senior high schools of the State.

A maximum of 40 units in Music may be used toward the A.B. Degree. Of these 40 units a maximum of 3 may come from the field of musical activities: band, choir, chorus, glee clubs and orchestra.

Lower Division

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 1A or 1B and 1C</td>
<td>6</td>
</tr>
<tr>
<td>Social Science (see page 17)</td>
<td>6</td>
</tr>
<tr>
<td>Natural Science (see page 17)</td>
<td>6</td>
</tr>
<tr>
<td>Psychology I, General</td>
<td>3</td>
</tr>
<tr>
<td>Health Education 21, Health and Social Adjustment</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education Activities</td>
<td>2</td>
</tr>
<tr>
<td>Music 1A, 1B, 1C, 1D, and 1D, Musicianship</td>
<td>6</td>
</tr>
<tr>
<td>Music 4A-4B, Elementary Harmony</td>
<td>6</td>
</tr>
<tr>
<td>Music 5A, 5A, 6A, 6A, Orchestral Instruments</td>
<td>3</td>
</tr>
<tr>
<td>Music 29 or 17, and 18, Applied</td>
<td>2</td>
</tr>
<tr>
<td>Music 11, 12, 13, 15, 20, 23, or 30, Music Activities</td>
<td>2</td>
</tr>
<tr>
<td>Aesthetics 1A-1B, Survey of Music</td>
<td>4</td>
</tr>
<tr>
<td>Minor (English, social sciences or natural science recommended as such minor may be completed in whole or in part by requirements as listed above)</td>
<td>0-6</td>
</tr>
</tbody>
</table>

Upper Division

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aesthetics 102A-102B, Music History</td>
<td>4</td>
</tr>
<tr>
<td>Music 105A-105B, Advanced Harmony and Composition</td>
<td>6</td>
</tr>
<tr>
<td>Music 109A, Counterpoint</td>
<td>2</td>
</tr>
<tr>
<td>Music 107, Form and Analysis</td>
<td>2</td>
</tr>
<tr>
<td>Music 119A, Instrumental Conducting</td>
<td>1</td>
</tr>
<tr>
<td>Music 120A, Vocal Conducting</td>
<td>1</td>
</tr>
<tr>
<td>Music 121A, Instrumentation</td>
<td>2</td>
</tr>
<tr>
<td>Music 111, 112, 113, 118, 120, or 190, Activities</td>
<td>6</td>
</tr>
<tr>
<td>Music 117 or 118, Applied</td>
<td>6</td>
</tr>
<tr>
<td>Minor (English, social sciences or natural science recommended as such minor may be completed in whole or in part by requirements as listed above)</td>
<td>0-6</td>
</tr>
</tbody>
</table>

Summary

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Education 21 and 151</td>
<td>4</td>
</tr>
<tr>
<td>English 1A-1B and 102A-102B</td>
<td>6</td>
</tr>
<tr>
<td>Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Natural Science</td>
<td>9-12</td>
</tr>
<tr>
<td>English</td>
<td>9-12</td>
</tr>
<tr>
<td>Psychology</td>
<td>6</td>
</tr>
<tr>
<td>Minor (English, social sciences or natural science recommended as such minor may be completed in whole or in part by requirements as listed above)</td>
<td>0-6</td>
</tr>
<tr>
<td>Physical Education</td>
<td>8-15</td>
</tr>
<tr>
<td>Electives</td>
<td>2</td>
</tr>
</tbody>
</table>

A.B. Degree with Special Secondary Credential in Physical Education (Men)

This course leads to the A.B. Degree and the Special Secondary Credential in Physical Education which entitles the holder to teach physical education in senior high, junior high and elementary schools. Men majoring in physical education must register for Professional Activities for each semester of the four years in order to secure adequate skills, methods of teaching and proficiency in officiating. Participation in an intercollegiate sport is recommended.

Lower Division

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 1A or 1B and 1C</td>
<td>6</td>
</tr>
<tr>
<td>Speech Arts 2A, Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science (including Zool 1A or equivalent, Zool 1A, Zool 2A, or a physical science if needed)</td>
<td>0-12</td>
</tr>
<tr>
<td>Social Science (see page 17)</td>
<td>9-12</td>
</tr>
<tr>
<td>Psychology I, General</td>
<td>2</td>
</tr>
<tr>
<td>Health Education 21, Health and Social Adjustment</td>
<td>2</td>
</tr>
<tr>
<td>Health Education 65, Community Health</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>41, 42, 43, 44, Professional Activities</td>
<td>8</td>
</tr>
<tr>
<td>51, First Aid and Safety Education</td>
<td>2</td>
</tr>
<tr>
<td>53, Phys. Educ. in Elementary Schools</td>
<td>2</td>
</tr>
<tr>
<td>72, Introduction to Phys. Educ.</td>
<td>14</td>
</tr>
<tr>
<td>Minor (English, social sciences or natural science recommended as such minor may be completed in whole or in part by requirements as listed above)</td>
<td>0-6</td>
</tr>
<tr>
<td>Electives</td>
<td>0-74</td>
</tr>
</tbody>
</table>

Upper Division

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education 100B-PE, Methods in Phys. Ed.</td>
<td>2</td>
</tr>
<tr>
<td>Education 102C, Growth and Development of the Adolescent</td>
<td>2</td>
</tr>
<tr>
<td>Education 102D, Measurement and Evaluation in Secondary Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 112A, History and Philosophy of Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 112B, Secondary Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 116, Directed Teaching</td>
<td>2</td>
</tr>
<tr>
<td>Education 117A, Elementary Music Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 117B, Emotional Psychology</td>
<td>2</td>
</tr>
<tr>
<td>Education 115A, Methods in Music</td>
<td>9</td>
</tr>
<tr>
<td>Education 102C, Growth and Development of the Adolescent</td>
<td>2</td>
</tr>
<tr>
<td>Education 102D, Measurement and Evaluation in Secondary Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 115A, History and Philosophy of Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 115B, Secondary Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 116, Directed Teaching</td>
<td>2</td>
</tr>
<tr>
<td>Education 117A, Elementary Music Education</td>
<td>2</td>
</tr>
<tr>
<td>Education 117B, Emotional Psychology</td>
<td>2</td>
</tr>
<tr>
<td>Health Education 151</td>
<td>2</td>
</tr>
<tr>
<td>Zoology 114A, Genetics</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>145, 146, 147, 148, Professional Activities</td>
<td>8</td>
</tr>
<tr>
<td>154, Adm. of Phys. Ed. in Secondary Schools</td>
<td>3</td>
</tr>
<tr>
<td>155, Applied Anatomy and Kinesiology</td>
<td>3</td>
</tr>
<tr>
<td>198, Physiology of Exercise</td>
<td>3</td>
</tr>
<tr>
<td>170, Recreational Leadership</td>
<td>3</td>
</tr>
<tr>
<td>177, Ind. Program Adaptation</td>
<td>9</td>
</tr>
<tr>
<td>199, Specialized Study in Health, Recreation or Phys. Ed. = Becomes 1-3 24-26</td>
<td>0</td>
</tr>
<tr>
<td>Minor</td>
<td>2-4</td>
</tr>
<tr>
<td>Electives</td>
<td>2-4</td>
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</tbody>
</table>

Summary

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 1A or 1B and 1C</td>
<td>6</td>
</tr>
<tr>
<td>Speech Arts 2A, Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science</td>
<td>9-12</td>
</tr>
<tr>
<td>Social Science</td>
<td>9-12</td>
</tr>
<tr>
<td>Psychology I, General</td>
<td>2</td>
</tr>
<tr>
<td>Health Education 151</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>41, 42, 43, 44, Professional Activities</td>
<td>8</td>
</tr>
<tr>
<td>51, First Aid and Safety Education</td>
<td>2</td>
</tr>
<tr>
<td>53, Phys. Educ. in Elementary Schools</td>
<td>2</td>
</tr>
<tr>
<td>72, Introduction to Phys. Educ.</td>
<td>14</td>
</tr>
<tr>
<td>Minor (English, social sciences or natural science recommended as such minor may be completed in whole or in part by requirements as listed above)</td>
<td>0-6</td>
</tr>
<tr>
<td>Electives</td>
<td>0-74</td>
</tr>
</tbody>
</table>
A.B. Degree With Special Secondary Credential in Physical Education (Women)

This course leads to the A.B. Degree and to the Special Secondary Credential in Physical Education which entitles the holder to teach physical education in senior high, junior high, and elementary schools.

<table>
<thead>
<tr>
<th>Lower Division</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Science (see page 17)</td>
<td>9-12</td>
</tr>
<tr>
<td>Natural Science (including Zoology 1A or equivalent, Physiology 1A, Zoology 8, and a physical science if needed (see page 17))</td>
<td>8-12</td>
</tr>
<tr>
<td>English 1A or 1B and 1C</td>
<td>6</td>
</tr>
<tr>
<td>Psychology 1, General</td>
<td>3</td>
</tr>
<tr>
<td>Health Education 21, Health and Social Adjustment</td>
<td>2</td>
</tr>
<tr>
<td>Speech Arts 2A, Fundamentals of Public Speaking</td>
<td>2</td>
</tr>
<tr>
<td>Music 1A, Musicianship—Fundamentals of Music (or equivalent)</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education:</td>
<td></td>
</tr>
<tr>
<td>1A, Fundamental Skills</td>
<td></td>
</tr>
<tr>
<td>1B, Folk Dancing</td>
<td></td>
</tr>
<tr>
<td>1C, Rhythmic Skills</td>
<td></td>
</tr>
<tr>
<td>1D, Team Sports</td>
<td>1</td>
</tr>
<tr>
<td>3A, Modern Dance</td>
<td></td>
</tr>
<tr>
<td>4A, Social Dancing</td>
<td></td>
</tr>
<tr>
<td>5A, Archery</td>
<td></td>
</tr>
<tr>
<td>6A, Badminton</td>
<td></td>
</tr>
<tr>
<td>7A, Life Saving</td>
<td></td>
</tr>
<tr>
<td>11A, Tennis</td>
<td></td>
</tr>
<tr>
<td>51, First Aid and Safety Education</td>
<td>2</td>
</tr>
<tr>
<td>55, Physical Education in the Elementary School</td>
<td>2</td>
</tr>
<tr>
<td>72, Introduction to Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Minor (see page 20)</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>1-7</td>
</tr>
<tr>
<td>Recommended Electives: Art 61B, Health Education 60, Health Education 65, Home Arts 61A-61B.</td>
<td>60</td>
</tr>
</tbody>
</table>

Upper Division

| Physical Education:                | 60    |
| 133, Administration of Physical Education in Secondary Schools | 3     |
| 155, Applied Anatomy and Kinesiology | 1     |
| 16A-16B, Sports Methods            |       |
| 16A, Teaching of Body Mechanics    | 4     |
| 16A, Folk Dancing Methods          | 2     |
| 16A:16B, Methods in Modern Dance   | 2     |
| 16A, Methodology of Exercise       | 2     |
| 170, Recreational Leadership       | 2     |
| 177, Individual Program Adaptations| 2     |
| 181, Techniques of Individual Sports | 2     |
| Health Education 151, Health Education for Teachers | 2     |
| Political Science 101 or equivalent, Refer to Examination Requirements in U.S. Constitution, American History, Institutions, and Ideals (page 20) | 0-2   |

Education:

| 100B-PE, Methods and Materials of Instruction in Physical Education | 2     |
| 102C, Growth and Development of the Adolescent                      | 2     |
| 102D, Measurement and Evaluation in Secondary Education            | 2     |
| 115A, History and Philosophy of Education                           | 2     |
| 115B, Secondary Education                                           | 2     |
| 116, Directed Teaching                                             | 2     |
| 120, Educational Psychology                                        | 2     |
| Minor                                                               | 2     |
| Electives                                                           | 1-3   |

A.B. Degree With Special Secondary Credential in Speech Arts

The following program when satisfactorily completed will lead to the A.B. Degree with Special Secondary Credential in Speech Arts.

<table>
<thead>
<tr>
<th>Lower Division</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Science (see page 17)</td>
<td>9-12</td>
</tr>
<tr>
<td>Natural Science (see page 17)</td>
<td>9-12</td>
</tr>
<tr>
<td>English 1A or 1B and 1C</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 1, General</td>
<td>3</td>
</tr>
<tr>
<td>Health Educ. 21, Health and Social Adj.</td>
<td>2</td>
</tr>
<tr>
<td>Physical Education Activities</td>
<td></td>
</tr>
<tr>
<td>Speech Arts 2A, 2B, 3A, 4A, 5A, 6A, 7A, 8A</td>
<td>6</td>
</tr>
<tr>
<td>Speech Arts 5A-5B or 6A-6B or 7A-7B or 8A-8B</td>
<td>6</td>
</tr>
<tr>
<td>Speech Arts 61A, 61B, 63A, 63B, 67A, 71</td>
<td>5</td>
</tr>
<tr>
<td>Speech Arts Electives</td>
<td>5</td>
</tr>
<tr>
<td>Electives</td>
<td>9-3</td>
</tr>
</tbody>
</table>

Upper Division

| Speech Arts 1A and 1B            | 6     |
| Speech Arts electives, selected from Speech Arts 1A, 1B, 2A, 3A, 4A, 5A, 6A, 7A, 8A, 9A | 6     |
| Speech Arts electives            | 6     |
| Upper Division electives selected from upper division English Literature | 6     |
| Minor                             | 9     |
| Education 100B-SA, Methods in Speech Arts | 2     |
| Education 102C, Growth and Development of the Adolescent | 3     |
| Education 102D, Measurement and Evaluation in Secondary Education | 2     |
| Education 115A, History and Philosophy of Education | 3     |
| Education 115B, Secondary Education | 2     |
| Education 116, Directed Teaching | 6     |
| Education 120, Educational Psychology | 2     |
| Health Education 151             | 5     |
| Electives                         | 60    |

Summary

| Social Science                   | 9-12  |
| English                           | 6     |
| Health Education 21 and 151      | 2     |
| Physical Education                | 1     |
| Speech Arts, major               | 2     |
| Upper division English Literature | 30    |
| Education 100B-SA, 102C, 102D, 115A, 115B, 116, 120 | 15     |
| Minor                             | 1-7   |
| Electives                         | 120   |
Special Secondary Credential in Correction of Speech Defects

This credential is granted only to students who can verify two years of successful teaching experience plus 100 hours clinical supervision, and who hold a valid California teacher’s certificate, credential, or life diploma of elementary or secondary school grade. Such students must show credit in the following subjects:

**Lower Division**
- Psychology 1 or General Psychology........................................ 3
- Speech Arts 2A, Fundamentals of Public Speaking, or equivalent......... 3
- Speech Arts 11A or 11B Interpretation...................................... 3
- Speech Arts electives.................................................................. 6

**Upper Division**
- Speech Arts 150, Phonetics......................................................... 3
- Speech Arts 221, Articulatory Problems of Speech or Education 176, Problems of Speech Correction and Articulation..................................... 3
- Speech Arts 170A-170B or Education 179A-179B, Nervous Speech Disorders ................................................................. 6
- Psychology 118, Mental Hygiene............................................... 3

**ELEMENTARY SCHOOL ADMINISTRATION CREDENTIAL**

Applicants shall meet the following requirements, in addition to the general state requirements for all degrees:

(a) Possession of a valid general elementary credential.
(b) Two years of successful teaching experience in the elementary schools.
(c) Thirty semester hours of upper division or graduate work in addition to the holding of the general elementary credential. Those hours shall include specific courses designated by the State Department of Education and the college.
(d) A grade point average of 1.75 in work at San Diego State College subsequent to receiving the general elementary credential.
(e) Eighteen units must be taken at San Diego State College.

**THE ELEMENTARY SCHOOL SUPERVISION CREDENTIAL**

The general requirements for this credential are identical with those of the Elementary School Administration Credential excepting that the total of 24 units is required. The pattern of courses is somewhat different. Write to the Director of Elementary Education for course requirements.

---

**PRE-AGRICULTURAL CURRICULA**

The high school program should include the following subjects: elementary algebra 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; trigonometry, .5 unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit; foreign languages, 3 units in one language.

Students should ascertain the lower division requirements of the agricultural college they expect to enter.

The following arrangement of courses is recommended:

**Curriculum in Plant Science**

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Year</td>
</tr>
<tr>
<td>Physical Education ........................................ 2</td>
</tr>
<tr>
<td>Health Education 21 ....................................... 5</td>
</tr>
<tr>
<td>Chemistry 1A-1B ............................................ 4</td>
</tr>
<tr>
<td>Botany 2A-2B ................................................ 3</td>
</tr>
<tr>
<td>Physics 2A-2B ................................................ 2</td>
</tr>
<tr>
<td>Elective ....................................................... 3</td>
</tr>
<tr>
<td>114</td>
</tr>
<tr>
<td>Sophomore Year</td>
</tr>
<tr>
<td>Physical Education ........................................ 3</td>
</tr>
<tr>
<td>Economics 1A-1B ............................................. 3</td>
</tr>
<tr>
<td>Chemistry 103-109 .......................................... 3</td>
</tr>
<tr>
<td>Geology 1A or 2A ........................................... 4</td>
</tr>
<tr>
<td>Bacteriology 1 .............................................. 4</td>
</tr>
<tr>
<td>Zoology 1A .................................................... 3</td>
</tr>
<tr>
<td>Elective ....................................................... 3</td>
</tr>
<tr>
<td>104</td>
</tr>
</tbody>
</table>

**Curriculum in Animal Science**

<table>
<thead>
<tr>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freshman Year</td>
</tr>
<tr>
<td>Physical Education ........................................ 2</td>
</tr>
<tr>
<td>Health Education 21 ....................................... 5</td>
</tr>
<tr>
<td>Chemistry 1A-1B ............................................ 4</td>
</tr>
<tr>
<td>Zoology 1A-1B ................................................ 3</td>
</tr>
<tr>
<td>Physics 2A-2B ................................................ 3</td>
</tr>
<tr>
<td>Geology 2B .................................................... 2</td>
</tr>
<tr>
<td>Elective ....................................................... 2</td>
</tr>
<tr>
<td>104</td>
</tr>
<tr>
<td>Sophomore Year</td>
</tr>
<tr>
<td>Physical Education ........................................ 3</td>
</tr>
<tr>
<td>Economics 1A-1B ............................................. 3</td>
</tr>
<tr>
<td>Chemistry 103-109 .......................................... 3</td>
</tr>
<tr>
<td>Bacteriology 1 .............................................. 4</td>
</tr>
<tr>
<td>Botany 2A ..................................................... 3</td>
</tr>
<tr>
<td>Zoology 100 ................................................... 3</td>
</tr>
<tr>
<td>Zoology 20 or 30 ............................................ 2</td>
</tr>
<tr>
<td>Elective ....................................................... 3</td>
</tr>
<tr>
<td>104</td>
</tr>
</tbody>
</table>
### CURRICULUM IN COMMERCE

The objective of the Commerce Department is to equip students to live satisfactorily as individuals and as useful citizens. Each student is provided with specialized training that will be of practical value in a business position as well as provide a basis for promotion. Some students are preparing to enter directly into such professional fields as accounting, merchandising or secretarial science; others are preparing for general business. A number of pursue studies that qualify them to become teachers of business in the secondary school or junior college.

The first two years of the curriculum are introductory. During this period the student acquires a basis for further study and an understanding of the place that business fills in modern economic life. The choice of the major field should be made at the beginning of the junior year. The student then follows a program of studies that is designed to provide a vocational ability in at least one particular area.

### Lower Division

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>English 1A or 1C and 8</td>
<td>6</td>
</tr>
<tr>
<td>Health Education 21, Health and Social Adjustment</td>
<td>6</td>
</tr>
<tr>
<td>Psychology, General</td>
<td>2</td>
</tr>
<tr>
<td>Natural Sciences (including Geography)</td>
<td>9-12</td>
</tr>
<tr>
<td>History, Political Science or Sociology</td>
<td>6</td>
</tr>
<tr>
<td>Geography 10, Economic</td>
<td>6</td>
</tr>
<tr>
<td>Economics 1A-1B, Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>Commerce 2, Mathematics of Finance</td>
<td>6</td>
</tr>
<tr>
<td>Commerce 1A-1B, Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Commerce 1A-1B, Commercial Law</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td>6</td>
</tr>
</tbody>
</table>

**Merchandising subfield should include:**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merchandising 24, Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>Merchandising 25, Salesmanship</td>
<td>3</td>
</tr>
<tr>
<td>Merchandising 26, Advertising</td>
<td>3</td>
</tr>
<tr>
<td>Merchandising 27, Consumer Problems</td>
<td>3</td>
</tr>
<tr>
<td>Art 7 Line, Color, Display</td>
<td>3</td>
</tr>
</tbody>
</table>

### Upper Division

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor</td>
<td>9</td>
</tr>
<tr>
<td>Major</td>
<td>24</td>
</tr>
</tbody>
</table>

**Including:** Economics 111, Economic History of the United States; Economics 140, Statistics; Commerce 121, Business Administration; and 35 units selected from one of the following groups:

**A. Accounting:** Commerce 100A-100B, 161A-161B, 162, 164A-164B, 165A-165B.

**B. Banking and Finance:** Commerce 133, 134, 137; Economics 107, 131, 135.

**C. Business Administration:** Commerce 123, 125, 129, 133, 137, 135; Economics 150, 142.

**D. Merchandising:** Commerce 123, 133, 184, 185, 186, 187; Home Arts 100A-100B.

**Electives (at least 7 of which must be upper division)** | 17-27

### PRE-DENTAL CURRICULUM

Candidates for a degree in dentistry should ascertain the entrance requirements of the dental college to which they expect to transfer and should make whatever changes in the following requirements that may seem desirable in satisfying the requirements of the specific dental college.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; foreign language, 3 units in one language; mechanical drawing, 1 unit.

The following arrangement of courses is recommended:

<table>
<thead>
<tr>
<th>Summer Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>1</td>
</tr>
<tr>
<td>Health Education 21</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry 1A-1B or 1A-1B</td>
<td>5</td>
</tr>
<tr>
<td>Physics 1A-1B or 2A-2B and 3A-3B</td>
<td>3</td>
</tr>
<tr>
<td>English or Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 1</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>0-2</td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>1</td>
</tr>
<tr>
<td>Chemistry 108-109</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 1A-1B</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics C-D</td>
<td>3</td>
</tr>
<tr>
<td>Social Science Year Course (selected from Anthropology 1A-1B, Economics 1A-1B, History 4A-4B or 8A-6B or 17A-17B, Political Science 1A-1B)</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
</tbody>
</table>

**Junior Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 105</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 105</td>
<td>4</td>
</tr>
<tr>
<td>Zoology 106</td>
<td>2</td>
</tr>
<tr>
<td>Art 119A</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 11</td>
<td>3</td>
</tr>
<tr>
<td>Additional Year Course in Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>4</td>
</tr>
</tbody>
</table>

The following courses are suggested for a third year in preparation for dentistry for those who fail to receive an acceptance from a dental college after completing the prescribed 60 units.

The curriculum for Dental Hygiene is essentially the same as the above for pre-dentistry.
# PRE-FORESTRY CURRICULUM

**Freshman Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 1A-1B</td>
<td>5</td>
</tr>
<tr>
<td>Botany 2A-2B</td>
<td>4</td>
</tr>
<tr>
<td>English 1A or 1B and 1C</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics 3A-3B</td>
<td>3</td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>4</td>
</tr>
<tr>
<td>Physics 2A-2B, 3A-3B</td>
<td>4</td>
</tr>
<tr>
<td>Engineering 1A-1B</td>
<td>3</td>
</tr>
<tr>
<td>Economics 1A-1B</td>
<td>3</td>
</tr>
<tr>
<td>Geology 2A</td>
<td>3</td>
</tr>
<tr>
<td>Health Education 21</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry 106</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>4</td>
</tr>
</tbody>
</table>

**CUMULATIVE**

<table>
<thead>
<tr>
<th>Units</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

# CURRICULUM IN GENERAL ENGINEERING

The four year curriculum in general engineering leads to the A.B. Degree in General Engineering and is designed to give students a sound training in the fundamentals of engineering education plus the broader training and experiences which constitute a liberal arts education.

Students may stay at San Diego State College for less than four years and then complete their training for professional engineering at the University of California or some other engineering school. In such cases the curriculum for the first two years should be essentially the same as that outlined below, but the student should plan his work carefully with the help of a faculty-adviser to insure satisfaction of all requirements.

In the freshman and sophomore years all general engineering students must take the courses listed below. In the junior and senior years optional programs are available which provide for some specialization in aeronautical, chemical, civil, electrical, or mechanical engineering or in engineering physics or engineering economics.

The general engineering curriculum follows the plan of the general major. (See page 8.) This requires completion during the junior and senior years of a minimum of 36 upper division units chosen from three different fields with no more than 15 units or less than 6 units from any one field to count as part of the minimum of 36 units.

In chemical engineering, the three fields are engineering, physics, and chemistry. In all the other optional upper division programs, the three fields which make up the general engineering major are engineering, physics, and economics. Training in mathematics beyond the minimum requirements is very desirable, and it is recommended that at least Mathematics 112, Differential Equations, be included among the upper division electives. In the field of physics, a maximum of 6 units may be chosen from Mathematics 115, Advanced Calculus, Mathematics 119, Differential Equations, and Mathematics 124, Vector Analysis.

The general engineering curriculum allows considerable latitude in the choice of electives in the junior and senior years. Students are encouraged to choose electives which suit their particular needs in broadening their training in the field of general education. The choice of electives must follow a logical plan approved by a faculty committee.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; solid geometry, 3 units; trigonometry, 1 unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit.

## Lower Division

Courses must be included to satisfy all college requirements for the A.B. Degree, except the foreign language requirement. (See page 10.)

**Freshman Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math, 3A-3B, Analytic Geometry</td>
<td>3</td>
</tr>
<tr>
<td>Physics 1A-1B, Mechanics of Solids and Fluids, and Heat</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 1A-1B, General Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>English 1A or 1B, English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Health Ed. 21, Health and Social Adjustment</td>
<td>3</td>
</tr>
<tr>
<td>Biology 1, Survey of Biology (Unless taken in high school)</td>
<td>1</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Electives</td>
<td>16</td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Math, 4A-4B, Second and Third Courses in Calculus</td>
<td>3</td>
</tr>
<tr>
<td>Physics 1C-1D, Electricity and Magnetism, Sound and Light</td>
<td>3</td>
</tr>
<tr>
<td>Econ. 1A-1B, Principles of Economics</td>
<td>3</td>
</tr>
<tr>
<td>Engineering 21, Descriptive Geometry</td>
<td>4</td>
</tr>
<tr>
<td>Physical Education</td>
<td>4</td>
</tr>
<tr>
<td>Other courses to complete lower division preparation, including</td>
<td>7</td>
</tr>
<tr>
<td>Psychology 1, English, and Social Science (see page 10)</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>16</td>
</tr>
</tbody>
</table>
One of the following groups of courses is required, dependent upon the field of specialization desired in the upper division:

**For Civil Engineering**
- Engineering 1A-1B, Plane Surveying: 6 units
- Astronomy 3, Surveyor's Course in Practical Astronomy: 3 units

**For Mechanical, Electrical and Aeronautical Engineering**
- Engineering 1A, Plane Surveying: 3 units
- Engineering 22, Machine Drawing: 3 units
- Elective: 3 units

**For Chemical Engineering**
- Chem. 108 and 109, Organic Chemistry: 6 units
- Elective: 3 units

**For Engineering Economics**
- Commerce 14A-14B, Principles of Accounting: 6 units
- Elective: 3 units

**For Engineering Physics**
- Engineering 22, Machine Drawing (recommended): 3 units
- Elective: 6 units

Students should, if possible, complete all of the college lower division requirements in the sophomore year. (See page 16.) Any not completed then must be completed in the junior year.

**Upper Division**

The choice of a field of specialization and the choice of electives must be approved by the Chairman of the Physical Science Division. Students normally will submit proposed programs for formal committee approval before the beginning of the junior year. Any subsequent deviations from this plan must be approved by the committee.

All upper division requirements of the college for the A.B. Degree must be met. These include:
- Examination in American History and U.S. Constitution. (See page 1B.)
- Completion of the requirements for the General Major. (See page 16.)

The courses required for general engineering include a core group required for all general engineering students plus those required for each field of specialization. These are indicated below:

**Required for All General Engineering Students**

**Junior Year**
- Physics 105A-105B, Analytical Mechanics: 6 units
- Engineering 100A-100B, Elements of Electrical Engineering: 6 units
- Engineering 140, Strength of Materials: 3 units

**Senior Year**
- Engineering 128, Applied Engineering Thermodynamics: 3 units
- Engineering 128, Senior Report: 2 units

**Additional Requirements for Various Fields of Specialization**

**Aeronautical Engineering**
- Engineering 122, Machine Design: 3 units
- Engineering 141, Materials of Engineering Laboratory: 2 units
- Elective—including 6 units upper division economics: 10 units

**Senior Year**
- Engineering 150, Aerodynamics: 3 units
- Engineering 142, Stress Analysis: 3 units
- Engineering 142, Heat Power Laboratory: 3 units
- Elective—including 9 units upper division economics and/or physics: 14 units

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**Chemical Engineering**

**Units**

**Junior Year**
- Chemistry 105A, Quantitative Analysis: 3 units
- Chemistry 100A-110B, Physical Chemistry: 5 units
- Engineering 141, Materials of Engineering Laboratory: 2 units
- Elective: 4 units

**Senior Year**
- Chemistry 144-145, Chemical Engineering: 6 units
- Elective: 10 units

**Civil Engineering**

**Junior Year**
- Engineering 130, Route and Construction Surveying: 3 units
- Engineering 141, Materials of Engineering Laboratory: 2 units
- Elective—including 6 units upper division economics: 10 units

**Senior Year**
- Engineering 131, Advanced Surveying: 3 units
- Engineering 106, Hydraulics Laboratory: 2 units
- Elective—including 9 units upper division economics and/or physics: 17 units

**Electrical Engineering**

**Junior Year**
- Engineering 101A-101B, Electrical Engineering Laboratory: 4 units
- Elective—including 6 upper division economics: 11 units

**Senior Year**
- Physics 107, Electrical Measurements: 2 units
- Physics 102, Electronics: 3 units
- Elective—including 4 units upper division economics and/or physics: 17 units

**Mechanical Engineering**

**Junior Year**
- Engineering 122, Machine Design: 3 units
- Engineering 141, Materials of Engineering Laboratory: 2 units
- Elective—including 6 units upper division economics: 10 units

**Senior Year**
- Engineering 130, Heat Power Laboratory: 2 units
- Engineering 100, Hydraulics Laboratory: 2 units
- Engineering 145, Internal Combustion Engines: 2 units
- Elective—including 9 units upper division economics and/or physics: 15 units

**Engineering Economics**

**Junior Year**
- Commerce 121, Business Administration: 3 units
- Commerce 132, Corporation Finance: 2 units
- Commerce 13A, Commercial Law: 3 units
- Economics 140, Statistics: 2 units
- Elective: 3 units

**Senior Year**
- Economics 171, Transportation: 3 units
- Commerce 150, Labor Problems: 3 units
- Economics 131, Public Finance: 2 units
- Electives: 13 units

**Engineering Physics**

**Junior Year**
- Mathematics 119, Differential Equations: 3 units
- Elective—including 6 units upper division economics: 12 units

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4-70010
HOME ARTS CURRICULUM

The Home Arts curriculum is planned to meet the needs of those students who wish to apply their knowledge to the various problems of home living. This curriculum will lead to a general major in Liberal Arts, which means it will be combined with two other fields. (See General Major Requirements, page 18.) By selecting the right combination of courses, it will be possible to prepare for professional work in journalism, radio, community recreation, home service in industry, merchandising, and several phases of social work. The student should consult the Dean of General Education for his approval and then see the Head of Home Arts Department for help in planning a course of study.

Summary of Lower Division Requirements for a General Major in Home Arts

<table>
<thead>
<tr>
<th>Units</th>
<th>1st Term</th>
<th>2nd Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 1A or 1B, Freshman Composition</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>English 1G, Freshman Literature</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 1, General</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Chemistry 2A-2B, General</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Health Education 21, Health and Social Adjustment</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Art 6A, Design</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Home Arts 1, General</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16½</td>
<td>16½</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Units</th>
<th>1st Term</th>
<th>2nd Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Arts 61A-61B, Nutrition and Laboratory</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Home Arts 5, Food Preparation</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Home Arts 10, Fundamentals of Clothing</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 50A-50B, Introduction</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Completion of Natural Science requirement</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Completion of Social Science requirement</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15½</td>
<td>14½</td>
</tr>
</tbody>
</table>

Suggested electives for the first two years:
- Biology 10A-10B (6), or Biology 1 (3), Zoology 20 (3)
- Physics 2A-2B (8)
- Fundamentals of Speech 2A-2B (6)
- History 17A-17B (6) (Sophomore Year preferable)
- Health Education 90, Physiology of Reproduction (1)
- Nutrition 61A (2), 61B (1)
- Art 6B (2)
- Art 61B (2)

Upper Division

Home Arts courses to satisfy the General Major should be selected from the following:
- Home Arts 101, Clothing Selection (3)
- Home Arts 105, Family Food and Meals (3)
- Sociology 108, The Family (3)
- Home Arts 150, Home Management (3)
- Home Arts 160, Merchandise Analysis—Textiles (2)
- Home Arts 160B, Merchandise Analysis—Non-Textiles (2)
- Education 162B, Child Growth and Development (3)
PRE-LEGAL CURRICULUM

The entrance requirements of law colleges range from two years to three and four years of pre-legal work. The lower division requirements of the liberal arts curricula should be met in full whether the curriculum extends over a period of two, three, or four years.

The following curriculum meets the recommendations of standard American law colleges for a broad and liberal education in those fields of human knowledge commonly involved in human affairs and those which have cultural and disciplinary values. For the majority of pre-legal students a general major (see page 18) with concentration in economics, history and political science, as provided for in the following curriculum, furnishes the most effective preparation for later professional study in law and for later activities in the field of business. However, for some students a major, or at least strong minors, in English, history, or political science, may provide a suitable preparation.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language, 3 units in one language or 2 units in each of two languages.

Following is a recommended arrangement of courses:

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Health Education 21</td>
<td>2</td>
</tr>
<tr>
<td>Foreign Languages (if needed to complete requirement)</td>
<td>0-5</td>
</tr>
<tr>
<td>Natural Science (see lower division requirements)</td>
<td>3-5</td>
</tr>
<tr>
<td>English 1A or 1B and 1C</td>
<td>3</td>
</tr>
<tr>
<td>Commerce 14A-14B</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 1</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>0-3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>153</strong></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Additional Natural Science (if needed to meet requirement)</td>
<td>3</td>
</tr>
<tr>
<td>Economics 1A-1B</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy 1A-1B, 2A-3B, or Mathematics 3A-5B</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 1A-1B or 2A-7A</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>154</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commerce 158</td>
<td>3</td>
</tr>
<tr>
<td>Economics Elective</td>
<td>3</td>
</tr>
<tr>
<td>History 151A-151B or 172A-172B</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 111A-111B or 143A-143B</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 106, 108</td>
<td>3</td>
</tr>
<tr>
<td>Elective (see upper division requirements)</td>
<td>3</td>
</tr>
<tr>
<td>Examination in American History, U. S. Constitution, etc. (see page 18)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 100A</td>
<td>3</td>
</tr>
<tr>
<td>Economics Elective</td>
<td>3</td>
</tr>
<tr>
<td>History 111A-111B or 121A-121B</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 123A-123B</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>4</td>
</tr>
<tr>
<td>Health Education 21</td>
<td>4</td>
</tr>
<tr>
<td>Chemistry 1A-1B</td>
<td>4</td>
</tr>
<tr>
<td>English 1A or 1B and 1C</td>
<td>3</td>
</tr>
<tr>
<td>French or German (if needed to meet requirement)</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>164</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>4</td>
</tr>
<tr>
<td>Zoology 1A-1B</td>
<td>4</td>
</tr>
<tr>
<td>Psychology 1</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 106</td>
<td>3</td>
</tr>
<tr>
<td>Social Science</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>19</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics 1</td>
<td>3</td>
</tr>
<tr>
<td>Physics 1A-2B</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 106</td>
<td>4</td>
</tr>
<tr>
<td>Zoology 106</td>
<td>4</td>
</tr>
<tr>
<td>Electives</td>
<td>7</td>
</tr>
<tr>
<td>Examination in American History, U. S. Constitution, etc. (see page 18)</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper division requirements and electives for the major in Zoology or Chemistry, the minor and the degree (see page 17)</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>
PRE-NURSING CURRICULUM

A student who plans to complete a curriculum in nursing leading to a degree and a certificate in nursing in another collegiate institution should ascertain the lower division (junior certificate) requirements of that institution.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; trigonometry, 1 unit; physics, 1 unit; chemistry, 1 unit; foreign language, 3 units.

The following curriculum prepares for junior standing in university schools of nursing:

**Freshman Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>1</td>
</tr>
<tr>
<td>Health Education 21</td>
<td>2</td>
</tr>
<tr>
<td>Biology A</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 2A-2B</td>
<td>3</td>
</tr>
<tr>
<td>Home Arts 61A-61B</td>
<td>3</td>
</tr>
<tr>
<td>English 1A or 1B and 1C</td>
<td>3</td>
</tr>
<tr>
<td>French or German (if needed to complete requirements)</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>2-8</td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>1</td>
</tr>
<tr>
<td>Psychology 1 and 11</td>
<td>3</td>
</tr>
<tr>
<td>Economics 1A-1B or Sociology 50A-50B</td>
<td>3</td>
</tr>
<tr>
<td>Bacteriology 1</td>
<td>3</td>
</tr>
<tr>
<td>Physiology 1A, 1C</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 6</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>5</td>
</tr>
</tbody>
</table>

**Total:** 16

**PRE-OPTOMETRY**

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; trigonometry, 1 unit; physics, 1 unit; chemistry, 1 unit; foreign language, 3 units.

The following curriculum prepares for junior standing in university schools of optometry:

**Freshman Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemistry 1A-1B</td>
<td>5</td>
</tr>
<tr>
<td>English 1A or 1B</td>
<td>5</td>
</tr>
<tr>
<td>Speech Arts 2A</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language (if needed to complete requirements)</td>
<td>3-3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3-3</td>
</tr>
<tr>
<td>Electives</td>
<td>4</td>
</tr>
</tbody>
</table>

**Sophomore Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physics 2B-2H</td>
<td>3</td>
</tr>
<tr>
<td>Physics 3A-3B</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 1</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics 2A</td>
<td>3</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>3</td>
</tr>
<tr>
<td>Physiology 1A, 1C</td>
<td>3</td>
</tr>
<tr>
<td>Health Education 21</td>
<td>3</td>
</tr>
<tr>
<td>Chemistry 108</td>
<td>1</td>
</tr>
<tr>
<td>Physical Education</td>
<td>1</td>
</tr>
</tbody>
</table>

**Total:** 16

**PRE-PHARMACY CURRICULUM**

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; chemistry, 1 unit; physics, 1 unit; foreign language, 2 units.

Attention is called to the fact that the American Association of Colleges of Pharmacy allows not more than one year of credit for work completed in an institution other than a college of pharmacy. Consequently, although the normal first year work and part of that of the second year may be completed before transfer, the time required in the college of pharmacy cannot be reduced to less than three academic years. Students should ascertain the requirements of the college of pharmacy they expect to enter.

The following arrangement of courses is recommended:

**Freshman Year**

<table>
<thead>
<tr>
<th>Course</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>5</td>
</tr>
<tr>
<td>English 1A or 1B and 1C</td>
<td>5</td>
</tr>
<tr>
<td>Chemistry 1A-1B</td>
<td>4</td>
</tr>
<tr>
<td>Botany 2A-2B, or Zoology 1A-1B</td>
<td>3-0</td>
</tr>
<tr>
<td>Mathematics C-D (if not completed in high school)</td>
<td>0-4</td>
</tr>
<tr>
<td>Physics 2A-2B and 3A-3B</td>
<td>15-16</td>
</tr>
</tbody>
</table>

**Total:** 16

The following courses are also commonly required or recommended: (See, however, three-year rule, above.) Chemistry 5, 108, 109; Psychology 1, Physiology 1A, or Zoology 20.

1 Student should consult catalogue of school he plans to attend.
PRE-SOCIAL WORK

The professional curriculum in social service prepares for admission to graduate work in recognized American schools of social work. This curriculum should be pursued by those who plan careers in federal, state and local welfare work; social work in public schools including preparation for a teaching credential; family and children's private case work agencies; social settlement work; county probation work; child welfare agencies; statistical and investigational work in private and public agencies; work in public institutions for the defective and delinquent; medical social service and psychiatric social work in hospitals and clinics; executive positions in social work; and social work in numerous other organizations.

The lower division requirements of the liberal arts curricula include the general requirements of recognized professional schools of social work and should therefore ordinarily be met in full. However, a student who has definitely decided not to become a candidate for a degree in San Diego State College may substitute the lower division requirements of the institution to which he expects to transfer wherever the requirements differ.

A student who pursues a four-year curriculum in social work in San Diego State College should complete the requirements for the general major. See page 18.

The following subjects should be completed in high school: elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; foreign language, 3 units in one language.

Following is the required arrangement of courses:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Freshman Year</strong></td>
<td></td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Health Education 21</td>
<td>2</td>
</tr>
<tr>
<td>English 1A or 1B and 1C</td>
<td>3</td>
</tr>
<tr>
<td>Biology 10A-10B</td>
<td>3</td>
</tr>
<tr>
<td>Foreign Language (if needed to complete requirement)</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 1 and 11</td>
<td>3</td>
</tr>
<tr>
<td>Elective (Speech Arts 2A-2B recommended)</td>
<td>1-6</td>
</tr>
<tr>
<td></td>
<td>16 1/2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sophomore Year</strong></td>
<td></td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Economics 1A-1B</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 1A-1B or 71A-71B</td>
<td>3</td>
</tr>
<tr>
<td>Additional Natural Science (if needed to meet requirement)</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 50A-50B</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16 1/2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Junior Year</strong></td>
<td></td>
</tr>
<tr>
<td>Economics 108 or 111</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 108</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 109</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 105</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 145</td>
<td>3</td>
</tr>
<tr>
<td>Zoology 114A</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Examination in American History, U. S. Constitution, etc. (see page 18)</td>
<td>7 1/2</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Courses</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Senior Year</strong></td>
<td></td>
</tr>
<tr>
<td>Economics 155 or 160</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 107</td>
<td>3</td>
</tr>
<tr>
<td>Sociology Elective</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 101A</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 155A-155B or upper division anthropology</td>
<td>3</td>
</tr>
<tr>
<td>Additional upper division courses in Economics or Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>
### PUBLIC ADMINISTRATION

As the vocational demand for students of public administration is comparatively limited, the student of public administration will do well to prepare himself for a related field of work for which there is not only a cultural but also a vocational demand. The candidate for a public administrative position who is equipped for a career in a professional, scientific or technical field that is common to both public and private enterprise has a distinct advantage. The special courses in public administration listed in the following curriculum are supplementary courses designed for exploration and orientation. The curriculum as a whole provides for a major in economics, a minor in political science, and a general preparation for the public service in social science fields and furnishes a basis for more highly specialized graduate courses in the field of public administration.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; intermediate algebra, 1 unit; foreign language, 3 units in one language.

The following arrangement of courses is recommended:

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Health Education 21</td>
<td>2</td>
</tr>
<tr>
<td>English 1A or 1B</td>
<td>2</td>
</tr>
<tr>
<td>Foreign Language (if needed to complete requirements)</td>
<td>3-5</td>
</tr>
<tr>
<td>Psychology 1</td>
<td>3</td>
</tr>
<tr>
<td>Natural Science</td>
<td>3</td>
</tr>
<tr>
<td>Commerce 14A-14B</td>
<td>0-5</td>
</tr>
<tr>
<td>Elective</td>
<td>0-5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English 1C</td>
<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>3</td>
</tr>
<tr>
<td>Additional Natural Science (if needed to meet requirements)</td>
<td>3</td>
</tr>
<tr>
<td>Economics 1A-1B</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 1A-1B or T1A-71B</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 100A</td>
<td></td>
</tr>
<tr>
<td>Economics 140</td>
<td>3</td>
</tr>
<tr>
<td>Economics 100B</td>
<td>3</td>
</tr>
<tr>
<td>Economics 131</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 143A-143B</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Examination in American History, U. S. Constitution, etc. (see page 18)</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 150</td>
<td></td>
</tr>
<tr>
<td>Economics 170 or 171</td>
<td></td>
</tr>
<tr>
<td>Economics electives</td>
<td>3</td>
</tr>
<tr>
<td>Political Science elective</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

### INTER-AMERICAN RELATIONS

The purpose of this curriculum is (1) to furnish a basis for a more intelligent and effective understanding of the opportunities and problems of international relations in the western hemisphere; (2) to provide facilities for a basic education and training for a business or professional career which involves international relations.

The student who plans a career in this field should therefore organize his electives to provide for a concentration in some area of work in which there are greater vocational opportunities. Preparation for employment as a foreign service officer of an American business organization implies concentration in economics. The student who pursues this curriculum as a guide for training for the foreign service in consular, vice consular, secretarial, and other public offices should include additional courses in foreign language, history, political science, geography, and economics to furnish more effective preparation for the comprehensive competitive examinations required for appointment to the Service and for entrance to the Foreign Service Training School at Washington, D. C.

This program should be completed either with a major in economics or a general major. Consult the Dean of General Education for details.

The high school program should include the following subjects: algebra, 1 unit; plane geometry, 1 unit; foreign language, 3 units in one language, preferably Spanish.

The following arrangement of courses is recommended:

<table>
<thead>
<tr>
<th>Freshman Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Health Education 21</td>
<td>3</td>
</tr>
<tr>
<td>English 1A or 1B and 1C</td>
<td>0-5</td>
</tr>
<tr>
<td>Spanish</td>
<td>3-5</td>
</tr>
<tr>
<td>Natural Science</td>
<td>3</td>
</tr>
<tr>
<td>History 8A-8B</td>
<td>3</td>
</tr>
<tr>
<td>Psychology 1</td>
<td>3-5</td>
</tr>
<tr>
<td>Elective</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sophomore Year</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Additional Natural Science (if needed to meet requirements)</td>
<td>0-3</td>
</tr>
<tr>
<td>Economics 1A-1B</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 1A-1B or T1A-71B</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Junior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 195</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 141</td>
<td>3</td>
</tr>
<tr>
<td>Political Science 142</td>
<td>3</td>
</tr>
<tr>
<td>History 173A-173B</td>
<td>3</td>
</tr>
<tr>
<td>Spanish 104A-104B</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
</tr>
<tr>
<td>Economics elective</td>
<td>3</td>
</tr>
<tr>
<td>Examination in American History, U. S. Constitution, etc. (see page 18)</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Senior Year</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics 100</td>
<td>3</td>
</tr>
<tr>
<td>Economics 198 (Special Study—Western Hemisphere)</td>
<td>3</td>
</tr>
<tr>
<td>History 161</td>
<td>3</td>
</tr>
<tr>
<td>History 162</td>
<td>3</td>
</tr>
<tr>
<td>Geography 116</td>
<td>3</td>
</tr>
<tr>
<td>Geography 121</td>
<td>3</td>
</tr>
<tr>
<td>Electives from economics history, political science or geography to complete the general major</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>
COURSES OF INSTRUCTION

Figures in parentheses indicate the unit value of the course.

Courses numbered from 1 to 90 are lower division (freshman or sophomore) courses; those numbered 100 and above are upper division (junior or senior) courses; those numbered 200 to 299 are graduate courses to be taken only after completion of the bachelor's degree; those numbered 300 to 399 are professional education courses to be taken at the graduate level.

Freshmen are not admitted into upper division courses.

A sophomore may enroll in an upper division course for lower division credit provided he has earned an average grade of not less than 1.5 in all college work undertaken, and provided he receives the instructor's permission to enroll in the course. A second semester sophomore may enroll in an upper division course for upper division credit without the foregoing grade limitations provided the units earned in the upper division course or courses are in excess of the 60 units required in the lower division.

One "unit" represents an hour recitation or lecture, together with the required preparation, or three hours laboratory work each week for a semester of 18 weeks.

The semester in which courses are offered is designated as follows: (1) Fall; (2) Spring; (3) Fall and Spring; (4) Year course. Courses designated as "Year course" begin in the Fall, but those given in the list below may be taken in the reverse order (i.e., the second semester of the course may be taken before the first semester) or the second semester may be taken alone. In the case of other year courses, students who have completed the equivalent of the first semester's work may seek permission from the instructor to take the second half of the course.

YEAR COURSES OPEN TO REGISTRATION IN THE MIDDLE OF THE YEAR

| Aesthetics 1A-1B | History 111A-111B |
| Anthropology 1A-1B | History 121A-121B |
| Anthropology 151A-151B | History 131A-131B |
| Economics 100A-100B | History 140A-140B |
| English 50A-50B | History 150A-150B |
| English 52A-52B | History 160A-160B |
| English 56A-56B | History 172A-172B |
| English 100A-100B | History 172A-172B |
| English 107A-107B | History 173A-173B |
| English 117A-117B | Political Science 1A-1B |
| French 101A-101B | Political Science 7A-71B |
| French 105A-105B | Spanish 101A-101B |
| French 107A-107B | Spanish 102A-102B |
| French 112A-112B | Spanish 104A-104B |
| French 126A-126B | Spanish 105A-105B |
| History 3A-3B | Spanish 110A-110B |
| History 4A-4B | Speech Arts 35A-35B |
| History 8A-8B | Speech Arts 55C-55D |
| History 17A-17B | Speech Arts 155A-155B |
| Speech Arts 156A-156B |

Other year courses for which the student may enroll for credit in the second half before completing the first half are indicated in the Time Schedule. Although the college fully expects to carry out the arrangements planned in the Time Schedule, it reserves the right to make changes. Classification in which the enrollment may not be offered or may be postponed.

DIVISION OF EDUCATION

EDUCATION

Upper Division Courses

Ed. 100B. Methods and Materials of Instruction

A series of professional courses in specific teaching fields designed to be taken just prior to or concurrently with the first directed teaching assignment. Each course emphasizes the application of principles of best practice with reference to motivation, individual differences, audio-visual aids, evaluation and the achievement of an effective learning situation in one subject field.

Subject fields for sections in 100B are as follows:

- Ed. 100B-A, Methods in Art
- Ed. 100B-B, Methods of Accounting
- Ed. 100B-C, Methods of Psychology
- Ed. 100B-D, Methods in Business Education
- Ed. 100B-E, Methods in English
- Ed. 100B-F, Methods in Romance Languages
- Ed. 100B-G, Methods in Mathematics
- Ed. 100B-H, Methods of Merchandising
- Ed. 100B-I, Methods in Music
- Ed. 100B-J, Methods in Physical Education (Men)
- Ed. 100B-K, Methods in Physical Education (Women)
- Ed. 100B-L, Methods in Science
- Ed. 100B-M, Methods in Speech Arts
- Ed. 100B-N, Methods in Social Science
- Ed. 100B-P, Methods in Secretarial Subjects

Fall (2)

102A. Measurement and Evaluation in Elementary Education

A course required of all students preparing for an elementary teaching credential. It deals with the use of tests in the diagnosis and improvement of learning; construction of objective examinations; problems of evaluation in education; and the elements of statistical techniques. Fall and Spring (3)

102B. Child Growth and Development

The course deals with a study of the mental, emotional, social, and physical development of the child. Directed observation required. Students who have credit in Psychology 102A or 102B will receive only half credit for this course. Fall and Spring (3)

102C. Growth and Development of the Adolescent

Experience and instruction organized around a study of the adolescent in today's society. The course deals with the adolescent's physiological, psychological, social, and emotional development as important determinants of the educational program. To be taken during the junior year. (3)

102D. Measurement and Evaluation in Secondary Education

The course deals with the use of educational and psychological tests in the diagnosis of difficulties and improvement in learning; problems of evaluation in education; construction of objective examinations; and the elements of statistical techniques. (2)

115A. History and Philosophy of Education

Historical backgrounds and underlying philosophies upon which the modern public school system has been established. The content covers such problems as the meaning of education, educational aims and values, and democracy and education. Prerequisite: Senior standing or the equivalent. Fall and Spring (2)
118B. Secondary Education
The role of the teacher in secondary education; methods, materials, and directed observation of classroom teaching and management; trends in the organization and development of the secondary school curriculum. To be taken during the junior year. Full and Spring (3)

116. Directed Teaching
Systematic observation, participation, and teaching under supervision in the campus elementary school, the affiliated elementary, junior high, and senior high schools. During each semester of directed teaching in the secondary schools a weekly conference with the director is required as indicated in the time schedule.

The general plan is for elementary school candidates to take, in addition to the education practicum, a half day of teaching daily in the campus elementary school or in the affiliated elementary schools throughout one semester. Junior high school and special secondary school credential candidates will be guided by their advisor relative to the distribution of their directed teaching. For those applying a combination of credentials, the requirements for each teaching level must be satisfied. Further information regarding this requirement should be requested of the Dean of Education when the student first registers for directed teaching.

Thirty clock hours of directed teaching will usually carry one unit of credit in the course, but the final amount of credit allowed will depend upon the character and quality of the teaching done by the student. Directed teaching requirements may be reduced for those who furnish evidence of successful public school experience.

The maximum amount of credit allowed for directed teaching is twelve units.

The universities usually require the amount of directed teaching credit they will prepare students to meet this reduction with an equal number of acceptable units in other courses.

No grade below a C is acceptable for credit in directed teaching.

Prerequisites: Completion of 75 units of college work, admission to teacher education, a minimum of one semester's work in psychology; a minimum of one semester's work in this college.

No credit will be given unless the student registers in advance for this course in the office of the Dean of Education.

117A. Elementary Music Education

Main objectives of music teaching in the public elementary schools. Study of the child, development of body, voice, and music reading and writing, elementary music education, art, music and physical education, art, music and health education. Prerequisite: Music 1A, or the equivalent. Fall and Spring (2)

117B. Methods in Instrumental Music
A study of the theory of instruments and organizing and conducting school bands and orchestras; the selection of materials. Provides practical experience in organizing and planning of courses of study for pupils of various ages and abilities will be made. (2)

119. Art in the Elementary School
Discussion of the elements and principles of art and their place in the art expression and appreciation of the elementary school child. Lectures illustrated with examples of children's work and opportunity given for experience with mediums used. Prerequisite: Art 6A. Fall and Spring (2)

122. Social Studies in the Elementary School
A study of the nature and purpose, scope, organization and instructional procedure in the social studies in the elementary school. Prerequisite: 120. (2)

129. Arithmetic in Elementary Education
A course for teachers of arithmetic in the elementary and junior high school. Emphasis is placed upon the understanding of the systems of notation and language. (2)

130. Educational Psychology
A study of the science of human behavior as it relates to learning. Emphasis is given to the principles of learning and maturation of the organism. Special aspects treated are: growth, anxiety, thinking, memory and habit formation, motivation, transfer of learning, organic and environmental conditions affecting learning, individual differences, and the theory of audio-visual education. Prerequisite: Psychology 1. (2)

136. Reading in the Primary Grades
A study of techniques in guiding children's learning to read through the first three grades. This will include practical suggestions for teachers in developing reading readiness, independence, word recognition and reading as a thinking process throughout this period. Analysis will be made of materials and use of materials will be studied. (2)

144. Diagnosis and Remedial Treatment of Difficulties in Reading
Lectures and demonstrations relative to the causes of reading difficulties and the procedures for diagnosis and remedial treatment. Students will be expected to do practical work with children who have remedial difficulty. The work is designed primarily for principals, supervising teachers and teachers in-service. Prerequisites: Education 102B or Education 102A, or one year of successful teaching experience. (3)

145. Organization and Administration of Music Education
Theory of the general principles of music administration; correlation of music with the various subjects in the public schools; music tests; creative work. (2)

146. Education Practicum (Kindergarten-Primary)
This course is a continuation of Education 145 and should accompany Education 116 in the kindergarten. It is a study of the theory of early childhood education. Provides experience with children of nursery school and kindergarten ages. Prerequisite: Education 147, 148. (4)

147. Education Practicum
This course is required of all students who expect to receive a credential which will qualify them to teach in the kindergarten or in the elementary school. The course should take the course the second semester, after admission to Teacher Education. Registration is strictly limited to those who have been approved by the Committee on Admission to Teacher Education. The practice period is a unified course which deals with the interpretation and intelligent application of theory and practice in elementary education. The child and accumulated knowledge are studied as one affects the other. The psychology of learning is interpreted while the college student is immediately associated with children in the process of learning. For two or three hours each day classes are held in which the psychology and philosophy of education are studied and analyzed as systems of knowledge and concurrently interpreted in references to the actual teaching participation to which the student is assigned for one hour daily. The course includes the following methods and materials: reading (2); Elementary School Methods, including Children's Music Education (2); Elementary Art Education (2); Mental Hygiene and Speech (2); Directed Teaching (2). The course is taught by college teachers who supervise in the Campus Elementary School and other faculty members (10).

148. Education Practicum
The course is a continuation of Education 147 and is required of all students who are candidates for general elementary or the kindergarten- primary credential. An extended analysis is made of the psychology of education in various fields and an extended application is made through directed teaching in grades 4 to 6. The course and application is made through directed teaching in grades 4 to 6. The course and application includes Elementary Arithmetic Education (3); Elementary Social Studies and includes Elementary Arithmetic Education (2); Elementary Social Studies and includes Elementary Education (2); Elementary Art Education (1); Elementary Music Education (1); Art Education (2); Directed Teaching (1); Directed Teaching (2). Additional 4 units for General Elementary School; Language Arts Education (2); Directed Teaching (2). Prerequisites: Education 147. (12)

149A. Laboratory in Elementary Education
A general course in observation and theory covering all teaching done in the elementary school, including arithmetic, reading, English, science, social studies, art, spelling. Students in this course will observe in the elementary school a laboratory-type experience and participate in the teaching procedures. (3)
149B. Workshop in Elementary Education

Students in this course will select a problem related to their professional assignment for the coming year and work upon it in the summer session under the guidance of the staff. Groups of teachers may work together upon common curriculum problems or toward other objectives in personal or professional improvement. Special interests, community, field trip, subject matter areas, and many other types of experiences which will provide educational source background may be selected. Students should correspond with the Director of Elementary Education in advance to secure most effective planning of the course. (3)

This course can be very profitably combined with 149A. Arrangements may be made to secure 6 units of credit. (3)

149C. Laboratory in Rural Education

Observation in a one-room multigraded summer demonstration school. Students will observe demonstrations, discuss procedures with the staff, and prepare material for their own schools. (6)

149D. Workshop in Elementary Education

Participants in the workshop will select classroom problems for study under the guidance of workshop consultants. Summer only. (3)

155. Principles of Guidance

An analysis of the problems of pupil personnel, guidance and parent-teacher relationships in the public schools. A study of the source materials useful in guidance and a survey of the literature pertaining to the principles and practices of guidance. (3)

174. Audio-Visual Education

A study of audio-visual aids as they affect learning. Analysis and development of materials of instruction and their presentation; operation of equipment. (2)

176. Problems of Speech Correction and Articulation

Analysis and discussion of the major articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. (3)

177. The Teaching of Lip Reading

History, theory and methods of lip reading. Aids for the classroom teacher; program and materials of instruction for the specialized teacher. Opportunities for practice teaching are offered. (2)

178. Problems of the Hard of Hearing

The adjustment of the hard of hearing group with emphasis on the public school child. State and county hearing programs; technique of audiometry; use of hearing aids; educational, classroom, and social problems. (2)

179A. 179B. Nervous Speech Disorders

Classification of speech defects and disorders. Nervous speech disorders; stammering, stuttering, hesitation, cluttering. Teacher training in corrective techniques. Required of candidates for the Special Credential in Correction of Speech Defects. Not open to students with credit in Speech Arts 179A-179B. Year course (2-3)

199. Educational Problems

A course for senior and graduate students in residence and enrolled in teacher education who have shown ability to work independently on educational problems. The problem can be chosen only after consultation with a staff member. Admission by consent of the staff. Credit and hours to be arranged.

Graduate Courses

200. Seminar in Elementary Education

A study of the methodology of research and of the basis research in the psychology and teaching of the elementary school subjects. Organized around individual problems. Prerequisite: Eight units in elementary education and approval of instructor. (2)

201. Curricular Problems in Secondary Education

Appraisal of outstanding studies in the content and organization of the secondary school curriculum, followed by the student's own investigation of problems in either his major or minor field. Topics for study will be determined jointly by students and instructor. To be taken in the graduate year. (3)

202. Guidance Problems in Secondary Education

A study of good guidance procedures. An analysis of the psychological and educational factors involved in assisting high school students to adjust themselves to the high school situation, and problems of guiding youth in the selection and preparation of a life career. To be taken in the graduate year. (3)

236. Teaching of Reading

An advanced course in the psychology of the teaching of reading. (2)

255. Workshop in Secondary Education

This course is designed to meet the needs of individual or groups of teachers who wish to develop or continue the study of some problem with the consultation of the College Staff and the San Diego County Curriculum Staff. Teachers should correspond with the Director of Secondary Education, San Diego State College, before registration to secure maximum value from this course. Offered only in summer session. (3)

260. Federal, State, County and City School Organization and Administration

A study of the organization, administration and supervision of federal, state, city and county school systems. Includes school finance, housing, business administration, and the legal aspects of education. (3)

262. The Organization and Administration of Elementary Schools, Including School Law

A course designed for students preparing to become elementary school principals. A study will be made of the problems of personnel, local finances, curriculum, community relations, and the legal aspects of elementary schools. Required as prerequisite to Ed. 260. Prerequisite: Teaching experience. (3)

264. Elementary School Supervision

Principles and practices of supervision and methods of evaluating instruction and the curriculum in elementary education. Prerequisite: General elementary credential and teaching experience. (3)

Ed. 266. Field Work in Elementary School Administration and Supervision

A first-hand study of the administration or supervision of an elementary school, as required for the elementary school administration and supervision credentials. To be planned and directed by a college instructor and an elementary school principal. Extends over a full school year. (3) Prerequisite: Ed. 262 or Ed. 264.

316. Directed Teaching

Systematic observation, participation, and teaching under supervision in an affiliated high school. Thirty clock hours of directed teaching will usually earn one unit of credit, but the credit finally allowed will depend upon the nature and quality of the teaching done. Any work below a C grade is unacceptable for credit in this course. (3-3)

No student can enroll in this course until he has completed at least 5 units of work in education.

During the semester in which the student takes his first assignment in directed teaching, he must meet with the college supervisor one hour each week for conference and discussion of problems encountered in his teaching.

Students who have had directed teaching in preparation for the junior high school or special secondary credentials should confer with their departmental and school or special secondary credentials should confer with their departmental and school

260. Federal, State, County and City School Organization and Administration

A study of the organization, administration and supervision of federal, state, city and county school systems. Includes school finance, housing, business administration, and the legal aspects of education. (3)

262. The Organization and Administration of Elementary Schools, Including School Law

A course designed for students preparing to become elementary school principals. A study will be made of the problems of personnel, local finances, curriculum, community relations, and the legal aspects of elementary schools. Required as prerequisite to Ed. 260. Prerequisite: Teaching experience. (3)

264. Elementary School Supervision

Principles and practices of supervision and methods of evaluating instruction and the curriculum in elementary education. Prerequisite: General elementary credential and teaching experience. (3)

Ed. 266. Field Work in Elementary School Administration and Supervision

A first-hand study of the administration or supervision of an elementary school, as required for the elementary school administration and supervision credentials. To be planned and directed by a college instructor and an elementary school principal. Extends over a full school year. (3) Prerequisite: Ed. 262 or Ed. 264.

316. Directed Teaching

Systematic observation, participation, and teaching under supervision in an affiliated high school. Thirty clock hours of directed teaching will usually earn one unit of credit, but the credit finally allowed will depend upon the nature and quality of the teaching done. Any work below a C grade is unacceptable for credit in this course. (3-3)

No student can enroll in this course until he has completed at least 5 units of work in education.

During the semester in which the student takes his first assignment in directed teaching, he must meet with the college supervisor one hour each week for conference and discussion of problems encountered in his teaching.

Students who have had directed teaching in preparation for the junior high school or special secondary credentials should confer with their departmental and school

EDUCATION 65

201. Curricular Problems in Secondary Education

Appraisal of outstanding studies in the content and organization of the secondary school curriculum, followed by the student's own investigation of problems in either his major or minor field. Topics for study will be determined jointly by students and instructor. To be taken in the graduate year. (3)

202. Guidance Problems in Secondary Education

A study of good guidance procedures. An analysis of the psychological and educational factors involved in assisting high school students to adjust themselves to the high school situation, and problems of guiding youth in the selection and preparation of a life career. To be taken in the graduate year. (3)

236. Teaching of Reading

An advanced course in the psychology of the teaching of reading. (2)

255. Workshop in Secondary Education

This course is designed to meet the needs of individual or groups of teachers who wish to develop or continue the study of some problem with the consultation of the College Staff and the San Diego County Curriculum Staff. Teachers should correspond with the Director of Secondary Education, San Diego State College, before registration to secure maximum value from this course. Offered only in summer session. (3)

260. Federal, State, County and City School Organization and Administration

A study of the organization, administration and supervision of federal, state, city and county school systems. Includes school finance, housing, business administration, and the legal aspects of education. (3)

262. The Organization and Administration of Elementary Schools, Including School Law

A course designed for students preparing to become elementary school principals. A study will be made of the problems of personnel, local finances, curriculum, community relations, and legal aspects of elementary schools. Required as prerequisite to Ed. 260. Prerequisite: Teaching experience. (3)

264. Elementary School Supervision

Principles and practices of supervision and methods of evaluating instruction and the curriculum in elementary education. Prerequisite: General elementary credential and teaching experience. (3)

Ed. 266. Field Work in Elementary School Administration and Supervision

A first-hand study of the administration or supervision of an elementary school, as required for the elementary school administration and supervision credentials. To be planned and directed by a college instructor and an elementary school principal. Extends over a full school year. (3) Prerequisite: Ed. 262 or Ed. 264.

316. Directed Teaching

Systematic observation, participation, and teaching under supervision in an affiliated high school. Thirty clock hours of directed teaching will usually earn one unit of credit, but the credit finally allowed will depend upon the nature and quality of the teaching done. Any work below a C grade is unacceptable for credit in this course. (3-3)

No student can enroll in this course until he has completed at least 5 units of work in education.

During the semester in which the student takes his first assignment in directed teaching, he must meet with the college supervisor one hour each week for conference and discussion of problems encountered in his teaching.

Students who have had directed teaching in preparation for the junior high school or special secondary credentials should confer with their departmental and school

6-J9910
DIVISION OF FINE ARTS

AESTHETICS

Lower Division Courses

1A-1B. Survey of Music
Correlation of music and other arts. Designed to stimulate enjoyment of music by developing intelligent listening. The elements of music, its structure, folk music of all countries, musical instruments, and the contributions of the best known composers, with some biographical study of these men. Compositions are presented by orthophonic recording and by class members. Attendance at a number of local concerts is required. No previous musical training or background is necessary. Music majors are required to complete additional assignments for full credit.
Year course (2-2)

5. Art Orientation
An illustrated lecture course dealing with aesthetic meaning and its relation to the structure of art products. Designed to increase both understanding and appreciation of the visual world in general and of the fine arts in particular.
Spring (2)

50. Appreciation and History of Art
A survey of art development in the painting, sculpture, architecture, and handicrafts from dawn of art to the Renaissance. Illustrated.
Fall (2)

51. Survey of Mexican Art
A study of Mexican and Middle American Art from earliest time to present.
Fall (2)

Upper Division Courses

102A-102B. Music History
The various movements in the development of music as related to the other arts. The chronological development of the art of music, with particular emphasis on the larger works. Considerable attention is given to the works of modern composers. Many symphonic works are studied from the orchestral scores. Music majors are required to complete additional assignments for full credit. Prerequisite: Aesthetics 1A or 1B.
Year course (2-2)

Aesthetics 103. Music Literature
A non-technical discussion of musical forms and styles found in instrumental and vocal literature, considered in their historical perspective. Guest artists will be heard at appointed times. Not open to music majors. Prerequisite: 1A-1B.
Spring (2)

150. Appreciation and History of Art
The period from the Renaissance through the modern school, treated in the same manner as in Aesthetics 50.
Spring (2)

ART

Many students, regardless of the field in which they may be majoring, recognize the need for an intelligent approach to the subject of art and art appreciation. How- ever, due to the erroneous popular feeling that art is a subject requiring “talent,” many students may refrain from enrolling in art courses.

For students who desire a better understanding of art, but who do not hope to acquire any of the art skills, the following courses are recommended:

5. Art Orientation

50. Appreciation and History of Art

51. Survey of Mexican Art

102A-102B. Music History

150. Appreciation and History of Art

Units

Aesthetics 5, Art Orientation 2
Aesthetics 50, History and Appreciation of Art 2
Aesthetics 51, Survey of Mexican Art 2
Art 9, Costume and Home-furnishing 2
Other courses which require certain skills but which are not beyond the ability of the average college student are:

Art 61B, Crafts 2
Art 6A, Design 2
Art A, Design and Composition 2
Art 94, Costume design 2

Candidates for a teaching credential in art should refer to the statement “Admission to Teacher Education” on page 22.

Lower Division Courses

A. Drawing and Composition

Problems involving perspective to develop ability to draw still life, furniture, exteriors, interiors, and the like. (High school equivalent may excuse the student from this course.)
Fall and Spring (2)

Art B. Drawing and Composition

Drawing of mechanical and natural forms by the use of line and value. Emphasis on proportion and structure. Some quick sketching, gesture and contour drawing.
Fall and Spring (2)

5A. Design

Fundamentals of design and composition and theory of color. Basic course used as a prerequisite for all advanced work.
Fall and Spring (2)

6B. Design (continued)

Original work in creative design and representation with special stress on modern tendencies. Prerequisite: Art 6A.
Fall and Spring (2)

7. Line, Color and Display

The principles of line, color and arrangement applied to store and window display. Building Study and observation of windows, color and materials used in display. Building the principles of line, color and arrangement applied to store and window display. Building Study and observation of windows, color and materials used in display. Building 7. Line, Color and Display

8. Costume and House Furnishings

An appreciative study of modern architecture and modern house furnishings, with emphasis on the spirit of genuine living and an appreciative study of the modern dress with emphasis on suitability to the figure, the personality and the occasion.
Fall and Spring (2)

11A. Industrial Design

Design of objects for manufacture with reference to their use, materials, and in accordance with factory practices and machine techniques. Prerequisite: Art 6A-6B, A.
Fall (2)
11B. Advanced Industrial Design
Advanced problems with particular attention to the techniques of presentation—working drawings, renderings in perspective and scale models. Prerequisite: Art 6A-6B, A. 11A
Spring (2)

14A. Lettering
Fundamental art principles applied to lettering. Practices for quick, accurate lettering; original problems using letters as design. Prerequisite: Art 6A
Fall (2)

14B. Posters and Commercial Art
The application of lettering to posters, newspaper and magazine advertising, and other forms of commercial art. The study of composition combined with lettering and special study of modern tendencies in publicity. Prerequisites: Art 6A, 14A
Spring (2)

15A-15B. Life Drawing
Drawing from the nude model. Prerequisite: Art A-B.
Year course, beginning either Fall or Spring (2-2)

16A-16B. Painting
Semester I: Composition of still life and flower forms in water color and oil. Semester II: Landscape and more advanced composition in water color and oil. Prerequisite: Art A-B.
Year course, beginning either Fall or Spring (2-2)

52. Stage Costume (For description, see Art 152)
Fall (2)

Art 61A. Crafts in the Elementary Schools
A foundation course which develops unification of work of the elementary grades through activities and experiences. These experiences grow out of environmental activities. They include study and working of clay, lumber and tools, textiles, and cardboard construction. Prerequisite: Art 6A.
Fall and Spring (2)

61B. Crafts
Problems involving the application of design principles to various fields—pottery, textiles, weaving, metal work, wood-carving, and book-binding. Prerequisite: Art 6A.
Fall and Spring (2)

94. Costume Design
Original designs of modern costumes suitable to the individual or to distinct types; the drawing of fashion figures; the rendering of fabrics and textures. Prerequisite: Art 6A
Spring (2)

95. Interior Decoration (See Art 105)

Upper Division Courses

106A-106B. Printmaking
Study of print crafts which includes the making of linoleum blocks, wood engravings, etchings and lithographs. Prerequisites: Art A, B, 6A.
Year course (2-2)

106C. Illustration
Same as 106A-B except that printmaking is applied to problems of book illustration. Prerequisites: Art A, B, 6A.
Spring (2)

112A-112B. Design and Composition
Imaginative organization of space by means of color, dark and light, perspective, and textures of various materials. Prerequisites: Art A-B, 6A-6B, and if possible 15A-15B or 106A.
Year course (2-2)

115A-115B. Life Drawing and Painting
Drawing and painting from nude and costume models. Year course, beginning either Fall or Spring (2-2)

115C-115D. Advanced Life
Painting from nude and costume models and advanced composition in oil. Portraiture. Prerequisite: Art 115A-115B.
Year course, beginning either Fall or Spring (2-2)

116A-116B. Advanced Painting
Painting in oils from still life and landscape, stressing composition. Prerequisite: Art 115A-115B.
Year course, beginning either Fall or Spring (2-2)

119A. Ceramics
Building of pottery on the basic techniques of coil, slab, mold making, and slip casting. Ceramic sculpture, glazing and kiln operations. Fall (2)

119B. Ceramics
Study of glazes and elementary clay technology. Mold making, slip casting with application to individual creative problems. Spring (2)

132. Stage Costume
Costume studied in relation to drama, opera and dance. Original designs for mood and character. Practical problems in designing costumes and accessories for college productions. Prerequisites: Art 6A, 32.
Fall (2)

194. Costume Design (For description, see Art 94)
Spring (2)

195. Interior Decoration
Lectures and designing in class, trips to art galleries, stores, factories and homes, studying how to recognize and choose the best in furniture, rugs, wall coverings, textiles and pottery as to design, color and materials. Actual experience in designing and arranging furnishings in homes and offices. Arrangement of flowers and objects for different types of rooms and occasions. Prerequisites: Art A, 6A.
Spring (2)

Graduate Courses

200A-200B. Special Problems
A graduate course in which students may carry out projects in various fields of art under the direction of faculty members who are specialists in the field chosen. A graduate course in which students may carry out projects in various fields of art under the direction of faculty members who are specialists in the field chosen. A graduate course in which students may carry out projects in various fields of art under the direction of faculty members who are specialists in the field chosen.
Fall and Spring (2-2)

HOME ARTS

Many students, regardless of their field of special study, recognize the need for more understanding of personal and family living. Courses with prerequisite may be elected to meet these needs.

Those students who wish to offer Home Arts as a part of the general major (see page 18) must complete a year of lower division work and from nine to fifteen units in the upper division, including Home Arts 3, 10, 101, 105, Sociology 108, and Education 102B.
Lower Division Courses

1. General Home Arts
   Consideration of necessary preparation for marriage, family budgets and money management; recreation, entertaining and social usage; finding a home, its furnishings and equipment; consideration of arrangement and care; child care, proper training and guidance. Open to men and women. (3)

5. Food Preparation
   Principles of food selection, preparation and service with consideration of aesthetic and nutritional values. Experience in food preparation and meal service. One lecture and two three-hour laboratories per week. (3)

10. Fundamentals of Clothing
    Selection of clothing with self-analysis as a basis; wardrobe planning and buying procedures. A study of commercial patterns and principles of garment construction. Two three-hour laboratories per week. (2)

61A. Nutrition
    Practical problems of nutrition including food requirements, food selection, and food habits. For men and women. One two-hour lecture per week. (2)

61B. Nutrition Laboratory
    Nutrition principles applied to food preparation, meal preparation, and special diets. One three-hour laboratory per week. (1)

Upper Division Courses

101. Clothing Selection
    Aims to develop taste in dress through a better understanding of the relation of art principles, psychology, fashion trends, personality and physical characteristics to cycles in fashion. History of costume is studied briefly as an aid in understanding recurring fashion selection to insure satisfaction and economy. (3)

105. Family Meals
    This course deals with the planning, preparing, and serving of attractive, well-balanced menus for different income levels, and for various occasions. The student will have responsibility for menu making, food purchasing, and meal management. Two three-hour laboratory, one hour lecture per week. (3)

160A. Merchandising Analysis—Textiles
    Properties, uses, selection and care of textile fibers and fabrics. The course is to develop judgment in the evaluation involved in the selection of textiles. (2)

160B. Merchandising Analysis—Non-Textiles
    Properties, uses, selection and care of metals, glass, rubber, fur, enamels and plasties. (2)

MUSIC

Candidates for a teaching credential in music should refer to the statement requirements on that page and those following. The curriculum for the A.B. Degree with a Special Secondary in Music is on page 28.

Lower division preparation for the liberal arts major in music: Music 1B-10:1D; Aesthetics 1B-10D.

Liberal arts major (upper division): twenty-four upper division units selected from: Music 10B, 105B; 106A; 107A; 110A, 120A; 121A, 121B, 121C, 122A, 122B, 122C; Aesthetics 10A, 10DB; and 4 units of music activity credit. (Music 111, 112, 113, 115, or 130). At least a C average in upper division music courses is necessary.

As a laboratory work, each music major is required to carry two music activities per semester.

1A. Musicanship—Fundamentals of Music
    The elements of music: scale construction; elementary music theory; drill in music reading both with syllables and with words; ear training, elementary music dictation. Basic course for all general elementary credential students. Music majors receive no credit.
    Fall and Spring (3)

1B. Musicanship—Music Reading and Ear Training
    Tonal and rhythmic dictation; rhythmic writing; sight singing. Basic course for majors and minors. Text—Smith and Krone: Fundamentals of Musicanship Book 1. Prerequisite: Music 1A, or the equivalent. Music majors not able to pass the departmental entrance examination in the fundamentals of music will take IA without credit preparation for this course.
    Fall and Spring (2)

1C. Musicanship—Advanced Music Reading and Ear Training
    Tonal work in minor keys; modal scales; dissonant triads and seventh chords; interval feeling in all chords; rhythmic progression and elementary forms; rhythmic, melodic and harmonic dictation. Prerequisite: Music 1B.
    Year course (2-2)

2A. String Instruments
    Beginner's class in violin, viola, 'cello and string bass. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.
    Fall and Spring (1)

3A. Woodwind Instruments
    Beginner's class in oboe, clarinet, flute and bassoon. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.
    Fall and Spring (1)

4A-4B. Elementary Harmony
    Scale construction, intervals, by-tonic and dissonant harmonies. Transposition and original composition in the simple forms. Text—Alchin: Applied Harmony Vol. I. Prerequisite: Music 1A-1B, or the equivalent, and at least one year of piano study.
    Year course (2-3)

6A. Brass Instruments
    Beginner's class in trumpet, French horn, baritone, trombone and tuba. Required of all music majors working for a Special Secondary credential unless this orchestral section is the major or minor field.
    Fall and Spring (1)

7A. Music Materials for the Elementary School
    Study of the song material in the state music texts and in the supplementary study. Required course texts. Appreciation materials applicable to the elementary school. Required course texts. Prerequisite: Music 1A
    Fall and Spring (3)

11A-B-C-D. Women's Glee Club—Treble Clef
    Entrance upon examination.
    Fall and Spring (1-4)

12A-B-C-D. Men's Glee Club
    Entrance upon examination.
    Fall and Spring (1-4)
12A-B-C-D. Orchestra
Permission of the conductor required for membership.
Fall and Spring (1-1)

15A-B-C-D. Choral Club
Entrance upon examination.
Fall and Spring (1-1)

*16A-16B-16C-16D. Individual Study of an Orchestral Instrument
Fall and Spring (1-1)

*17A-17B-17C-17D. Individual Study of Voice
Fall and Spring (1-1)

*18A-18B-18C-18D. Individual Study of Piano or Organ
Prerequisite: The ability to play artistically hymns and folk songs of the type found in the Golden Book of Favorite Songs.
Fall and Spring (1-1)

20A-B-C-D. Chorus
Open to anyone interested in singing standard choral works. No examination required.
Fall and Spring (1-1)

28A-B-C-D. Band
Permission of the conductor required for membership.
Fall and Spring (1-1)

28A-28B. Piano
Fundamental playing and reading techniques for the pianoforte. Emphasis upon playing by ear, and the development of interpretative ability. For beginners only. No credit for music majors and minors.
Year course (1-1)

28C-28D. Continuation of First Year Piano
Study of more advanced piano literature. Considerable emphasis upon ensemble piano playing and accompanying. Prerequisites: Music 28A-28B, and consent of instructor. No credit for Music Majors. Credit will be given to Music Minors.
Year course (1-1)

29A-29B. Class Voice
A class for beginners in the vocal field taking up the problems of breath control, tone placement, articulation and enunciation. Frequent performance before class required. Limited to 15.
Year course (1-1)

29C-29D. Continuation of First Year Voice
Study of more advanced songs with attention being given to interpretation, as well as continued work on tone, articulation and placement. Frequent performance before class required. Limited to 15.
Year course (1-1)

30A-30B. Chamber Music
String and woodwind ensembles. The consent of the instructor necessary for admission to class.
Year course (1-1)

* See page 74, conditions under which credit may be given for music study under private instructors.

102A-102B. Music History
The various movements in the development of music as related to the other arts. The chronological development of the art of music, with particular emphasis on the larger works. Considerable attention is given to the works of modern composers. Many symphonic works are studied from the orchestral scores. Music majors are required to complete additional assignments for full credit. Prerequisite: Aesthetics 1A-1B.
Year course (2-2)

105A-105B. Advanced Harmony and Composition
Study of the possible types of modulation and harmonic harmonies: continuation of harmonic analysis and original composition. Text—Alichea: Applied Harmony Vol. II. Prerequisite: Music 4A-4B.
Year course (3-3)

106. Counterpoint
Study of the five species of counterpoint with much practice in writing in such forms. Application of contrapuntal style to modern composition. Prerequisite: Music 4A-4B.
Fall (2)

107. Form and Analysis
Aural and visual analysis of music forms through a consideration of structure, harmonic content, and style. Prerequisite: Music 105A-105B.
Spring (2)

111A-B-C-D. Women's Glee Club—Treble Clef
Entrance upon examination.
Fall and Spring (1-1) (A maximum of 2 units in glee club may be counted toward the A.B. Degree)

112A-B-C-D. Men's Glee Club
Entrance by examination.
Fall and Spring (1-1) (A maximum of 2 units in glee club may be counted toward the A.B. Degree)

113A-B-C-D. Orchestra
Permission of the conductor required for membership.
Fall and Spring (1-1) (A maximum of 4 units in orchestra may be counted toward the A.B. Degree)

115A-B-C-D. Choral Club
Entrance by examination.
Fall and Spring (1-1) (A maximum of 2 units in Choral Club may be counted toward the A.B. Degree)

Fall and Spring (1-1)

*117A-117B-117C-117D. Advanced Individual Study of Voice
Fall and Spring (1-1)

*118A-118B-118C-118D. Advanced Individual Study of Piano or Organ
Fall and Spring (1-1)

119A. Instrumental Conducting
Conducting and reading of orchestral scores.
Fall and Spring (1)

* See page 74, conditions under which credit may be given for music study under private instructors.
120A. Vocal Conducting
The theory of vocal conducting together with practical experience gained from directing the college chorus. Prerequisites: Upper division music major or minor.
Fall and Spring (1)

121A. Instrumentation
Arranging of music for full orchestra. Selected works of pupils to be performed by standard orchestras.
Fall and Spring (2)

126A-B. C-D. Band
Permission of the conductor required for membership.
Fall and Spring (1-1) (a maximum of 4 units in band may be counted toward the A.B. Degree)

130A-130B. Chamber Music
String quintet and woodwind ensembles only. Permission of the instructor necessary for class membership.
Year course (1-1)

Graduate Courses

Music 203. Musicostructure
Survey of bibliography and methods of research in music history and literature. Prerequisites: Aesthetics 102A-102B and consent of Music Department. Advanced courses in Harmony, Composition, and Forms and Analysis are desirable.
Fall (3)

Music 206. Composition
Music composition in the larger forms. Students will be required to submit a complete work in one of the larger musical forms as thesis in the course. Prerequisites: Music 165A-165B, 166A, 167A, 121A, and consent of the Music Department.
Spring (3)

CONDITIONS UNDER WHICH CREDIT MAY BE GIVEN FOR MUSIC STUDY UNDER PRIVATE INSTRUCTORS
Credit may be allowed for private instruction in music under the following conditions:
1. The applicant for such credit must be a regularly enrolled student in the music department of the college.
2. The instructor giving such private work must be approved by the Music Department. All private work and the names of all such teachers must be registered in the office of the music department chairman at the beginning of the semester.
3. In the case of first semester private study, a placement examination conducted by the music department faculty at the beginning of the semester will show the status shown by an examination conducted by the music department faculty at the end of the semester.

DIVISION OF HEALTH, PHYSICAL EDUCATION, AND RECREATION

HEALTH EDUCATION

Lower Division Courses

21. Health and Social Adjustment (Men and Women)
A course concerned with the personal health problems of college students; designed to provide scientific health information; promote wholesome attitudes and practices relating to healthful living. Required of all freshmen. Replaces former Health Education 1 and 2.
Fall and Spring (3)

65. Community Health
A study of community health problems; the role of the citizen, the public and private (or voluntary) agencies in promoting and protecting the health of the community. Prerequisite: Health Education 21. Required of physical education major students.
Fall (3)

90. Physiology of Reproduction (Women)
A course consisting of a series of lectures and discussions dealing with normal and abnormal physiology and anatomy of reproduction, facts and truths in sex hygiene, and related topics. Prerequisite: Health Education 21.
Fall and Spring (1)

Upper Division Courses

151. Health Education for Teachers
A course for teacher education students designed to develop a teacher awareness of pupil health needs. The elements of the health education program are considered, with emphasis on the responsibility of the teacher in health guidance; observation of health for children, standards for screening defects, screening and in-service training of teachers; and other activities. Prerequisite: Health Education 21.
Fall and Spring (2)

152. Health Education Programs
The construction of the health education program including objectives, scope and sequence of instruction, teaching methods, source materials and evaluation procedures, with practice in building functional instructional units. Prerequisite 151.
Fall (3)

153. Administration of School Health Program
The principles, policies, and practices in organizing and conducting the school health program as an integral part of the total school and community program. A study of the administrative aspects of the divisions of the school health program; health instruction, health service (including health guidance), healthful school environment, and relationship to physical education and recreation. Partially fulfills Health and Development Credential requirement for nurses.
Spring (3)

Graduate Courses

202. Problems in Health Education
A survey of current problems facing the Health Education profession includes a review of the literature, discussion of trends, observation of school situations together with the analysis and evaluation of actual problems. Written reports are required. Prerequisite: Graduate standing. (3)
PHYSICAL EDUCATION

MEN'S DEPARTMENT

Candidates for a teaching credential in physical education should refer to the statement "Admission to Teacher Education Curricula" on page 22. For the teacher education curriculum in physical education, see page 39.

A two-hour activity course each semester is required for the two years of lower division. A medical examination is given each student when entering and recommendation is made as to type of activity most beneficial. Developmental physical education classes are taken for special needs are offered. The content of the required courses is planned to give each student an opportunity to participate in many activities of carry-over value, developmental nature, and recreational interest. An opportunity is afforded for students to participate in competitive sports and intramural programs.

Intercollegiate sports may be taken in addition to required lower division courses. A maximum of one unit in sports in one semester may be counted toward the A.B. Degree.

Freshmen are required to choose from courses numbered 1-10. Sophomores may choose from courses numbered 11-18. An activity course may be taken for credit once only with one-half unit credit. The complete uniform will be furnished by the student.

Activity Courses

<table>
<thead>
<tr>
<th>Units</th>
<th>Courses</th>
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<tbody>
<tr>
<td>1A-1B-1C-1D</td>
<td>Developmental Physical Education, Fall and Spring (3)</td>
</tr>
<tr>
<td>1</td>
<td>Basketball, Fall and Spring (3)</td>
</tr>
<tr>
<td>2</td>
<td>Boxing, Fall                              (3)</td>
</tr>
<tr>
<td>3</td>
<td>Gymnastics, Fall                          (3)</td>
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<tr>
<td>4</td>
<td>Soccer, Fall                              (3)</td>
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<tr>
<td>5</td>
<td>Softball, Fall and Spring                 (3)</td>
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<tr>
<td>6</td>
<td>Football, Fall and Spring                 (3)</td>
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<tr>
<td>7</td>
<td>Track and Field, Spring                   (3)</td>
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<tr>
<td>8</td>
<td>Volley Ball, Spring                       (3)</td>
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<td>9</td>
<td>Wrestling, Spring                         (3)</td>
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<tr>
<td>10</td>
<td>Archery, Spring                           (3)</td>
</tr>
<tr>
<td>11</td>
<td>Badminton, Fall and Spring                (3)</td>
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<tr>
<td>12</td>
<td>Fencing, Fall                             (3)</td>
</tr>
<tr>
<td>13</td>
<td>Golf, Spring                              (3)</td>
</tr>
<tr>
<td>14</td>
<td>Tennis, Fall and Spring                   (3)</td>
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<tr>
<td>15</td>
<td>Handball, Fall and Spring                 (3)</td>
</tr>
<tr>
<td>16</td>
<td>Track, Fall and Spring                    (3)</td>
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</tbody>
</table>

Intercollegiate Sports

<table>
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<tr>
<th>Units</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1A-1B-1C-1D</td>
<td>Archery, Spring (3)</td>
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<tr>
<td>1</td>
<td>Badminton, Spring (3)</td>
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<tr>
<td>2</td>
<td>Basketball, Fall and Spring (3)</td>
</tr>
<tr>
<td>3</td>
<td>Boxing, Fall (3)</td>
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<tr>
<td>4</td>
<td>Gymnastics, Spring (3)</td>
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<td>5</td>
<td>Soccer, Fall and Spring (3)</td>
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<tr>
<td>6</td>
<td>Softball, Fall and Spring (3)</td>
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<td>7</td>
<td>Football, Fall and Spring (3)</td>
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<td>8</td>
<td>Track and Field, Spring (3)</td>
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<td>9</td>
<td>Volley Ball, Spring (3)</td>
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<td>10</td>
<td>Wrestling, Spring (3)</td>
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<tr>
<td>11</td>
<td>Archery, Spring (3)</td>
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<td>12</td>
<td>Badminton, Fall and Spring (3)</td>
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<td>13</td>
<td>Fencing, Fall (3)</td>
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<td>14</td>
<td>Golf, Spring (3)</td>
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<td>15</td>
<td>Tennis, Fall and Spring (3)</td>
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<td>16</td>
<td>Handball, Fall and Spring (3)</td>
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<td>17</td>
<td>Track, Fall and Spring (3)</td>
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<tr>
<td>18</td>
<td>Wrestling, Spring (3)</td>
</tr>
</tbody>
</table>

Professional Activities

These courses are required of all men majoring in Physical Education. Each includes the theoretical and practical aspects of participation, techniques of teaching and proficiency in officiating. See Requirements for Special Secondary Credential in Physical Education.

<table>
<thead>
<tr>
<th>Units</th>
<th>Courses</th>
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<tbody>
<tr>
<td>41</td>
<td>Wrestling and Speedball, Fall (2)</td>
</tr>
<tr>
<td>42</td>
<td>Gymnastics and Tumbling, Volleyball, Spring (2)</td>
</tr>
<tr>
<td>43</td>
<td>Boxing and Handball, Fall (2)</td>
</tr>
<tr>
<td>44</td>
<td>Soccer and Dance, Spring (2)</td>
</tr>
<tr>
<td>142</td>
<td>Baseball and Tennis, Fall (2)</td>
</tr>
<tr>
<td>146</td>
<td>Football and Golf, Spring (2)</td>
</tr>
<tr>
<td>147</td>
<td>Basketball and Badminton, Fall (2)</td>
</tr>
<tr>
<td>148</td>
<td>Track, Field and Archery or Swimming, Spring (2)</td>
</tr>
</tbody>
</table>

WOMEN'S DEPARTMENT

Candidates for a teaching credential in physical education should refer to the statement "Admission to Teacher Education Curricula" on page 22, and to the outline for the A.B. Degree with Special Credential in Physical Education on page 40. Two hours per week of directed physical activity are required throughout the year.

Two hours per week of directed physical activity are offered through the school year. The individual activities, tennis, golf, archery, badminton and dancing are offered through the school year. Candidates for the special credential in physical education must select one as a major activity and two others as minors. Skills in the activities thus selected must be maintained as prerequisite to the senior course, Physical Education 185.

1A. Fundamental Skills
Practice in efficient fundamental body movements. Fall and Spring (4-4)

1B. Folk Dancing—Elementary (Men and Women)
Fall and Spring (4-4)

1C. Rhythmic Skills
Practice in dance techniques and rhythms. Fall and Spring (4-4)

1D. Team Sports
Fall and Spring (4-4)

2A-2B. Folk Dancing—Advanced
Fall and Spring (4-4)

3A-3B. Modern Dance
Continuation of practice in dance technique and an introduction to dance composition. Fall and Spring (4-4)

4A-4B. Social Dancing (Men and Women)
Fall and Spring (4-4)

5A-5B. Archery
Fall and Spring (4-4)

6A-6B. Badminton
Fall and Spring (4-4)

7A-7B. Golf
Fall and Spring (4-4)

11A-11B. Tennis
Fall and Spring (4-4)
12A-12B. Advanced Modern Dance (Men and Women)
Laboratory experiments in advanced choreography and percussion accompaniment.
Prerequisites: 1C and 2A for women, 1C for men.
Fall and Spring (1-1)

PROFESSIONAL THEORY COURSES
(Open to Men and Women)
Lower Division Courses

51. First Aid and Safety Education
The accepted procedure in meeting the emergencies which arise daily in schoolroom, play or on the athletic field, bench, mountains, or any of the many places where the physical director is called on for first aid. Special attention given to the arrangement of the apparatus and the activities so that many of the most common accidents are prevented or minimized. Course content qualifies for Red Cross Certificate.
Spring (2)

53. Physical Education in the Elementary School
The content of the state program in physical education forms the basis of the course. Two lectures, two one-hour laboratory periods per week.
Fall and Spring (2)

72. Introduction to Physical Education
The history and principles of physical education and sports movements of the past. The aims and objectives of the modern physical education program are studied and an effort is made to give the student a basic philosophy or a background for his professional training. Required of all physical education majors and minors.
Fall (2)

Upper Division Courses

153. Administration of Secondary Physical Education
The philosophy and principles of physical education and its relation to general education. Analysis of present-day programs and methods in terms of objectives. The study of selection and adaptation of activities, examination and grouping of pupils, testing the results of teaching, evaluation of the teacher, provision of equipment, and departmental organization. Selection and use of audio-visual aids.
Fall (3)

154. Administration of Physical Education in Secondary Schools
The problems and practices in organization and administration of the school program including the activity program, intramural and inter-school athletics. The selection and care of equipment and supplies, schedules and schedule making, layout and maintenance of facilities, are taken up. Required of all majors. Prerequisite: P.E. 155 and senior standing.
Spring (3)

155. Applied Anatomy and Kinesiology
Anatomical and kinesiological analysis of human structure and movement. Application of analysis relative to mechanical principles as influenced by efficiency factors of body functions. Prerequisites: Zoology 8 or 20.
Fall (3)

156A-156B. Sports Methods (Women)
Analysis of skills in basketball, hockey, soccer, speedball, volleyball, and softball; methods of presenting sports to large groups; study of rules and officiating.
Fall and Spring (2-2)

160. Teaching of Body Mechanics (Women)
A study of efficient use of the body in daily living; evaluation and classification of exercises, methods and practice in planning and presenting material.
Fall (2)

161. Folk Dancing Materials and Advanced Techniques (Women)
A study of folk customs, festivals and costumes. Selection of dance materials for different age groups. Practice in advanced techniques. Prerequisite: 1B.
Spring (2)

164A-164B. Methods in Modern Dance
Advanced choreography, study of musical and percussion accompaniment, historical survey of dance, practical experience in production. Two activity periods and one lecture per week.
Fall and Spring (2)

165. Administration of Community Recreation
An introductory course in the principles of organization and promotion of community recreation and leisure time and recreation activities. Content consists of a study of recreation leadership, the growth of the recreation movement, the operation of facilities, program of activities, features, services, organization and administration problems. Required course for Recreation minors.
Fall (3)

170. Recreational Leadership
A study of the practical application of the activities adapted to group recreation programs. Activities include arts and crafts, special athletic events, drama, dancing, music, hobbies, camping and hiking, socials, games and contests and stunts. This course is presented through lectures, discussions, field trips and actual class participation in the above activities. Required of all Physical Education majors, Physical Education and Recreation minors.
Spring (3)

177. Individual Program Adaptation
The adaptation of programs to the capacities and physical needs of individuals, including analysis and evaluation of aims, techniques and procedures in developmental, preventive and corrective measures. Special problems, such as survey of the situation, recognition of divergences, selecting and assigning of students, instructional problems, follow-up, teacher limitations and public relations are considered. Prerequisites: P.E. 155 and senior standing.
Spring (3)

183. Techniques of Individual Sports (Women)
A course summarizing rules and teaching methods, and testing individual playing ability.
Fall (3)

189. Special Study in Health, Physical Education and Recreation
An opportunity is presented for extensive review of pertinent literature, individual research and advanced study of problems in the profession. Credit will range from 1 to 3 units according to the caliber of work. Prerequisite: Approval of Chairman of Division. (1-3)

Graduate Courses

200. Evaluation Procedures in Health, Physical Education and Recreation
A study of tests and measurements in the profession with practice in their use and construction and interpretation of results. Prerequisite: Graduate standing. (3)

201. Developmental Physical Education
Intensive study of developmental problems, including methods of correcting such conditions through exercise. Practice in making remedial physical examinations, constructing individual exercise programs, exercising remedial physical examinations, constructing individual exercise programs, exercising remedial Exercise, as well as ethical procedures and limitations are considered. Prerequisite: Graduate standing, Applied Anatomy and Kinesiology.
Fall (2)
DIVISION OF LANGUAGES AND LITERATURE

COMPARATIVE LITERATURE

Requirements for the minor in Comparative and General Literature: (1) a minimum of 15 units of work must be completed in courses offered by the department, at least 9 of which must be in upper division courses; (2) the work to be taken should be arranged in consultation with an instructor selected by the department.

Lower Division Courses

52A-52B. Types of World Literature
For a description of this course, see English 52A-52B.
Year course (3-5)

Upper Division Courses

101A. Modern Continental Fiction
For description, see English 101A.
Spring (3) (Offered in 1948-49 and alternate years)

104A-104B. Spanish American Literature
For a description of this course, see Spanish 104A-104B, which may be taken for credit in Comparative Literature by doing the required reading in English translation.
Year course (3-3) (Offered in 1948-49 and alternate years)

115. The Bible as Literature
For description, see English 115.
Spring (3) (Offered in 1948-49 and alternate years)

140A-140B. Masterpieces of French Literature
A cultural course designed to be given in introduction to the great French works from the Song of Roland through Cyrano de Bergerac, with emphasis on the works of the 16th, 17th, 18th and 19th century authors. The contributions to world thinking of Rousseau, Hugo, Balzac, Flaubert, Maupassant, Zola, will be studied through lectures and outside readings.
Year course (3-3) (Offered in 1947-48 and alternate years)

162A. Survey of Drama: Comedy
For description, see English 152A.
Fall (3)

162B. Survey of Drama: Tragedy
For description, see English 152B.
Spring (3)

165. Literature of the Continental Renaissance
Development of Renaissance literature in western and southern Europe. Studies in the works of Petrarch, Ariosto, Tasso, Erasmus, Rabelais, Calvin, Cervantes and others.
Spring (3) (Offered in 1947-48 and alternate years)

166. Classicism in European Literature
Aims, ideals, themes, influences, literary manners and methods of the period of classicism in European literatures, particularly that of France. Studies in the writings of Moliere, Racine, Descartes, Boileau, Montesquieu, Voltaire and others.
Fall (3)
109. The Rise of Romanticism in European Literature
Continental origins and growth of the romantic movement. Studies in the works of Rousseau, Goethe, Schiller, Lessing, Chateaubriand, Mme. de Stael, and others.
Spring (3) (Offered in 1948-49 and alternate years)

ENGLISH

Lower division preparation for the liberal arts major in English: At least 35 units of work, including English 1B, 6A-6B, and either 50A-50B or 60A-60B. (Students who take English 1A are required to take English 1C and substitute the two courses for English 1B; students who take English 1B but have a low score on the college entrance test in reading are also required to take English 1C.) Upper division requirements for the liberal arts major: (1) At least 24 units in upper division English and Comparative Literature courses, selected under the supervision of an adviser appointed by the English Department; (2) a reading knowledge of one foreign language approved by the department. (By "reading knowledge" is meant two full years of lower division work, or the equivalent. Further work in the language, in upper division courses, is highly recommended.)

Lower Division Courses

1A. Subject A: English Composition
The elements of composition, including drill in grammar and usage; exercises in vocabulary building and careful reading; theme writing. Credit in this course is equivalent to passing the English A Examination, and admits to English 1C.
Fall and Spring (3)

1B. Freshman Composition
Exposition is stressed. Prerequisite: Satisfactory Subject A test. Not open to students who have taken English 1A.
Fall and Spring (3)

1C. Freshman Literature
A course designed to develop college reading skills through practice in the analysis of prose of varying levels of difficulty. Emphasis will be placed on the student's problems in reading rapidly and accurately and on mature books in literature, history, psychology, science, philosophy, etc.
Fall and Spring (3)

6A-6B. The Study of Literature
A basic course in the techniques of reading imaginative literature with greater sympathy, insight, and vividness. The natural gap between the entering college student and the author of serious literature is explicitly recognized; how the former may close it through developing the requisite informed and trained attention is the subject of the course. Plays, stories, and poems contemporary in appeal will constitute an elective.
Year course (3-3)

3. English in Business
Theory and practice of business correspondence. Business letters as applied salesmanship; problems in writing credit and collection letters, applications for credit, as indicated by Subject A Examination, or record from college. This in conjunction, if used may be used to meet English requirements in other fields.
Fall and Spring (3)

10. Recreational Reading
Development of personal tastes for leisure-time reading through lectures and oral or written reports. May be taken a second time with new material.
Fall and Spring (1)
116A. The Age of Elizabeth
Poetry and prose, exclusive of the drama.
Fall (3) (Offered in 1947-48 and alternate years)

116B. The Elizabethan Drama
Principal contemporaries of Shakespeare.
Spring (3) (Offered in 1947-48 and alternate years)

117A-117B. Shakespeare
A chronological survey. The first semester gives special emphasis to the histories and chronicles; the second, to tragedy and the dramatic romances.
Year course (3-3)

118A. The Age of Swift and Pope
A study of the literature of the first half of the eighteenth century, with special emphasis on social satire of Swift, Pope, Addison, Steele, Gay, and Prior.
Fall (3)

118B. The Age of Johnson
A study of Johnson and his circle as representative of their age, together with a study of Burns, Blake, and other forerunners of the age of Romanticism.
Spring (3)

119. The Romantic Period: Poetry
A study of early nineteenth century poetry; the work of Wordsworth, Coleridge, Byron, Shelley, and Keats, in relation to the thought of the revolutionary period.
Fall (3) (Offered in 1947-48 and alternate years)

120. Seventeenth Century Literature
A study of the literature of the seventeenth century, with emphasis on Jonson, Donne, Bunyan, Milton, and Dryden. Consideration will be given to the political, religious and social backgrounds of the seventeenth century.
Spring (3) (Offered in 1947-48 and alternate years)

121. The Victorian Period: Poetry
A study of Tennyson and Browning and their contemporaries and successors, relating English poetry to nineteenth century life and thought.
Fall (3) (Offered in 1948-49 and alternate years)

126. Nineteenth Century British Prose
Romantic and mid-Victorian prose writers, including Coleridge, Hazlitt, Lamb, DeQuincey, Carlyle, Landor, Macaulay, Mill, and Thackeray.
Fall (3) (Offered in 1948-49 and alternate years)

127. Modern British Prose
Late nineteenth and early twentieth century essays of Arnold, Galsworthy, Huxley, Newman, Pater, Ruskin, Shaw, Stevenson, Wells, and others.
Fall (3) (Offered in 1947-48 and alternate years)

129. Contemporary British Literature
Selected prose and poetry of England and Ireland from 1914 to the present, including Shaw, Yeats, Brooke, Joyce, Maugham, Huxley, D. H. Lawrence, Eliot, the Oxford poets, and the principal authors belonging to the two wars.
Spring (3) (Offered in 1948-49 and alternate years)

131. American Literature: 1820-1860
The study of the important romantic writers, with emphasis on the New England group.
Fall (3)

132. The Frontier and American Literature
A survey of the influence of the frontier upon American literature from colonial days to the present. Studies in source materials, biographies, and representative writers such as Cooper, Harte, Twain, and Rolvaag.
Fall (3)

133. American Fiction
The outstanding writers of novels and short stories, from Cooper to Norris.
Spring (3)

134. American Literature: 1900 to the Present
A survey of American literature since 1900 with emphasis upon contemporary poetry, fiction, and drama.
Spring (3)

135. American Colonial and Revolutionary Literature
The Puritan system of thought and way of life, and the literary and intellectual movements of the eighteenth century, studied in the works of such representative writers as Mather, Franklin, Paine, Franklin, and Brooks.
Fall (3)

143A-143B. The English Novel
History of the English novel from the beginnings to the present. Extensive reading of novels with reports, lectures, and discussions. The first semester covers the nineteenth century; the second semester deals with the modern works.
Year course (3-3)

149. Contemporary Poetry
Moods of the world today as reflected in the most influential British and American poets of this century; emphasis on current directions in the practice and criticism of verse.
Fall (3) (Offered in 1947-48 and alternate years)

152A. Survey of Drama: Comedy
Studies in the field of comedy, based on selected readings from the works of Continental, English, and American dramatists. Lectures, discussions, and reports on reading.
Fall (3)

152B. Survey of Drama: Tragedy
Procedure as in 152A with selections taken from the field of tragedy.
Spring (3)

165A-165B. Literature in the Perspective of Other Studies of Man
An honors type reading and discussion course devoted to analyzing literature in other as an expression of a cultural field and to exploring the values of literature in other studies of the life of man. Registration limited to majors and graduate students in studies of the life of man. Admission by permission of the instructor.
Year course (3-3)

166. Honors Course
Special study. Open to members of the Honors Group in English (see page 14).
Fall and Spring (1 to 3-1 to 8)

191. Advanced Composition
A course in modern prose writing. Emphasis on the narrative and the essay, particularly on the problems of effective expression as exhibited in the work of members of the class and encountered in the work of high school students. Prerequisite: One or more college courses in composition. Open only to senior and graduate students.
Spring (3)
192. The English Language
An inductive approach to basic aspects of the language. The course includes an analysis of English sounds, grammar, and syntax. Modern, Middle, and Old English. Open only to senior and graduate students.

Fall (3)

193. Chaucer
A study of Chaucer's works, and a consideration of the social and literary backgrounds of the fourteenth century. Open only to senior and graduate students.

Fall (3)

194. Milton
A study of Milton's prose and poetry, with emphasis on Paradise Lost. Consideration will be given to the historical, philosophical, and literary significance of the works studied. Open only to senior and graduate students.

Spring (3) (Offered in 1947-48 and alternate years)

195. Literary Criticism
An historical survey of the principles and practices of literary criticism from Greek times to the nineteenth century. Readings in the works of Aristotle, Horace, Longinus, Sidney, Boileau, Dryden, Lessing, Sainte-Beuve, Coleridge, and Arnold. Open only to senior and graduate students.

Fall (3) (Offered in 1948-49 and alternate years)

196. The Forms of Poetry
Foundation materials for the appreciation of poetry, including critical concepts of the nature of the art; metrical theory; history of the leading poetic types; and the relation of poetic forms to thought, mood, and environment. Open only to senior and graduate students.

Spring (3)

199. Research: Advanced Honors Course
Special study. Open to mature, specially qualified students, graduates, teachers of English literature, and others who have demonstrated marked aptitude for intensive research in the field of English literature.

Fall and Spring (3-5)

Graduate Courses

201. Shakespeare
A seminar on the graduate level; Bibliography, critical study, special problems, criticism. Prerequisite: Graduate standing. Recommended: At least one undergraduate course in Shakespeare.

Spring (2)

221. Regionalism in American Literature
A seminar on the graduate level; Bibliography, special problems, with concentration on selected regions. Prerequisite: Graduate standing. Recommended: At least one undergraduate course in American literature.

Fall (2)

Comparative Literature
For other courses in literature, offered by members of the English Department and other departments, see Comparative Literature, page 81.

FOREIGN LANGUAGES
The courses offered in foreign languages are listed below. See pages listed after French, see below; General Language, page 88; German, page 88; and Spanish, page 88.

As a background for advanced work in Romance languages, students are advised to include in their electives as many as possible of the following courses: Geography 52A, 52B, 56A, 56B, 58A, 58B, 59A, 59B, 101A, 116, 118A, 118B, 119, 128, 143, 152A, 152B.
111A-111B. Seventeenth Century Dramatic Literature
Reading in class of plays of Molére, Corneille, and Racine. Outside readings and lectures on the background of the seventeenth century in France. Prerequisite: French D or its equivalent, with a grade of C.
Year course (3-3) (Offered in 1930-31)

199. Comprehensive Reading and Survey Course
Designed to fill up the gaps in the reading done in courses. Class meeting once a week for guidance, reports, and quizzes. Required of all seniors majoring in French.
Spring (3)

GENERAL LANGUAGE

Lower Division Course

A. Latin and Greek Word Derivation
A general and elementary course in philology. A study of Latin and Greek roots of most frequent occurrence in English, and of the English words derived from them.
Fall (3)

B. Language for Music and Speech Students
Study of the pronunciation of French, German, and Italian for the use of singers, radio announcers, etc. No prerequisite. This course may be taken for one, two, or three units of credit depending on the individual student's need. Credit in this course does not count toward the 10 unit foreign language requirement.
Spring (1-3)

GERMAN

Lower Division Course

A-B. Elementary
Pronunciation, reading, and grammar, with practice in simple conversation, narration and description, both oral and written. Credit not given for German A unless followed by German B. Students who have had one year of German in high school should register for two units of work in German A. Those who have had two years of German in high school should register for four units of work in German B.
Year course (5-5)

C-D. Intermediate Review and Reading
Reading and composition; study of standard prose as basis for class work; collateral reading with written reports; German conversation, with the texts read as its equivalent. Credit not given for German B or three years of high school German; or its equivalent, should enter German D.
Year course (3-3)

SC-SD. Scientific Reading
First semester, readings in scientific render on chemistry, physics, etc.; occasional written reports on scientific subjects read outside of class; sight reading, reports required; sight reading. Prerequisite for SC; German B with a grade of C of C, or four years of high school German.
Year course (5-3)

SPANISH

Lower division preparation for the liberal arts major in Spanish: Spanish Liberal arts major in Spanish: Twenty-four units of upper division work, of 118, History 161, 162, or Comparative Literature 115, 116, 128 in consultation with the chairman of the department. At least a C average in upper division major

A-B-C-D; French A-B or German A-B; History 4A-4B or 8A-8B, while at least 21 must be in Spanish, and three units may be selected from Geography with the chairman of the department.

A-B. Elementary
Intensive study of Spanish grammar and syntax, with daily written work; class drill in conversational idiom and pronunciation; reading with oral discussion and response; dictation; introduction to contemporary prose writers. Credit not given for Spanish A unless followed by Spanish B. Students who have had one year of Spanish in high school should register for two units of work in Spanish A. Those who have had two years of Spanish in high school should register for four units of work in Spanish B.
Year course (5-5)

C-D. Intermediate Spanish
Reading and composition: study of standard prose as basis for class work; collateral reading in prose and drama, with written reports in Spanish; dictation; class work conducted mainly in Spanish. Individual conferences. Prerequisite for C: Spanish B or three years of high school Spanish. Prerequisite for D: Spanish C or four years of high school Spanish.
Year course (3-3)

50. Spanish Commercial Correspondence
A one-semester intermediate course in Spanish composition, directed along the line of commercial correspondence. A practical course, with translation of business letters, and supplementary reading in Spanish on commercial subjects. Prerequisite: Three years of high school Spanish, or completion of Spanish B. This course may substitute for Spanish C in the C-D sequence.
Fall (3)

70. Spanish for Elementary-School Teachers
Elementary Spanish to meet the needs of elementary-school teachers. Emphasis on the oral aspects of the language with reading centering around Mexico. No prerequisite. Open only to students enrolled in the general elementary school curriculum.
Spring (3)

101A-101B. Conversation and Composition
Translation into Spanish of moderately difficult English prose passages. Free composition in Spanish. Outside reading of modern Spanish plays, with written reports in Spanish. Oral practice in colloquial Spanish with extensive use of phonograph recordings. Prerequisite: Spanish D, or its equivalent, with grade of C.
Year course (3-3)

102A-102B. Introduction to Spanish Classics
Reading from several types of classical literature. Lazarillo de Tormes and other novels of the Quixote, and the Cien Moches Poesias; Don Quixote, and the Cien Moches Poesias.
Year course (3-3) (Offered in 1940-41)

104A-104B. Spanish-American Literature
Reading from representative Spanish-American authors during the colonial and revolutionary and modern periods. Lectures, class reading, collateral reading and translation of the required reading in English translation.
Year course (3-3) (Offered in 1948-49)

105A-105B. Modern Spanish Drama
The development of the drama of Spain from the beginning of the nineteenth century to the present time. Prerequisite: A grade of C in Spanish E or permission from the instructor.
Year course (3-3)
110A-110B. Novel and Short Story in Spain
The development of the novel and short story in Spain from 1850 to the present time. Prerequisite: A grade of C in Spanish D or permission from the instructor.
Year course (3-3) (Offered in 1948-49)

199. Comprehensive Reading and Survey Course
Designed to fill up the gaps in the reading done in courses. Class meeting once a week for guidance, reports, and quizzes. Required of all seniors majoring in Spanish. Spring (3)

JOURNALISM
Students who wish to specialize in journalism should use it as one field in a general major. See page 18.

Lower Division Course
51A-51B. News Gathering and Reporting
Study of news sources and types; practice in news and feature writing; newspaper organization; excursions and special lectures. Course planned for freshmen as a prerequisite to positions on all college publications.
Year course (2-3)

Upper Division Courses
101. Feature Writing
Study and practice in writing special articles for newspapers, general circulation magazines and non-technical trade magazines. Frequent written assignments.
Spring (3) (Offered in 1947-48 and alternate years)

102. Editorial Writing
Study and practice in writing effective presentation of opinion for publication. Extensive practice in this form of writing.
Spring (3) (Offered in 1949-50 and alternate years)

103. Editing and Copyreading
A laboratory course in the final preparation of copy for publication, making up the newspaper and use of photographic art.
Fall (3)

SPEECH ARTS
Lower division preparation of the Liberal Arts major in Speech Arts: At least 15 units of lower division courses in Speech, specializing in the field of dramatic art, public speaking or a guided combination of the two.
Upper division requirements for the Liberal Arts major in Speech Arts: 24 units of upper division work including Speech Arts 105; 6 units selected from 155A-155B, 140A-140B, 170A-170B, 192A-192B (the first semester of any of these courses may be combined); 6 units selected from 157A-157B, 158A-158B, 190A-190B, 192A and 192B; 2 units selected from upper division English literature.
Candidates for the teaching credentials should refer to page 41.

Lower Division Courses
1. Voice and Diction
Exercises and drills to improve the quality, flexibility and effectiveness of the further courses in public speaking and dramatic art.
One semester (3)

2A. Fundamentals of Public Speaking
Training in fundamental processes of oral expression; method of obtaining and organizing material; outlining principles of attention and delivery; extemporaneous of speech.
Fall and Spring (3)

28. Extemporaneous Speaking (or Forum Speaking)
Practise in extemporaneous speaking on subjects of current interest, both national and local, with stress laid on the organization and delivery of content material. Forum discussion will provide speakers with the opportunity of assembling facts quickly to meet such questions as any audience situation might demand.
Fall and Spring (3)

11A. Interpretation
The oral interpretation of longer literary selections, both in poetry and prose; a fundamentals course designed for the beginning students in speech as well as those majoring in English literature.

11B. Interpretation
Emphasis placed on stage poise and grace with adequate attention given to variations in the presentation of literary selections. Much opportunity is provided for individual and group creative work. No prerequisite. Class limited.
Spring (3)

20. Corrective Speech
Corrective laboratory training prescribed on the basis of vocalization tests made on Recording Machine. Required of education majors who fail to meet speech requirements test. Private clinical assistance given to stutterers and lispsers.
Fall and Spring (1) (9 weeks' course)

55A-55B. Elementary Acting
The fundamentals of voice and pantomime applied to the problems of characterization in group scenes in modern plays. The aims of this course include the discovery and development of talent and the understanding of the problems of the actor for directors and teachers. Acting experience is available in workshop productions and also in the major productions of the department. (Speech Arts 55A prerequisite for Speech Arts 55B).
Year course (3-3)

56A-56B. Dramatic Production
A general survey of the process of play production for lower division students planned to introduce them to the whole organization of the college and school theater with particular emphasis on back-stage methods and practice, including stagecraft and technical lighting. Technical crews for the departmental productions are taken from this class.
Year course (3-3)

57A-57B. Radio Production
A course presenting the background, theory and fundamentals of broadcasting. Basic material for radio speaking and writing.
Year course (2-2)

60A-60B. Argumentation and Debate
Obtaining and organizing of evidence and the construction and use of the brief; study and discussion of current issues; the presentation of formal and informal debates. Attention to intramural and intercollegiate debating.
Year course (3-3)

61A-61B-61C-61D. Intercollegiate Debate
Fall and Spring (1-1-1-1)

63A-63B-63C-63D. Verse Choir
Participation in verse speaking chorus to develop quality, range of tone, and ability in dramatic visualization of poetry. Required for speech arts credential.
Fall and Spring (1-1-1-1)
108. Advanced Interpretation
Analysis of various types of literature. Material chosen will emphasize the finer
techniques of oral expression to develop the imagination, the emotional power, reading
skill and platform diction in its varied phases. Prerequisite: One year of college
speech or equivalent.
Spring (3)

118A-118B. Playwriting
The first semester of this course deals with the one-act play, its problems and
technique. A number of one-act plays are analyzed and creative writing in this medium
is encouraged. Plays written by the students are read and discussed in class during
their period of development. Students will have an opportunity to see their plays pro-
duced. The second semester continues with analyses of long plays and assumes that the
students are planning a continuous program of writing.
Year course (3-3)

141A-141B. Stage Design
The application of the principles of design, color and perspective to the design
of settings for the production of period and modern plays. Students will learn to make
sketches and models and paint the scenery for the departmental productions. Prere-
quisite—50A or 50B or equivalent.
Year course (3-3)

145. Stage Lighting
A course for directors, designers and technicians in school and community
theaters concerning the principles and practice of light, color, lighting instruments,
and control equipment including the design and planning of lighting of plays. Students
will serve as stage crews for departmental production.
Fall (3) (Not offered 1947-1948)

150. Phonetics
Auditory and kinaesthetic analysis of the sounds of the English language, Valu-
able as a course in pronunciation and articulation. Required of speech majors
and those seeking the Speech Correction Credential.
Fall (3)

154A-154B. History of the Theater
A study of the theater from primitive times to the present. Special attention will
be given to the theater as an aspect of the social and cultural background of the various
countries and periods in which it is studied. Carries aesthetical credit. (Speech Arts 154B
may be taken without 154A.)
Year course (3-3)

155A-155B. Advanced Acting
More advanced forms of dramatic expression are studied. Acting of different
periods and countries in workshop productions. Prerequisite: 55A or equivalent.
Year course (3-3)

156. Advanced Dramatic Production
Problems and projects in scenery and lighting in connection with the workshop
and major productions of the department.
Offered in summer session only (3)

157A-157B. Advanced Radio Production
Preparation and production of radio plays and various types of radio material.
Year course (3-3) (Offered in 1946-1947 and alternate years)
DIVISION OF LIFE SCIENCES

BIOLOGICAL SCIENCES

The courses offered in Biological Sciences are listed below.

BACTERIOLOGY

Lower Division Courses

1. General Bacteriology
   An introduction to bacteriology. Effects of physical and chemical agencies upon bacteria; biochemical activities of bacteria; microscopic examination and cultivation of bacteria; the bacteria of air, water, soil, milk and dairy products, other foods; industrial applications. Introduction to disease-producing bacteria. Two hours of lecture and six hours of laboratory per week. Prerequisite: Chemistry 1A or 2A.
   Fall (4)

Upper Division Courses

199. Special Problems
   Work other than outlined in the regular courses. Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least fifteen units of work in the department (including courses in Bacteriology and Chemistry) with grades of A or B.
   Fall or Spring (1 or 2)

BIOLOGY

Lower Division Courses

A. Mathematics of Solutions and Dosage
   Arithmetic review with computing of dosage, percentage of solutions, apothecaries' weights. Two hours per week.
   Fall (1)

1. Survey of Biology
   A survey of life science, stressing the development of modern concepts in the fields of plant and animal science, bacteriology, genetics, and physiology. Emphasis is placed on the relationships of biology to modern life and the application of scientific analyses to everyday problems. Three lectures and one hour of demonstration and discussion per week. Not open to students with credit for Biology 10A-10B, Zoology 1A-1B, or Botany 2A-2B.
   Fall (3)

10A-10B. General Biology
   A year course in life science, more extensive than "Biology 1." Continues throughout the year and includes a three-hour laboratory period, and two hours of botany; not open for credit to students who have taken Zoology 1A, Biology 1, or 2A, 2B for credit.
   Year course (3-3) Begins in Fall only.

BOTANY

Lower division preparation for advanced work in botany: Botany 2A, 2B, 4, and Chemistry 1A, 1B, 8. Recommended: German, French, and elementary courses in other biological sciences.

Lower Division Courses

2A. General Botany
   Fundamentals of structure and general behavior of seed plants. Two lectures or recitations and six hours of laboratory per week.
   Fall (4)

2B. General Botany
   A continuation of 2A treating morphology and relationship of the lower plants and including an introduction to classification of seed plants. Lectures and laboratory as in 2A.
   Spring (4)

4. California Plants
   Classification and ecology of representative orders of wild flowers, trees, and chaparral of the San Diego region, including practice in the use of keys. One lecture and three hours laboratory per week. Occasional Saturday field trips.
   Spring (2)

5. Cultivated Trees and Shrubs
   Recognition of the common cultivated trees and shrubs of the San Diego region. Trips to local parks and private gardens. One lecture and three hours per week laboratory or field work.
   Fall (2)

Upper Division Courses

102. Plant Geography
   Lectures and field work on the principles of geographical distribution of plants. Prerequisite: Botany 2A-2B, or 4, or equivalent.
   Fall (3) (Offered in 1948-49 and alternate years)

104. Plant Taxonomy
   Identification, classification and distribution of representative orders of flowering plants. One hour of lecture and six hours per week of laboratory and field work. Prerequisites: Botany 2A-2B, or 4.
   Spring (3) (Offered in 1947-48 and alternate years)

199. Special Problems
   Work other than outlined in the above courses. Admission by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open only to students who have completed at least fifteen units of Botany with a grade of A or B.
   Fall and Spring (1 or 2)

PHYSIOLOGY

Lower Division Courses

1A. Human Physiology
   A lecture course considering the functions of the human body, and including a brief review of the microscopic and gross anatomy of the structures discussed. Prerequisites: Elementary chemistry and high school or college biology or zoology.
   Three hours of lecture per week. Credit reduced to 2 units, for students having credit for Zoology 20.
   Spring (3)

1C. Human Physiology
   A study of the human functions through laboratory experiments and demonstrations. Prerequisites: Physiology 1A completed or in progress. Six hours of laboratory per week.
   Spring (2)
ZOOLOGY

Lower division preparation for the liberal arts major in zoology: Zoology 1A, 1B, Chemistry 1A-1B or 2A-2B. Recommended: German or French, Botany 2A, 2B, 4.

Liberal arts major in zoology: (1) At least a C average in upper division major courses. (2) Twelve units of upper division courses, in zoology or eighteen in the major subject and six in related courses in botany, chemistry, physics, physiology or bacteriology.

Students preparing to teach science in the junior high school should try to include a course in zoology, botany, physiology, bacteriology, chemistry (at least high school chemistry). Courses designed to help the student get acquainted with wild life of the region should be included. Recommended: Botany 4, 104, 102; Zoology 112, 113A, 113B, 121.

Lower Division Courses

1A. General Zoology

An introduction to animal biology dealing with structure, functions, and evolution of animal life. Laboratory work supplementing the lectures and based on the study and observation of living and preserved material. Valuable to the general student as well as to the biology specialist, acquainting him with the fundamental facts and theories of biology as they pertain to animal life. Two lectures and six hours of laboratory per week. Students who have credit for Biology 10A-10B receive no credit for Zoology 1A but receive credit for Zoology 1B.

Fall (4)

1B. General Zoology

A continuation of 1A. The structure, relationships, and classification of the characters. Two lectures and six hours of laboratory per week. Prerequisite: Zoology 1A or Biology 10B.

Spring (4)

4. Microtechnique

Introduction to methods of preparation of tissues for microscopic study. Six hours of laboratory per week and one hour of lecture. Prerequisite: Elementary chemistry and biology.

Spring (8)

8. Human Anatomy

A study of human structure through the use of models, prepared dissections and microscope slides. Prerequisite: high school biology, Biology 1A, 1, or Zoology 1A. Two hours of lecture and three hours of laboratory per week. Required of prenursing students. Credit reduced to 2 units if student has credit for Zoology 20.

Fall (3)

20. Human Anatomy and Physiology

An elementary course in human anatomy and physiology. Prerequisite: High school biology, or Biology 1 or 10A or Zoology 1A. Lectures three hours per week. Credit reduced to 2 units if student has credit for Zoology 8 or Physiology 1A.

Fall and Spring (8)

Upper Division Courses

105. Embryology

The development of vertebrates as illustrated by the frog, chick, and pig. Six hours of laboratory and two hours of lecture and quiz per week. Prerequisite: Zoology 1B or Biology 10B.

Spring (4)

104. Microtechnique

Introduction to methods of preparation of tissues for microscopic study. Six hours of laboratory and one hour of lecture per week. Prerequisite: Elementary chemistry and biology.

Spring (8)
126. Medical Entomology
The role of insects and other arthropods in transmission and causation of human diseases. Three hours of laboratory and two hours of lecture per week. Prerequisite: Zoology 1A or Biology 10B.
Fall (3)

130. Readings in Biology
Reading from a suggested bibliography with informal class discussion of topics. Subjects discussed will include history of biology, biological principles, ecology, economic zoology, taxonomy, breeding habits, animal behavior.
Spring (2)

140. Histology
A study of the microscopic structures and differentiation of tissues and organs of the vertebrates, especially mammals. One lecture and 6 hours of laboratory per week. Prerequisites: Zoology 1A-1B, or Biology 10A-10B; recommended Zoology 100.
Fall (3)

199. Special Study
Work other than is outlined in the above courses. Admission only by consent of the instructor with whom the work is to be done. Credit and hours to be arranged in each case. Open to students who have completed at least fifteen units of Zoology with a grade of A or B.
Fall and Spring (1 or 2)

Graduate Courses

200. Seminar
To be conducted by the various members of the staff, with adaptation to the needs of the class and its background. Special emphasis will be placed on current concepts in the various fields of Biology including problems of migration, distribution, specialization, evolution. Required of all graduate students.
Fall (2)

202. Hydrobiology
A course in aquatic ecology with special emphasis on fresh water but with reference to marine biology.
Spring (2)

213. Advanced Studies in Ornithology
Lectures and seminar on advanced problems of morphology, distribution, behavior and classification of birds.
Spring (2)

DIVISION OF PHYSICAL SCIENCES

ASTRONOMY

Lower Division preparation in Astronomy desirable for advanced work: Astronomy 1, 2, 3, and 9; Mathematics 1A-1B, 4A-4B; Physics 1A-1B and 1C-1D; a reading knowledge of French and German desirable.

Lower Division Courses

1. Descriptive Astronomy
A cultural course planned to develop an appreciation of astronomy with special emphasis on the solar system. Only calculations of an elementary nature are used. Special attention given to the methods and instruments by means of which astronomical knowledge has been gained. A six-inch John Byrne refractor and an eight-inch reflecting telescope are available for observation. Prerequisites: Elementary algebra and plane geometry.
Fall and Spring (3)

2. Modern Astronomy
A study of celestial astronomy and astrophysics in the light of modern research, especially photographic and spectrographic. Prerequisite: Astronomy 1 or permission of the instructor.
Fall and Spring (3)

3. Surveyor's Course in Practical Astronomy
The principles of spherical astronomy adapted to the needs of engineering students. Computation and observation. Prerequisites: Surveying 1A or permission of the instructor. Astronomy 1 and 9 desirable.
Spring (3)

9. Practice in Observing
A laboratory course designed particularly to go along with and to supplement Astronomy 1. The course will include constellation study, use of astronomical coordinates, elementary methods of determining time and latitude, and descriptive coordinates. Able to complete three units in astronomy.
Fall or Spring (1)

12. Elementary Navigation
A study of compass corrections, drift problems, time, line of position, use of celestial coordinates, Bowditch Tables, etc. A few class hours at the close of the term are devoted to the use of tables such as Acrux, Dresdmonstok and H. O. 214 for the solution of astronomical triangle. Offered if demand is sufficient. Prerequisite: Astronomy 1 or permission of instructor.
Fall (3)

Upper Division Courses

106. Special Problems
Admission by consent of instructor. Credit and hours to be arranged in each case. Open to students who have completed three units in astronomy.
Fall and Spring (1 or 2)

105. Historical Development of Astronomy
A study of the more important problems and astronomical concepts in the light of the more important problems and astronomical concepts in the light of the biography and contributions of the more important astronomers, such as Galileo, Kepler, Newton, Herschel, and Bessel.
Spring (3)

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107. Method of Least Squares and Computing Practices

Fundamental principles with applications in the fields of astronomy, physics, and engineering.

Spring (3) (Offered 1947-48 and alternate years)

CHEMISTRY

Lower division preparation for the liberal arts major in chemistry, Chemistry 1A-1B, 5, Physics 2A-2B and 2A-3B, Mathematics 2A-3B, and a reading knowledge of German. Recommended: Mathematics 4A-4B.

Liberal arts major (upper division): A minimum of 24 upper division units in chemistry including Chemistry 2A-2B, 3A, 110A-110B, 111. The choice of related minors and the organization of the course of the major student must follow a definite plan approved by the department.

Lower Division Courses

1A-1B. General Chemistry

The general principles and laws of chemistry, and a description of the elements and their common compounds. Two lectures, one quiz, and two laboratory periods per week. The laboratory work in the second semester consists of work in qualitative analysis. Prerequisite: Two years of high school mathematics. Recommended: High school chemistry, physics, and additional mathematics.

Year course (5-5)

2A-2B. Fundamentals of Chemistry

A general course for those not intending to take advanced courses in chemistry. The work in the first semester stresses inorganic chemistry and fundamental principles; that of the second semester covers an introduction to organic chemistry and biochemistry. Emphasis is placed on applications of chemistry to everyday life. Two lectures and one laboratory period per week. Required of premedical students and recommended for those desiring chemistry as part of a liberal education.

Year course (3-3)

5. Quantitative Analysis

The principles of gravimetric and volumetric analysis. Discussions of the theory of quantitative analysis and practice in the standardization of reagents and the analysis of mixtures. One lecture and quiz, and two laboratory periods per week. Prerequisite: Chemistry 1A-1B.

Fall (5)

Upper Division Courses

105. Advanced Quantitative Analysis

Advanced work in the theory and practice of volumetric, gravimetric, and electroanalysis. One lecture and quiz, and two laboratory periods per week. Prerequisite: Chemistry 5.

Spring (3)

108. Organic Chemistry

An introductory study of the compounds of carbon, including both aliphatic and aromatic derivatives. Two lectures and one quiz and discussion period per week. Prerequisite: Chemistry 1A-1B.

Spring (3)

109. Organic Chemistry Laboratory

Preparation of typical aliphatic and aromatic compounds, and study of their properties. Discussion period and two laboratory periods per week. Prerequisite: Fall (3)

110A-110B. Physical Chemistry

Theoretical principles of chemistry, with emphasis on mathematical relationships. Three lectures per week, problems and reports. Prerequisite: Physics 1A-1B or 2A-3B. A knowledge of calculus, and experience in Chemistry 5. With the approval of the instructor, advanced courses in physics may be substituted for Chemistry 5.

Year courses (3-3)

111. Physical Chemistry Laboratory

Physico-chemical apparatus and measurements. Discussion period and three laboratory periods per week. Prerequisite: Credit or registration in Chemistry 110A.

Spring (3)

114. Biochemistry

An introductory lecture course covering the carbohydrates, proteins and fats, and the changes which they undergo in digestion and metabolism. A consideration of the vitamins and other accessory food factors and their importance to the body. A brief discussion of the chemistry of plant life. Three lectures per week. Prerequisite: Chemistry 108.

Fall (3)

118. Colloid Chemistry

The theoretical principles of colloid chemistry and the preparation, properties and practical applications of colloids. Two lectures per week. Prerequisite: Chemistry 108. Recommended Chemistry 110A, 110B.

Fall (2)

122. Glass Blowing

Elementary training in the manipulation of glass. Prerequisite: Chemistry 1A-1B. One laboratory period per week.

Fall (1)

127. Advanced Inorganic Chemistry

A lecture course dealing with such topics as the physical basis of the periodic system, complex inorganic compounds, and the nature of the chemical bond. Three lectures per week. Prerequisite: Chemistry 1A-1B. Recommended Chemistry 110A, 110B.

Spring (3)

144A-144B. Principles of Chemical Engineering

Industrial Stoichiometry, flow of fluids, heat transfer, unit processes and types of industrial equipment. Three lectures per week, problems and reports. Prerequisite: Chemistry 1A-1B. Recommended: Chemistry 110A, 110B.

Year course (3-3)

155. Instrumental Methods of Analysis

Training in the theory and manipulation of instruments used in modern chemical analysis. Two and physical testing laboratories. Discussions, laboratory work and field trips. Two and physical testing laboratories. Discussions, laboratory work and field trips. Two and physical testing laboratories. Discussions, laboratory work and field trips. Two and physical testing laboratories. Discussions, laboratory work and field trips. Two and physical testing laboratories. Discussions, laboratory work and field trips. Two and physical testing laboratories. Discussions, laboratory work and field trips.

Spring (2)

158. Advanced Organic Chemistry

Molecular structure, mechanics of reaction, isomerism and reaction rates as applied to recent developments in organic chemistry. Three lectures per week. Prerequisites: Chemistry 108 and 110A.

Spring (3)

159. Organic Chemistry—Analytical Methods

Qualitative analysis of organic substances based on group reactions and individual tests. Quantitative analysis of organic compounds by combustion and other methods. Discussion period and three laboratory periods per week. Prerequisites: Chemistry 5 and 108.

Fall (3)
199. Special Problems
Supervised individual work in specialized branches of chemistry. Admission only by the consent of the instructor. Hours of credit to be arranged in each case. Open only to students who have shown ability to do A or B work in chemistry.
Fall and Spring (1-2)

Graduate Courses

200. Seminar
Reading reports in selected fields such as colloid chemistry, electro-chemistry, stereochemistry, chemical thermodynamics, chemical kinetics, and organic reactions. Reading, reports, and attendance at all chemistry department seminar meetings. Prerequisite: Chemistry 110B
Fall and Spring (3-3)

208. Nuclear Physics
A study of the structure of the atom with emphasis on recent experimental and theoretical advances in nuclear physics. Prerequisites: Physics 108 or Chemistry 110B
Spring (3)

210. Molecular Structure
A lecture course designed to develop familiarity with modern concepts of valence; correlating magnetic, dielectric, and spectroscopic information with chemical properties. Prerequisite: Physics 108 or Chemistry 110B
Fall (3)

299. Special Problems
Individual work in specialized branches of chemistry. Problems selected to develop familiarity with chemical literature and research techniques. Prerequisite: Chemistry 110B.
Fall and Spring (1-13)

ENGINEERING
(For curriculum in engineering see page 47.

Lower Division Courses

1A-1B. Plane Surveying
Use and adjustment of surveying instruments, computations and map-making, together with a study of land, topographic, city, and mine surveying. Two instruction periods and one three-hour period for field work and mapping each week. Prerequisites: Trigonometry and Mechanical Drawing, or equivalent, and sophomore standing.
Year course (3-3)

2. Mechanical Drawing
Freehand lettering, use and care of drafting equipment, simple orthographic projection, introduction to problems of dimensioning. Open to students lacking credit for a year course in senior high school mechanical drawing.
Fall and Spring (2)

3. Summer Class in Surveying
Practical field problems in reconnaissance, triangulation, location and topographic surveys. Observations for meridian, time, and latitude. Precise work in linear and angular measurements. Development of self-reliance, accuracy, and proficiency. Special attention to the mountains of San Diego. For details regarding location of camp, date of registration, and other arrangements, a special announcement of the surveying camp is published in the Registrar's Office. Offered if demand is sufficient.
Summer (3)

21. Descriptive Geometry
Fundamental principles of descriptive geometry and their application to problems of engineering. Lectures and drafting. Prerequisites: One year of mechanical drawing, and sophomore standing.
Fall (3)

22. Machine Drawing
Design and drawing of simple machine parts with emphasis upon the production of standard drawings. Lectures and drafting. Prerequisite: Engineering 21, Mathematics 1A-3B.
Spring (3)

23. Materials of Construction
Manufacturing processes, structural properties and adaptability of the principal materials used in engineering. Lectures; Prerequisite: Sophomore standing.
Spring (2)

Upper Division Courses

100A-100B. Elements of Electrical Engineering
Theory and characteristics of electrical equipment with emphasis on industrial applications.

100A. Direct current circuits, generators and motors. Introduction to alternating current circuits.

100B. Alternating current circuits, transformers, alternators, induction on synchronous motors, conversion apparatus and transmission lines.

Lectures and problems. Prerequisites: Mathematics 4A, Physics 1C or permission of the instructor.
Year course (3-3) (Offered in 1947-48 and alternate years)

101A. Electrical Engineering Laboratory
Laboratory determination of the characteristics of direct current machinery and circuits, single phase alternating current circuits. One hour lab. and report per week. Prerequisite: Engr. 100A (may be taken concurrently).
Fall (2)

101B. Electrical Engineering Laboratory
Laboratory determination of the characteristics of single phase and polyphase circuits, machines, and related equipment. One three-hour laboratory period and report per week. Prerequisite: Engr. 100B (may be taken concurrently).
Spring (2)

105. Hydraulics
A general course in hydraulics including the fundamental principles of hydrostatics and hydromechanics applied to the flow of water through orifices, over weirs, through pipes and canals. Lectures and problems. Prerequisites: Mathematics 4A, Physics 1G. Recommended: Physics 105A-105B.
Spring (3)

106. Hydraulics Laboratory
Laboratory determination of the characteristics of flow and hydraulic equipment. Includes flow through pipes, orifices, weirs; characteristics of various equipment. One hour lab. per period and report per week. Prerequisite: Types of pumps. One three-hour lab. period and report per week. Prerequisite: Engr. 105 (may be taken concurrently).
Spring (2)

123. Materials of Construction
Essentially the same as Engineering 23 except that students will be expected to investigate more fully some particular material or process and prepare a written report upon it. Prerequisites: Chemistry 1B, Junior standing.
Spring (2)
128. Applied Engineering Thermodynamics
Principles of Thermodynamics. Application of principles in study of combustion process, boiler, steam engines, turbines, auxiliary apparatus. Prerequisites: Math 4A, Physics 1B.
Fall (3)

129. Heat Power Laboratory
Boiler testing and heat balance. Fine gas analysis, testing of steam power equipment. One three-hour lab and report per week. Prerequisite: Engr. 128 (may be taken concurrently).
Fall (2)

130. Route and Construction Surveying
Application of surveying to engineering problems. Reconnaissance, preliminary, location, and maintenance surveys for highways, railroads, and airfields. Construction surveys for buildings and other structures. Earthwork computations. Two lectures and one three-hour field period per week. Prerequisites: Engr. 1B, Ast. 5.
Fall (3)

131. Advanced Surveying
Special problem in surveying. Methods of geodetic surveying; adjustment of observations, geodetic positions, map projections. Two lectures and one three-hour field period per week. Prerequisites: Engr. 1B, Ast. 3, recommended Engr. 130.
Fall (3)

140. Strength of Materials
Spring (3)

141. Materials of Engineering Laboratory
Theory and operation of testing machines and auxiliary apparatus. Standard tests to determine the significant characteristics of the commonly used engineering materials. Heat treatment of metals. One laboratory period plus outside reading and report per week. Prerequisite: Engr. 140 (may be taken concurrently).
Spring (2)

142. Stress Analysis
Spring (3)

145. Internal Combustion Engines
Application of theory of thermodynamics to internal combustion engines. Essential features of design, operating characteristics, and application of gasoline, diesel, and gas engines, and the gas turbine. Lectures and problems. Prerequisites: Physics 1B, Math. 4A. Recommended: Engr. 128.
Spring (3)

152. Machine Design
A study of motions, velocities, and accelerations in linkages, cams, gears, and related mechanisms. Design of riveted and welded joints. Design of simple machine period per week. Prerequisite: Physics 105A (may be taken concurrently). Engr. 22
Fall (3)

156. Aerodynamics
Properties of air, air flow, air foils, drag, engines and propellers, aircraft problems. Prerequisites: Physics 105A-B.
Fall (3)

199. Senior Report
Investigation of specific problems of advanced nature. Preparation of report. Prerequisite: Advanced senior standing.
Spring (2)

GEOLOGY

Department requirement in Geology for liberal arts major in Physical Science includes in addition to Geology 1A-B, the completion of: Chemistry 1A-B, Physics 1A-B-C, or Astronomy 1A-B; 2A-2B; 3A-3B. Students preparing for advanced work in Geology 1A must complete Physics 1A-B-C or Astronomy 1A-B; 2A-2B; 3A-3B. Geology 1A in department prerequisite requirements provided the additional necessary unit of laboratory work is completed. French or German, Engineering 1A-B and Geology 21A-21B are recommended.

Lower Division Courses

1A. Physicals
The composition, origin, and distribution of earth materials, and their modification through mechanical and chemical processes of change. Three lectures and one three-hour laboratory period weekly with related field study during the semester. (Not open to students who have had Geology 2A except for one unit upon the completion of the laboratory section.)
Fall (4)

1B. Historical
Theories of earth origin, and the evolutionary history of the earth as traced through rock and fossil records. Consideration of the Paleontologic Sequence. Three lectures and one three-hour laboratory period weekly, with arrangement for field study and conference during the semester. Prerequisite: Geology 1A or equivalent.
Spring (4)

2A. General
Similar to Geology 1A but without laboratory. Emphasis upon origin and development of earth's surface features. Open to all students except those already presenting credit in Geology 1A. Two lectures and one demonstration and discussion hour weekly.
Fall (3)

2B. Physiography of United States
A study of the land forms of the United States and their physiographic history as illustrative of universal geologic conditions. Two lectures and one discussion hour weekly. Prerequisite: Geology 1A or 2A.
Spring (3)

21A-21B. Mineralogy
Study of the common minerals and rocks. Use of the blowpipe, simple chemical reagents, and the petrographic microscope, but with emphasis upon sight determination. Prerequisites: Geology 1A and high school chemistry, or equivalents.
Year course (2-3)

Upper Division Courses

100. Structural Geology
The evolution and description of the structural and topographical features of the earth. Faulting, folding, and orogenic forces with practical illustrations from the North American Continent and California geologic conditions. Lectures, discussions, and occasional field trips. Prerequisites: Geology 1A-B or 2A-2B.
Fall (3) (Offered in 1947-48 and alternate years)
101. Geologic Problems
Reconnaissance of adjacent areas with preparation of map and report; or directed reading and group discussion of California geologic literature; or selection and preparation of materials for the college museum collections. Prerequisite: Geology 1A-1B. Registration subject to approval of instructor. Fall and Spring (1-4)

199. Special Study
Individual work in field, library, laboratory, or museum under staff supervision. Open only to qualified students upon consultation. Fall and Spring (1 or 2)

MATHMATICS
Lower division preparation for the liberal arts major in mathematics: Mathematics 3A, 3B, 4A, with an average grade of C or better. Two or more of the following are recommended: Astronomy 1, Economics 1A-1B, 2, Engineering 21, French A-B, German A-B, Physics 1A-1B or 2A-2B, Surveying 1A.

Liberal arts major (upper division): Twenty-four units including at least eighteen in upper division mathematics, the others being selected from Astronomy 107, Chemistry 11A-11B, 16A, Physics 105A-105B, 112 and other approved courses. The major should be arranged in consultation with the chairman of the department and completed with a grade of C or better.

Liberal Arts Minor: The student in the lower division is introduced to analytic geometry, which in turn shows the varied relations existing between algebra, geometry, and trigonometry, all of these merging in the calculus. Constant use of arithmetic is found in the applied courses.

The courses taken in the lower division will vary according to the student's accomplishment in high school and to his aptitude in the subject. He will be guided by the counselor of the departmental representative regarding preparatory courses. All students will take the core course, Mathematics 2A-2B, or its equivalent. Many will be able to take 4A as well. One of the following applied courses in Mathematics should be included in the fifteen semester units of lower division or in the upper division: Economics 2, Mathematics of Finance; Engineering 1A, Plane Surveying; Engineering 21, Descriptive Geometry; Astronomy 1, Descriptive Astronomy; Physics 1A or 2A, Mechanics; Economics 140, Statistics.

For a minor the student should select not less than nine semester units of upper division work under the guidance of the departmental representative from the following: Mathematics 101, 102, 105, 117, 118, 119.

A-B. Basic Mathematics
A year course roughly equivalent to the two year sequence in algebra and geometry as given in the high school. More time is given to arithmetic and numerical trigonometry and less to demonstrative geometry.

Year course (3-2)

C. Intermediate Algebra
The course begins with an extensive review of elementary algebra. Topics covered include quadratic equations, simultaneous equations, proportions, variation, arithmetic and geometric progressions, binomial expansion and logarithms. It is equivalent to the second year course in high school algebra. Prerequisite: Elementary Algebra and Geometry or Mathematics A-B.

Fall and Spring (3)

D. Trigonometry
Roughly equivalent to the high school course in plane trigonometry but with more attention than is often given to those aspects needed in analytic geometry and calculus.

Prerequisites: Intermediate algebra, Mathematics C.

Fall and Spring (3)

E. Solid Geometry
A course in intuitive solid geometry with much attention to the calculation of surfaces and volumes for the simpler solids and for certain others used in industry.

Prerequisites: Intermediate algebra, Mathematics C.

Fall (2)

PHYSICAL SCIENCES
S. Slide Rule
Theory and use of the slide rule. Practice in performing the fundamental operations of arithmetic. Some attention is given to more involved computations. Prerequisite: Trigonometry, Math. D.

Fall and Spring (1)

1. College Algebra
Review of algebra and trigonometry. New material includes identities, graphs, solution of algebraic and trigonometric equations, determinants, and mathematical proofs. Prerequisites: Two years of algebra and trigonometry.

Fall and Spring (3)

3A. Plane Analytic Geometry
Equations and loci, conic sections, coordinate transformations, cartesian and polar coordinates, and parametric representation. Prerequisites: Algebra, plane geometry, intermediate algebra, and plane trigonometry, with a high degree of proficiency, or a satisfactory grade in Mathematics 1, College Algebra. In order to determine the degree of proficiency, examinations in intermediate algebra and plane trigonometry will be given during the first week of the semester. Students falling below the required standard will be assigned to Mathematics 1.

Fall and Spring (3)

3B. First Course in Calculus
Introduction to differential and integral calculus, with applications to problems involving variable rates and summations. Prerequisites: Mathematics 2A.

Spring (3)

4A. Second Course in Calculus
Differential equations, integration, infinite series, and a brief treatment of solid analytic geometry. Prerequisite: Mathematics 3B. Solid geometry is recommended.

Fall (3)

4B. Third Course in Calculus
Partial differentiation, successive integration, and applications. Prerequisite: Mathematics 4A.

Spring (3)

Upper Division Courses
101. Elementary Geometry for Advanced Students
Non-Euclidean Geometry, transformations, constructions with ruler and compasses, and famous problems. Prerequisite: Mathematics 4A.

Fall (3) (Offered 1946-47 and alternate years)

102. Elementary Algebra for Advanced Students
The number system, simultaneous equations, calculation of logarithms, and other topics related to the elementary field. Prerequisite: Mathematics 4A.

Spring (3) (Offered 1945-46 and alternate years)

104. History of Mathematics
History of mathematics down to early modern times. Prerequisite: Mathematics 3A-3B.

Fall (3) (Offered in 1947-48 and alternate years)

106. College Geometry
A continuation of the geometry of the high school with emphasis on modern topics. Prerequisite: Mathematics 3B.

Fall (3) (Offered 1945-46 and alternate years)

106. Projective Geometry
Concurrence of lines, collinearity of points and other properties of figures not altered by projections; constructions and study of ellipses, hyperbolas and parabolas by means of projections. Prerequisites: Mathematics 3A-3B.

Fall (3) (Offered in 1947-48 and alternate years)
11. Theory of Algebraic Equations
   Determinants, complex numbers, and theory of algebraic equations. Prerequisite: Mathematics 3A and 3B.
   Spring (3) (Offered in 1946-47 and in alternate years)

12. Analytic Geometry of Space
   The coordinate systems in space; lines, planes, and quadric surfaces; applications. Prerequisite: Mathematics 4A.
   Spring (3) (Offered 1946-48 and in alternate years)

17. Intermediate Calculus
   Essentially the same as Mathematics 4B with additional special work for advanced students. Prerequisite: Mathematics 4A. Credit not allowed for both 4B and 117.
   Spring (3)

18. Advanced Mathematics for Engineering Students
   Hyperbolic, elliptic, Bessel and gamma functions; line integrals; Fourier series, etc. Applications.
   Fall (3)

19. Differential Equations
   Ordinary differential equations of first and second order, with applications. Prerequisite: Mathematics 4A-4B (4B concurrently if desired).
   Spring (3)

24. Vector Analysis
   Theory and applications to engineering problems.
   Fall (3)

40. Probability and Statistics
   Statistical theory and method from the mathematical standpoint; applications in social and natural science. Prerequisite: Mathematics 4A.
   Spring (3) (Offered in 1946-48 and in alternate years)

199. Special Study
   Study of materials mainly supplementary to the courses listed above. Prerequisites: Average grade of B or better in at least 12 units beginning with Mathematics 3A.
   Fall and Spring (1 or 2, each semester)

**PHYSICAL SCIENCE**

Students wishing a major of a broader scope than that included in any one of the physical sciences are referred to the general major (page 18). This major permits combination of upper division work from three departments for a total of 3B units. The selection of courses must fit a pattern for a definite vocational objective.

**Lower Division Courses**

1A. Introduction to Physical Science
   A survey course dealing with the nature of man's physical universe. Emphasis will be upon materials chosen from topics in astronomy and physics to show the nature and development of the scientific method and man's use of energy. Not open to students who have had a high school or college course in either physics or astronomy. May be taken with or without plans to continue with 1B.
   Fall and Summer (3)

1B. Introduction to Physical Science
   A continuation of Physical Science 1A. Emphasis will be upon units chosen from geology and chemistry to show the origins of natural materials and their use by man in the modern world. Not open to students who have had a high school or college course in either chemistry or geology. May be taken with or without credit in Physical Science 1A.
   Spring (3)

10. Elementary Photography
   This course seeks to provide an elementary knowledge of dark room techniques and the theory of photography including printing, enlarging, and developing. Two lectures and one three-hour laboratory required each week.
   Full and Spring (3) (Not offered in 1947-48)

**PHYSICS**

Lower division preparation for the liberal arts major in physics: Mathematics 3A-3B-4A-4B; Chemistry 1A-1B, or their equivalents. Recommended: A reading knowledge of French and German. A maximum of 12 units of lower division physics may be applied toward the A.B. Degree.

Liberal Arts Major (upper division) in physics. Required: Twenty-four units of upper division work in physics, including Physics 165A-165B, 110A, three units chosen from 102 or 110B, and 100 (2 units). Six of the 24 units may be elected in closely related subjects after a submitted upper division program is approved by the department advisor.

**Lower Division Courses**

1A-1B-1C-1D. Principles of Physics
   A four semester course developing the fundamental ideas which underlie the subject of physics, with applications in the discussion of practical problems. This course is designed for students in the various fields of science and engineering who desire a thorough background of the elementary principles. Prerequisites: High school physics or chemistry, and trigonometry. Students deficient in any part of this requirement may enroll only with the permission of the instructor. Each course provides two lectures and one three-hour laboratory period per week. Students are expected to take the courses in the following sequence and deviations from this may be made only with the permission of the instructor.

1A. Mechanics of Solids.
   Fall, Spring, Summer (3)

1B. Mechanics of Fluids and Heat.
   Spring, Summer (3)

1C. Electricity and Magnetism.
   Fall, Summer (3)

1D. Sound and Light.
   Spring, Summer (3)

2A-2B. General Physics
   A year course covering the elementary principles of physics. This course is primarily for liberal arts and certain pre-professional students who do not desire an advanced knowledge of physics. First semester: Properties of matter, mechanics and heat. Second semester: Electricity and magnetism, sound and light. Prerequisite: Two years of high school mathematics.
   Year course (3-3)

3A-3B. Physical Measurements
   A year course in laboratory physics designed to accompany Physics 2A-2B.
   Year course (1-1)

**Upper Division Courses**

102. Electronics
   The fundamental principles of electron tubes and their associated circuits, including high-vacuum and gas tubes, rectifiers, amplifiers, oscillators and electronic instrumentation. Prerequisite: Physics 1C and Mathematics 4A.
   Spring (3)
105A-105B. Analytical Mechanics

Treatement of the fundamental principles of Newtonian mechanics. First semester: Study of the statics and kinematics of particles and rigid bodies. Second semester: Study of the dynamical principles underlying linear and rotary motion of rigid bodies, with additional work in elastic and inelastic impact. Prerequisites: Physics 1A-1B or 2A-2B and a working knowledge of the calculus.

Year course (3-3)

106. Optics

A study of reflection, refraction and dispersion of light, with applications to optical instruments, followed by a survey of phenomena indicative of the physical nature of light, including interference, diffraction, polarization and spectral radiation. Prerequisite: Eight units in physics.

Fall (3) (Offered in 1948-49 and alternate years)

107. Electrical Measurements

The theory and use of electrical measurements, including measurements of current, voltage, power, resistance, capacitance, inductance, and the parameters of resonant circuits. One hour of lecture and three hours of laboratory work per week. Prerequisites: Physics 1C and Mathematics 4A.

Fall (2)

108. Atomic Particles

A study of the experimental evidence for the existence of the elementary physical particles and their properties and of the physical concepts to which this experimental evidence has led. Prerequisites: Physics 1C or 2A.

Spring (3)

110A. Principles of Electrostatics and Electromagnetism

Elements of the mathematical theory of steady and quasi-steady electric and magnetic fields with applications. Prerequisites: Eight units of physics and a working knowledge of the calculus.

Fall (3)

110B. Electromagnetism

Extension of the material covered in Physics 110A, including alternating and transient current phenomena and electromagnetic waves.

Spring (3) (Offered in 1948-49 and alternate years)

112. Heat and Thermodynamics

A study of the thermal properties of matter with an introduction into the kinetic theory of gases and the laws of thermodynamics. Prerequisites: Eight units in physics and a working knowledge of the calculus.

Fall (3) (Offered in 1947-48 and alternate years)

114. Acoustics

A study of wave motion and its applications to the production, transmission and reception of sound. Material in architectural acoustics, speech and hearing, and acoustical instruments is presented. Prerequisites: Eight units in physics and a working knowledge of the calculus.

Spring (3) (Offered in 1947-48 and alternate years)

122. Electronics Laboratory

An experimental study of electron tubes and their associated circuits, covering the material in Physics 102. Prerequisite: Previous or concurrent registration in Physics 102 or permission of the instructor.

Spring (1)

126. Optical Measurements

An experimental study of lenses, optical systems and instruments, including the study of the wave character of light and the measurement of wavelengths of light. Prerequisite: Previous or concurrent registration in Physics 106 or permission of the instructor. This course replaces Physics 106L.

Fall (1 or 2) (Offered in 1948-49 and alternate years)
DIVISION OF SOCIAL SCIENCES

ANTHROPOLOGY

Recommended lower division preparation for the liberal arts general major with a concentration in anthropology: Anthropology 1A-1B, 2, or 3, Geography 1-2, Geology 1A-1B, Psychology 1-2, Sociology 50A, 50B; also Spanish, German, or French.

Recommended fields of concentration in addition to anthropology in the upper division of the general major with a view to later specialization in one of the following areas of anthropological work: Area of Archaeology: Art, Geography, Geology, History; Area of Physical Anthropology: Psychology and Zoology; Area of Social and Applied Anthropology: Psychology and Sociology; Area of Museum Work: Art, Education, Geology, Psychology.

(The general major provides for upper division concentration in three fields with a total of 90 units. See page 11.)

Lower Division Courses

1A-1B. General Anthropology
Year course (3-3)

2. Physical Anthropology
An introduction to the studies of primatology and anthropometry. The comparative anatomy of the monkeys and apes, the emergence of the anthropoid, the reconstruction of early man from fossil evidence. The landmarks, measures and indices used in the metrical study of the living human body and skeletal material. Sexual differences and growth changes in the skull and skeleton.
Fall (3)

3. Survey of Archaeology
A review of the history of modern archeology and a discussion of its methods. The development of archaeological techniques in reconstructing the ancient cultures of the Mediterranean world. The problems of present day archaeology in the Near East, the Orient and the Americas. The principles and basic techniques used in the excavation of sites and the reporting of findings.
Spring (3)

54. Social Anthropology
An anthropological study of social institutions in primitive and civilized societies. The evolution of family organization, religion, property right, and government traced in elementary and advanced civilization.
Spring (3) (Not offered in 1947-48)

Upper Division Courses

151A. The North American Indian
Pre-Columbian cultures of the North American Indian. The origin and migration of New World peoples. Industries, arts, crafts, social organization, religion and other phases of American Indian civilization.
Fall (3) (Not offered 1947-48)

151B. Indian Civilizations of Middle America
The development of civilization in Pre-Columbian Mexico and Central America: Aztec, Mayan, and related cultures.
Spring (3) (Not offered 1947-48)

152. World Ethnography
The cultural patterns of representative aboriginal peoples. Industries, arts, social organization and supernaturality considered with a view to environmental adjustment, historical development and functional interrelation. Ethnological theories reviewed and applied in interpreting illustrative aboriginal societies.
Fall (3)

153. Primitive Religion
Spring (3) (Not offered in 1947-48)

161. The California Indian
A survey of native California Indian culture with stress on the Indian groups of Southern California. The industries, arts, social organization, folklore and religion will be considered as revealed through the study of living peoples and archaeological evidence.
Offered only during summer sessions (3)

165. Ethnology and Race Psychology
The biological basis of race, somatic and serologic typology, racial mentality, tests and their ethnopsychological significance, abnormality in ethnic groups. Race and culture; ethnic aspects of demography.
Fall (3)

172. Indian Cultures of the Southwest
Pueblo Indian culture of the Southwestern states and its background in the arts, crafts, architecture and religion of the past. The culture of contemporary Puebloan villages interpreted in terms of earlier civilizations revealed through archeology. Recent trends in archeological research reviewed.
Offered only during summer sessions (3)

COMMERCE

Candidates for a teaching credential in business education should refer to the statement "Admission to Teacher Education Curricula" on page 22, and to the curriculum for the A.B. Degree with a special credential in Business Education on page 36.


Lower division courses for Liberal Arts Major in Commerce, 24 upper division units required as follows: Liberal Arts Major in Commerce, 24 upper division units required as follows: Economics 111, 140, Commerce 122, and 15 units selected from one of the following groups:

B. Banking and Finance: Commerce 133, 144, 157, Economics 167, 191, 192.
C. Business Administration: Commerce 123, 125, 126, 133, 137, 155, Economics 350, 142.
D. Merchandising: Commerce 123, 153, 184, 185, 186, 187, Home Arts 160A-160B.
A minor in commerce shall include Commerce 14A-14B and Economics 1A-1B.
A minor in commerce is included Commerce 14A-14B and Economics 1A-1B and nine units of upper division commerce selected from one in the lower division, with nine units of upper division commerce selected from one group as outlined above. Students who elect the merchandising group must have completed Commerce 24 and 25 or 27 in the lower division.

Lower Division Courses

A. Business Mathematics
A practical course in the mathematics of business. A thorough study of interest, compound interest, discount, amortization tables, insurance rates, etc.
Fall and Spring (1)

8-70016
1A-1B. Typewriting
A rapid development of a thorough command of a keyboard by the touch method. The acquisition of speed and the artistic arrangement of typewritten material with special reference to commercial forms, tabulation and billing; specifications, legal forms, and preparation of manuscripts; transcription, mimeographing, etc. Eight hours lecture and laboratory practice.
Year course (3-5)

2. Mathematics of Finance
Interest and annuities; amortization; sinking funds; valuation of bonds; depreciation; mathematics of building and loan associations; mathematics of life insurance. Prerequisites: Two years of algebra in high school, or equivalents.
Fall (3)

2A. Typewriting
A short course designed for those not wishing to enter the business office but desiring a knowledge of the use of the typewriter. Five hours laboratory practice.
Spring (2)

3A. Office Procedure
Practice and principles of office management, including organization, rearrangement and operation. Study and use of modern office appliances such as the multigraph, mimeograph, filing devices, calculating and bookkeeping machines. Prerequisite: Commerce 1A or its equivalent.
Fall and Spring (3)

5A-5B. Shorthand
An intensive course designed for the practical preparation of office secretaries. A thorough study of the Gregg System. Development of the ability to read and write shorthand rapidly and correctly, both literary and commercial. The shorthand speed necessary to pass a civil service examination is attained by the end of the year.
Year course (5-5)

6A-6B. Advanced Shorthand
Development of speed in writing and transcription. Advanced dictation on letter forms, legal forms, speeches, and literary and technical material.
Year course (3-3)

English in Business (See English 8)

14A-14B. Principles of Accounting
A knowledge of bookkeeping not required and not advantageous. The business sheet; profit and loss statement; balance sheet; profit and loss statements; books of original entry; the opening, conducting, and closing of books for different kinds of businesses; organizations, reorganizations, dissolutions, and consolidations, etc. Keeping in view the best modern accounting practice. Five hours lecture and laboratory.
Year course (3-3)

15A-15B. Elementary Accounting
An introductory course in the fundamental principles of accounting; recording business transactions; opening and closing books of different kinds of business in accordance with modern accounting practice; accounting theory combined with actual practice. Balance sheet; profit and loss statements; accounts; book of entry, etc. Planned for students entering accounting work who must conduct their preparation to one or two years. Open only to students enrolled in a two-year curriculum.
Year course (3-3)

18A-18B. Commercial Law
The leading and fundamental principles of business law. Simple cases showing the application of the principles to commercial and business transactions, rather than the development of those principles. Thorough preparation for contracts, sales, agency, partnerships, corporations, real property, negotiable instruments, insurance, and wills, with a brief study of evidence.
Year course (3-3)

20. Consumer Economics
Growing importance of consumption as a field for study; consumer incomes in the United States; consumption and business cycles; bases of consumer choice-making; practical problems of buying food, clothing, shelter, transportation, insurance, etc. Family budgeting; a survey of the methods by which products reach the consumer; family market structure and functions seen from the consumer's point of view.
Fall (3)

21. Organization and Management of Small Business
A course dealing with the problems confronting the small business man with regard to finance, organization, management.

24. Merchandising
A study of retail stores, emphasizing the problems of store managers and merchandising executives; store location, organization, personnel, sales promotion, buying and handling of merchandise, inventory, turnover, and control methods. Changing conditions in retailing, problems of profitable operation under present conditions.
Spring and Fall (3)

25. Salesmanship
Theoretical and psychological background of salesmanship, newer concepts of selling; the selling of ideas and services; steps in a sale; attitudes, interest, desire, closing; the development of customer and of good will; the personal factor in salesmanship.
Spring and Fall (3)

26. Applied Salesmanship
Classroom practice in selling; supervised work in cooperating stores, or outside selling; relationships between theory and practice in specific selling situations; incentive methods of payment in selling; the problem of sales managers in reducing selling costs.
Spring (2)

26A. Life Insurance Salesmanship
A study of the special problems of life insurance selling, with emphasis on the life insurance selling, and for those planning to obtain life insurance sales certification. Life insurance selling, and for those planning to obtain life underwriter's certification. To be taken in conjunction with 26 (see above) and not available as a separate course.
Spring (26 and 26A, taken together, 3 units)

27. Advertising
A survey of advertising from the point of view of the business man and the consumer; business principles applied to advertising; basic psychological appeals to the consumer; budgeting of appropriations; sale of advertising; market analysis as an advertising tool; institutional advertising; the function of agencies; radio as a specialized advertising problem.
Spring (3)
127. Credits and Collections
The credit man and his work, including the instruments with which he works, sources of credit information, the technique of his department, collection methods, legislation for the protection of debtor and creditor, and credit insurance.
Fall (3)

163. Personnel Administration
A discussion of employment, hours, wages, working conditions, insurance, pensions, and other related problems; organization, functioning, and control of personnel. Emphasis on practical problems. Prerequisite: Economics 1A-1B.
Year course (3-3) (Offered in 1948-49 and alternate years)

161A-161B. Cost Accounting
Principles and methods of cost accounting in the mercantile establishment and in the factory. A study of bookkeeping procedures, the forms used, and their application to practical problems. Prerequisite: Commerce 1A-1B.
Year course (3-3) (Offered in 1947-48 and alternate years)

162. Accounting Systems
The accounting systems used in various types of business and financial concerns. Some practice in design and installing systems. Prerequisite: Commerce 1A-1B.
Year course (3-3) (Offered in 1947-48 and alternate years)

164A-164B. Income Tax Procedure
A consideration of the problems arising from state and federal income, inheritance and corporation tax. The problems are approached from the point of view of the taxpayer who desires to determine the exact application of the law to his particular situation. No knowledge of accounting is necessary.
Year course (3-3) (Offered in 1947-48 and alternate years)

165A-165B. Auditing
The fundamental principles of accepted procedures of auditing and related types of accounting engagements.
Year Course (3-3) (Offered 1948-49 and alternate years)

167. Governmental Accounting
A comparative study of accounting systems used by municipalities, counties, and the state of California; detailed comparisons with commercial practice; procedures in the state of California; detailed comparisons with commercial practice; procedures in this state; budgeting and control; issuance of bonds; accounting and auditing.
Fall (3) (Offered in 1947-48 and alternate years)

184. Sales Management Problems
Problems of sales department organization, recruiting, training, supervising and controlling salesmen, selling to small businesses, consumer salesmen, buying sales territory, quotas and policies, selling to institutions, and the like.
Fall (3) (Offered in 1947-48 and alternate years)

185. Advertising Copy and Layout
Principles of effective copy-writing; headlines, slogans, body copy; layout principles and techniques, typography, hand lettering, illustrations, reproduction processes.
Prerequisite: Commerce 27.
(2)
186. Store Management Problems
Locations, buildings, layouts and fixtures; store supplies and maintenance; receiving, marking, storing, wrapping and delivering merchandise; customer service, adjustments, credit and collections; expense control; case studies in store operating problems. Prerequisite: Commerce 24. (2)

187. Buying and Merchandising Techniques
Merchandise plans, selection, pricing, stock control, turnover, inventory methods, interpretation of merchandising reports and results; case studies in buying and merchandising problems. Prerequisite: Commerce 24. (2)

Graduate Courses

203. Seminar in Office Management
An intensive study of the problems of office management and their solution. The relation of records, reports, budgets and manuals to managerial control. Prerequisite: Commerce 3A, Commerce A4A-14B, 121. (2)

223. Problems of Distributive Business
Critical Analysis of distributive business problems in the light of changing economic, social and governmental conditions. Prerequisite: Commerce 121, 123. (2)

260. Advanced Problem Analysis (Accounting)
The study of conditions causing various accounting problems with special emphasis upon the theory and practices involved in their solution. Prerequisite: Commerce 100A-160B, 161, 165. (2)

ECONOMICS

Lower division preparation for the liberal arts major in economics and for the junior certificate: Economics 1A-1B, Commerce 1A4A-14B, and at least one of the following: Political Science 1A-1B, 71A-71B, History 4A-4B, 5A-5B, 17A-17B, Psychology 1A-1B, Sociology 50A-50B or Anthropology 1A-1B. Recommended: Commerce 18A-18B, Geography 10 and Mathematics C.

Liberal arts major in economics, 24 upper division units required as follows: Economics 100A, 140, and 100B or 111. Liberal arts in Economics. A maximum of six of the additional units may be courses in a related field chosen in consultation with the Economics Department adviser.

Lower Division Courses

1A-1B. Principles of Economics
The basic principles of economics: utility, wealth, value, price; economic production, distribution, and consumption; rent, interest, wages, and profit; competition, monopoly, and large scale production; property, economic waste, and luxury; money and banking, international trade and tariffs; transportation corporations, labor problems, socialism, taxation, etc. Aims of the course: (1) to provide a foundation for further intensive study of economic problems; (2) to furnish to those who expect to follow business pursuits a broad foundation in economic principles; and (3) to introduce future citizens to political and economic problems of our time. Lectures, discussions, quizzes, and collateral reading. Not open to entering freshmen except by special arrangement.

Year course (2-3)

Upper Division Courses

100A. Modern Economic Thought
Advanced economic theory with special reference to value and distribution. Special attention is given to marginal utility theory, and to the contribution of modern economic thought. Prerequisite: Economics 1A-1B.

Fall (3)

100B. Modern Economic Thought
A problem course. Subjects include price and income theory; the development of economic ideas and their present application, and the trends in modern economic thought. Prerequisite: Economics 1A-1B. Recommended: Economics 100A.

Spring (2)

102. Comparative Economic Systems
A study of the economic aspects of laissez-faire and regulated capitalism, socialism, communism, Fascism. Comparative experience in Russia, Germany, the United States, Great Britain. Criterias for evaluating systems. Positions of the individual and government in each system. Planning in a liberal capitalism society. Cooperatives.

Spring (3)

111. Economic History of the United States
A comprehensive survey of American economic developments and of national legislation in the field of industry and commerce.

Spring (3)

126. Land Economics
Real estate in all its aspects: property rights, transfer of title, valuation, finance, selling, property management, taxation, insurance, city planning, and the like, with special emphasis upon problems as they exist in San Diego.

Fall (3) (Not offered 1947-48)

131. Public Finance
Principles and practices of taxation and public expenditures. Economic effects of public spending, debts and taxation. Financing social security and other services. Fiscal policy and prosperity. Relation to inflation and deflation. Special emphasis on social problems involved.

Spring (3)

135. Money and Banking
The elements of monetary theory. History and principles of banking with special reference to the banking system of the United States. Prerequisite: Economics 1A-1B.

Spring (3)

140. Statistical Methods
The nature and use of statistical methods in the social sciences. Practice in tabular and graphic presentation of data; analysis of frequency and time series; index numbers construction and study of correlation techniques. Prerequisite: Mathematics A-B, and C or equivalent.

Fall (3)

142. Business Cycles
Fundamental factors in business cycles are analyzed and cycle theories are examined. Study of current business conditions begins early in the course and develops into practical application of forecasting methods to both business and other data. Prerequisite: Economics 140.

Spring (3) (Not offered 1947-48)

150. Labor Problems
A study of labor organizations and their policies, wages, strikes, unemployment, social insurance, child labor, labor legislation, plans for industrial peace, and other labor problems.

Fall (3)

170. Government and Business
General survey of governmental activities affecting business; the state as an entrepreneur and manager; governmental assistance to business; governmental regulations and economic aspects, including recent developments in its historical, legal and economic aspects, including recent developments in the United States and abroad; proposed policies.

Fall (3)
171. Transportation
The development of railway transportation; railroad financing; rates and rate making; governmental regulation; government operation of railroads during the war; recent development of motor and air transportation; current problems in public utilities. Prerequisite: Economics 1A-1B.
Fall (5) (Not offered 1947-48)

189. Social Insurance
The need for social security and attempts to meet these needs through social insurance and other devices, including old age pensions, health insurance, unemployment insurance, and Social Security Act. Strength and weakness of existing systems. Need for extension; proposals.
Fall (5)

190. Principles of Foreign Trade
Principle of comparative costs; comparative advantages in various nations; foreign exchange and the balance of payments; financing foreign trade; the risk element; government regulations over trade.
Spring (3)

195. International Economic Relations
Review of national and international commercial policies; the techniques and controls of international trade; international organizations and trade; tariffs; trade and national economic objectives.
Spring or Summer (3)

196. Investigation and Report
Described to stimulate independent study and investigation; to furnish guidance in the collection, organization, and presentation of factual material; to improve the technique of term reports.
Fall and Spring (3-3)

199A-199B. Special Study
Described exclusively for seniors with a major in economics.
Fall (1), Spring (1 or 2)

Graduate Courses

Economics 200A-200B. Seminar in Modern Economic Thought
A critical study of contemporary economic thought to provide a clearer understanding of major economic problems of the day.
Fall and Spring (2-2)

GEOGRAPHY

Lower division preparation for the liberal arts major in geography: Geography 1, 2, 3, and Geology 1A-1B. Recommended: A reading knowledge of French or German.

Liberal arts major: Twenty-four units of upper division work in geography or 18 units in geography and six units in related subjects arranged in consultation with the chairman of the department.

Lower Division Courses

1. Introduction to Geography: Physical Elements
The nature of maps, weather and climates of the world; natural vegetation; land forms and their associated soils, with reference to their climatic relationships; the seas and their coasts. One all-day field trip. Open to all students who have not taken Geography 10A-10B. This course is classified as a natural science.
Fall and Spring (3)

2. Introduction to Geography: Natural and Cultural Regions
The regional differentiation of the world by human activity; areal bases of economy and nationality. Prerequisite: Geography 1.
Fall and Spring (3)

3. Elementary Meteorology
An elementary study of the earth's atmosphere and changes in it which produce our weather and influence human affairs. Special attention given to local conditions, instruments, and records. Aeronautical meteorology stressed in the fall semester. This course is classified as a natural science.
Fall (3)

4. Map Reading and Map Interpretation
Representation of geographic data by means of maps. Interpretation of projections, scales, symbols, land forms, and culture from topographic maps; measurements of cultural data on maps. Prerequisite: Geography 1. (See lower division requirements, page 17.)
Fall (2)

10. Economic Geography
Beginning course in economic geography designed for commerce and economic majors. Not open to students who have had Geography 2. Prerequisite: Geography 1.
Fall and Spring (3)

Upper Division Courses

112. Geography of California
The physiographic regions of California and the cultural landscapes developed by the successive cultural groups. Prerequisite: Geography 1.
Spring (3)

116. Geography of Latin America
The natural regions of Latin America; their occupational condition and historical evolution. Prerequisite: Geography 1.
Spring (3)

117. Geography of Northern and Eastern Europe
A study of the cultural development of the countries of northern and eastern Europe in relation to physical background and historical evolution. Prerequisite: Geography 1.
Fall (3)

118. Geography of the Mediterranean Area
A study of the cultural development of the countries of Southern Europe, Western Asia, and North Africa in relation to physical background and resources. Prerequisite: Geography 1.
Spring (3)

121. Geography of North America
The natural regions of North America, their formation and economic and historical development. Prerequisite: Geography 1.
Fall (3)

124. Geography of Asia
The cultural regions of Asia, their physical environment, and historical development. Prerequisite: Geography 1.
Spring (3)

135. Geography of the San Diego Area
Directed individual urban and rural field work in the San Diego area; the mapping of a small area and making its geographic interpretations. Prerequisites: Geography 1 and 2.
Fall (3)
141. Advanced Economic Geography
A survey of the raw materials of world trade; their production and distribution as related to major geographic regions of the world. Prerequisite: Geography 1.
Fall (3)

143. Political Geography
A survey of the geographic bases of national power; geographic aspects of international problems; theories of leading political geographers. Prerequisite: Geography 1.
Spring (3)

166. Honors Course
To be arranged after consultation with the chairman of the department. (See page 14.)
Fall and Spring (Credit to be arranged)

HISTORY

Lower division preparation for the liberal arts major in history: History 4A-4B or History 8A-8B, and either Political Science 1A-1B, 71A-71B or Economics 1A-1B.

Those planning to major in history are advised to take both of the abovementioned lower division history courses.

Upper division history requirements for the liberal arts major: At least 24 units in upper division history courses, including History 100, the major program to be arranged in consultation with the chairman of the department. A reading knowledge of at least one foreign language is expected of history majors.

The history minor: From 15 to 18 units of work in history is required. At least nine units must be chosen from upper division courses.

Any history course, with the exception of History 270A-270B, may be taken either semester, the A part without the B part, or vice versa.

Lower Division Courses

4A-4B. History of Modern Europe
A survey of European society, institutions and politics from about 1500 to 1914.
Fall semester: 1500-1700. Spring semester: 1700-1914.
Year course (3-3)

8A-8B. History of the Americas
Survey of the history of the western hemisphere from its discovery to the present time.
Year course (3-3)

9A-9B. History of the Pacific Ocean Area
A general survey of the history and civilization of the peoples of the Pacific, with special emphasis upon exploration, trade, international rivalries, and social evolution of the island areas.
Year course (3-3)

17A-17B. Political and Social History of the United States
Survey of the political and social development of the United States, with emphasis upon the rise of American civilization and ideals.
NOTE: This course is not open to freshmen.
Year course (3-3)

Upper Division Courses

111A-111B. Ancient History
Fall semester: Greek history to the Roman conquest. Spring semester: Roman history to the fourth century A.D.
Year course (3-3)

121A-121B. Medieval History
Survey of the main events of European social, cultural, religious, political and economic history, between 500 and 1300 A.D.
Year course (3-3)

131A-131B. Renaissance, Reformation and Counter-reformation
A history of personalities and events connected with the social, political, cultural, economic and religious change between 1300 and 1600.
Year course (3-3)

141. Europe in the Seventeenth and Eighteenth Centuries
European society, politics and international relations from the Thirty Years' War and Louis XIV to the Seven Years' War.
Fall (3)

142. The French Revolution and Napoléonic Era
Study of conditions in France prior to 1789, the Revolution, 1789-1815, the organization of France under Napoleon, character of his Empire, and the reorganization of Europe at the Congress of Vienna.
Spring (3)

143A-143B. Europe and the World Wars
Developments in Europe from 1914 to the present, with emphasis upon World War II and its aftermath.
Year course (3-3)

151A-151B. History of England
A survey of political and constitutional development in England since 1066; the transition from medieval England to modern; Tudor despotism; struggle for self-government under the Stuarts; rise and development of present-day political and social institutions.
Year course (3-3)

161. Mexico and the Caribbean Countries
Special attention to relations between the United States and these countries, and to recent developments in Mexico.
Fall (3)

162. South America Since Independence
Republics of South America. Development of nationality, struggles for political stability, exploitation, diplomatic and commercial relations with the United States, and other international problems of South America. Survey of present-day conditions.
Spring (3)

171A-171B. The Rise of the American Nation
Semester I: Lectures and readings on English colonization in North America, the development of colonial institutions and political customs, and areas of international conflict during the eighteenth century. Semester II: The revolutionary movement and conflict during the eighteenth century. The establishment of the government under the Constitution of 1787 to the close of the War of 1812.
Year course (3-3)

173A-173B. The Expansion of the United States
Lectures and readings on Jacksonian democracy, territorial expansion and the Mexican War, the slavery controversy, Civil War and Reconstruction, and attention to the growth and progress of the United States to the close of the nineteenth century.
Year course (3-3)

175. The United States in the Twentieth Century
The rise of the United States to the position of a world power; social and economic problems posed by the machine age; political action and adjustment, actual and proposed, intended as solutions for these problems.
Spring (3)
176A-176B. History of American Foreign Policy
Lectures and readings in the field of American foreign relations since 1776, with
special emphasis, in the second semester, upon affairs since 1900. A general survey
course. Not open to students with credit for Political Science 176A 176B.
Year course (3-3)

179A-179B. Intellectual History of the American People
A study of the birth and flow of ideas in the United States since the founding of
the English colonies, with special attention devoted to social and political thought.
Year course (3-3)

181A-181B. History of the West
The American frontier: Expansion, exploration, settlement and building of the
new states, with emphasis upon frontier problems of defense, communications, finance,
etc.; the development of cultural institutions. A critical examination of the causes,
effects and results of the frontier experiences of the American people. Second semester
deals chiefly with the far west and its political influence upon the American people.
Frontier influences on American ideals and politics.
Year course (3-3)

191A-191B. History of the Far East
Particular emphasis during the first semester upon the history, both internal
and international, of the Far East through the nineteenth century. The second semester
will be devoted to a consideration of developments in the twentieth century.
Year course (3-3)

192. Modern Russia
A general survey of Russian history, with emphasis upon the period since Peter
the Great; the relations between the Russian Empire and its national minorities;
Terrorist experiments in political and social reform; the rise and spread of revolutionary
socialism; the collapse of the Russian Empire; the development of the U. S. S. R.
Fall (3)

193. History of China to 1895
A survey of Chinese history and institutions from antiquity to the Sino-Japanese
War.
Spring (3)

194. History of Japan to 1923
A general survey of the political, economic and social development from the
foundation of the empire to the Japanese Exclusion Act. Special attention will be
given to religions, philosophy, literature and the arts.
Spring (3)

199. Special Course for Advanced Students
Required of all students with a history major in liberal arts and those working
toward a General Secondary credential with a history major. To be attended during
the senior year.
Spring (2)

270A-270B. Seminar
Required of all candidates for a General Secondary credential with history as
the major. Special emphasis upon the application of research in American history to
teaching in junior high school, high school, and junior college.
Year course (2-2) Open only to candidates for the General Secondary credential.

10. Use of the Library
The chief object is to give a working knowledge of some of the resources of the
library which every teacher and student should understand—the decimal classifica-
tion, the card catalog, periodical indexes, and the most important reference books,
together with some instruction in the preparation of bibliographies. The course will
be a requirement of those students added to the library's staff of student assistants,
although it will not prepare the student to become a librarian.
Fall and Spring (2)

PHILOSOPHY

1A-1B. Introduction to Philosophy
A non-historical introduction to the types and problems of philosophy. The most
inclusive and influential world-views are studied at length, then the principal problems
of philosophy are considered in terms of these basic systems. Prerequisite: Sophomore
standing or permission of instructor.
(1A, Fall and Spring, 3) (1B, Fall and Spring, 3)

3A-3B. History of Thought
A study of the basic ideas of Western Civilization in their historical development.
The making of the modern mind as revealed in the development of philosophy and in the
relations between philosophy and science, art and religion. The history of ideas against
the social and political backgrounds from which they came. Prerequisite: Sophomore
standing or permission of instructor.
Fall, Spring (3, 3)

108. Social Philosophies
The study of man's speculation regarding his "right" organization, together with
the assumptions, analogies and economics determining his temporary conclusions.
Among the thinkers studied are Hobbes, James I, Rousseau, Locke, Jefferson, Kropot-
kin, Mill, Marx, Mussolini, Dewey, Plessy, Hoover, Roosevelt, etc. (May be taken
for lower or upper division credit.)
Spring (3)

120. Reflective Thinking (Logic)
Analysis of fallacies, and the logic of argument and proof; an examination of
reflective procedures in various fields of knowledge, and a review of some psychological
descriptions of thought. Prerequisites: Psychology 1A and at least one semester of
philosophy.
Spring (3) (1947-48 and alternate years)

130. Ethics
The search for the Good Life. The principal theories of ethical obligation, the
sources of moral authority, and the various views regarding the nature of the "highest
good" and the related goals of intelligent living.
Fall (3) (1947-48 and alternate years)

136. Philosophy of Art
A study of the nature of aesthetic experience, both in itself and in relation to the
rest of human experience. Particular effort is made to disentangle man's aesthetic
attitude and activity (whether in the field of art, nature or daily life) from those
experiences and evaluations with which the esthetic is frequently confused. The
experiences of art, both traditional and contemporary, are studied at length—
principal theories of art, both traditional and contemporary, are studied at length—
both in relation to actual artistic production and to art's role in society.
Spring (3)

137. Philosophy of Science
A critical examination of the basic concepts and methods underlying contemporary
scientific thought. Nature of scientific knowledge, conceptions of nature, natural law,
scientific thought. Nature of scientific knowledge, conceptions of nature, natural law,
scientific thought. Nature of scientific knowledge, conceptions of nature, natural law,
POLITICAL SCIENCE

The minor in political science: From 15 to 18 units of work, nine units of which must be chosen from upper division courses.

It is suggested that students who expect to transfer to another college to complete a major in political science plan their lower division work to include both Political Science 1A-1B and 71A-71B, and History 4A-4B or Economics 1A-1B.

Lower Division Courses

1A-1B. Comparative Government
A comparative study of typical governments. Semester I: England, France and Switzerland; Semester II: Italy, Germany, Russia, and Japan.
Year course (3-3)

71A-71B. Introduction to American Government and Politics
Semester I: Governmental organization in the United States; the federal system; the organization, powers and functions of the legislative, executive, and judicial branches of the government; the relations between federal, state and local units of government.
Semester II: Expansion of governmental functions and the development of means of democratic control; an examination of the increased use of government as an instrument of social control; the history, motivation, methods and control of political parties; nominations, elections and minority groups; pressure politics.
Note: Not open to freshmen.
Year course (3-3)

Upper Division Courses

101. American Institutions
A study of the principles of the Constitution of the United States of America, and a survey of the political and social institutions which have developed under the Constitution.
Full (3)

111A-111B. Theory of the State
The nature of the state, its organization and activities, and its relation to the individual and to other states. Special attention is given to recent developments in the field of political thought.
Year course (3-3)

133A-133B. Principles of International Law
This course is concerned with the formation of law in the international community. The historical development of the theory and rules of international law, the application of international law in international relations and the application of international law in national courts.
Year course (3-3)

141A-141B. Introduction to International Organization
Examination of the development of ideas and practices in international relations. Semester I: Ideas, organization and practices of the community of nations; the development of theories and practices of the sovereign state; theories of nationalism, imperialism, internationalism and cosmopolitanism; methods short of war for settlement of international disputes. Semester II: Twentieth century experiments and international organizations; special emphasis to be placed upon a comparative study of the League of Nations and the United Nations; a critique of the functions of legislation, administration and judicial decisions on the international level.
Note: Open only to junior and senior students.
Year course (3-3)

143A-143B. Principles of Public Administration
A study of the functions and techniques of administration in the government of the United States.
Semester I: Functions of administration in American federalism; relationship between the administrative branch and the legislative and judicial branches of government; bureaucracy; administrative "legislation" and "adjudication"; administration and democratic controls.
Semester II: Public administration management. A detailed examination of the forms and purposes of administrative organization; agencies; government corporations; internal structure and control; inter-agency relationships; personnel administration; budget and auditing as administrative devices; methods of administrative action.
Year course (3-3)

175A-175B. American Constitutional Development
A study of the work of the Convention of 1787 and of significant phases of American constitutional law.
Year course (3-3)

176A-176B. History of American Foreign Policy
Lectures and reading in the field of American foreign relations since 1776, with special emphasis, in the second semester, upon affairs since 1900. A general survey course. Not open to students with credit for History 176A-176B.
Year course (3-3)

PSYCHOLOGY

Lower division preparation for a major in psychology shall include: Psychology 1, 10, and 11 or 12; 4 units in Biology, Zoology, or Physiology; 6 units in Philosophy, Anthropology, or Sociology. Mathematics C recommended.

Upper division requirements: At least 24 upper division units in Psychology including Psychology 104 and 300.

Lower Division Courses

1. General
An elementary survey of normal adult psychology, descriptive and organizational; the subjective and objective aspects of behavior. Furnishes basis for all other courses in psychology and is prerequisite therefor.
Fall and Spring (3)

10. Advanced General Psychology
A comprehensive treatment of the fundamentals of psychology as the science of behavior and experience through a historical and an experimental approach. Required of all majors. Prerequisite: Psychology 1.
Fall and Spring (3)

11. Applied Psychology
A survey of the fields in which the basic principles of psychology may be applied. An introduction to the interpretation of statistical data and its utilization in the application of psychological principles to problems of daily living. Required of all non-majors who plan to take upper division courses in psychology. Prerequisite: Psychology 1.
Fall and Spring (3)

12. Mental Hygiene
An examination and interpretation of the factors which go into the making of the person as he adapts himself to the social world about him. The development of the normal personality. Prerequisite: Psychology 1.
Fall and Spring (3)
102. Child Psychology
Upper Division Courses
A survey of the child's motor, social, emotional and intellectual development from conception to pre-adolescence, with a view to identifying general trends and evaluating individual differences in performance and in developmental patterns. Prerequisite: Psychology 10, 11, or 12.
Fall (3)

103. Psychology of Adolescence
A study of the characteristics of normal adolescent children, as indicated by recent research in the field of adolescent growth, development and behavior, and by first-hand observations to be conducted by class members, with a view to (1) promoting and understanding of the behavior of normal adolescents, (2) developing sensitivity for detection of deviation from the norm, and (3) recognizing practical implications for meeting the needs of adolescents. Prerequisite: Psychology 10, 11, or 12.
Spring (3)

104. Statistical Methods in Psychology
An introduction to the use of quantitative methods in psychology, with emphasis upon measures of central tendency and variability, graphic methods and percentiles, linear correlation, and the applications of the normal probability curve. Prerequisite: Psychology 10, 11, or 12.
Fall (3)

105A. Psychological Testing (Group)
A critical review of the principal intelligence, personality, aptitude and vocational interest tests, with emphasis upon problems of measurement in the various fields. Attention is given to procedures used in test construction and administration. Prerequisites: Psychology 11 or Psychology 104.
Fall (3)

105B. Psychological Testing (Individual)
A course offering instruction in the principles of individual testing and practice in the administration of the Stanford-Binet, Wechsler-Bellevue and the more widely used individual mechanical aptitude tests. Prerequisite: Psychology 105A or Psychology 104 and consent of instructor.
Spring (3)

120. Business and Industrial Psychology
Application of psychological facts and principles to problems of advertising and selling, market research, personnel selection and assignment, employee training, fatigue, and other factors in efficiency. Prerequisite: Psychology 11 or Psychology 104.
Fall (3)

140. Physiological Psychology
Topics covered include the history of physiological psychology, neurophysiology with emphasis upon integrative activities, receptor and effector processes, and the effects of hormones and narcotics upon behavior. Prerequisite: Psychology 10, 11 or 12 and Physiology, Biology or Zoology.
Spring (3)

145. Social Psychology
Personality as it develops in relation to social environment. Suggestion, imitation, leadership, the crowd, public opinion, social control, prejudice, propaganda, sex differences, race differences, etc. Prerequisite: Psychology 11 or 104.
Spring (3)

150. Abnormal Psychology
The relation of psychology to the psychoneuroses and insanity; the appearance of abnormal traits in incipient stages of mental disturbances. Methods of diagnosis and early treatment. Prerequisites: Psychology 10, 11, or 12 and Physiology, Biology or Zoology.
Fall (3)

151A. Clinical Psychology: Diagnostic
A study of diagnostic devices in psychology, tests of clinical significance, ratings, interviewing for securing information, projective and case study analyses; problems of insight, rapport, empathy, and prediction of individual behavior. Prerequisites: Psychology 105A, 105B, 140, or 250.
Fall (3)

151B. Clinical Psychology: Therapeutic
A study of non-medical psycho-therapies—ancient, medieval, and modern, but all contemporary; particularly non-directive counseling and such directive methods as naively operate in making friends and influencing people. Prerequisite: Psychology 151A unless waived by consent of instructor.
Spring (3)

160. Experimental Psychology of Learning
A survey of the historical development and more recent experimental literature in the psychology of memory and learning, including conditioning, problem solving, and thinking. The course will involve lectures, demonstrations of classical experiments, some group and individual problems, and extensive reading in psychological periodical as well as text-book materials. Prerequisite: Psychology 10 and Psychology 104.
Spring (3)

199. Individual Studies in Psychology
Limited to students in the senior year. Permission to enroll must be obtained from a member of the staff. Credit limited to three units.
Fall and Spring (1-3)

SOCIOLOGY
A major in Sociology shall consist of six lower division and 24 upper division units in Sociology including Soc. 50A, 50B, 103, 105, 108, 152.
A pre-social work curriculum is designed for those students who plan to do social work. They should follow the general major as outlined on page 56. Students who do not plan to do social work, and who may not wish a major in Sociology, may take Sociology as one of three social sciences in a general major. See page 18 for requirements of a general major.

Lower Division Courses

50A. Introduction to Sociology
A study of modern social problems recognizing the geographic, economic, psychological, and sociological factors involved. Emphasis is on a scientific method of approach. An evaluation of various causes and solutions of problems is made. A prerequisite for upper division courses in Sociology. Sophomore standing required.
Fall (3)

50B. General Sociology
The development and use of the concepts of sociological analysis, such as human nature, the effects of isolation and social contacts upon the development of personality; social interaction; social processes; social forces; social control; collective behavior; and social progress. A prerequisite for upper division courses in Sociology. Sophomore standing required.
Spring (3)
55. Marriage and Family Life
A psychological and sociological approach to the study of marriage and the family.
Some of the topics considered are: relation of courtship to marriage; emotional maturity
and marriage; eugenic aspects of marriage; college marriages; harmony in modern marriage;
economic adjustment in marriage, parenthood. Prerequisites: Health Education 21; a biological science and Psychology 1 recommended. Not open to freshmen.
Spring (3)

Upper Division Courses

103. Introduction to Social Research
Quantitative and nonquantitative methods of research in the social sciences; study and practice in the use of the schedule, questionnaire, case study and social survey; also tabular and graphic presentation, analysis of frequency distributions, sampling and correlation techniques. Prerequisites: Mathematics A-B and Sociology 50A-50B. This course is a prerequisite for other upper division courses in Sociology except for Sociology 108.
Fall (3)

105. Social Pathology
A study of the alleged abnormal phenomena in society; family disorganization
and personal demoralization; pathology of individual and group relationships and of
economic, social, and cultural relationships.
Fall (3)

106. Criminology and Penology
The extent and characteristics of crime; consideration of physical, mental,
economic, and sociological causes of crime; study of methods of penal discipline, prison labor, parole, and probation; programs of prevention. Prerequisite: Sociology 50A-50B.
Fall (3) (Offered in 1948-49 and alternate years)

107. Juvenile Delinquency
A study of the causative factors of anti-social behavior from the viewpoints of
economics, psychology and sociology. Particular emphasis will be placed upon the
influence of the school, home and neighborhood. Protective and remedial measures
such as the Visiting Teacher, Juvenile Court, Probation, Parole and Reformatories
will be studied. Prerequisite: Sociology 50A-50B.
Spring (3) (Offered in 1948-49 and alternate years)

108. Marriage and the Family
Preparation for marriage. Prediction scales for evaluating success or failure in
marriage. Parent-child relationships; factors in successful and unsuccessful mar-
rriages; higher education and the birth rate; married women in industry and profes-
sions; desertion and divorce. Not open to students who have had Sociology 55.
Prerequisite: 60 units of credit.
Fall (3)

109. Fields of Social Work
A survey of the nature of social work and the various kinds of social work
which are found in the modern urban life. The student is familiarized with the
various social agencies in the community, their problems and methods of work, by
readings and field trips. Volunteer social work in some social agency recommended.
Prerequisite: Sociology 50A-50B.
Spring (3)

110. Race Relations
A study of the Negro, Oriental, and other minority groups in the United States.
A study of mental capacities, education, cultural achievement, family life, delinquency
and other social factors of each group. Race prejudice, racial consciousness, theories
of racial superiority and inferiority will be considered. Prerequisite: Sociology
50A-50B.
Spring (3) (Offered in 1948-49 and alternate years)

115. Population Problems
Problems of population increase, migration, shifts in composition of population
relative to age, sex, and racial distribution. Population practices and theories.
Biological and geographical aspects of population problems. International population
movements. Prerequisite: Sociology 50A-50B; Sociology 103.
Spring (3) (Offered in 1947-48 and alternate years)

152. History of Social Thought
The origin and development of social theory in Europe and America; consider-
ation of the fields and specialization and research in contemporary American
Sociology. Prerequisite: Sociology 50A-50B.
Spring (3) (Offered in 1947-48 and alternate years)

195. Community Welfare Organization
An analysis of the structure and process of community organization for social
welfare as well as the functional relationships between public and private welfare
agencies. Field work will be required to study some of the social agencies of
San Diego. Prerequisite: Sociology 50A-50B and Sociology 103.
Fall (3) (Offered in 1947-48 and alternate years)

197. Urban Sociology
A study of the structure and function of the modern city; types of neighbor-
hoods; forms of recreation; social forces in a metropolitan area; types of urban
personalities and groups; rural-urban conflicts of culture. Practical field studies
required. Prerequisite: Sociology 50A-50B.
Fall (3)
**PROVISIONAL CURRICULA**

These curricula are organized for students who have not yet qualified for enrollment in a four-year curriculum leading to the Bachelor of Arts Degree. By maintaining a satisfactory grade of scholarship the student may secure the opportunity of transfer to a four-year program. Such transfers are made by action of a faculty committee after the student has completed two or more semesters in a provisional curriculum. Upon transfer the credits earned in courses in the provisional program in which grades of C or better have been received are allowed to count toward the Bachelor of Arts degree.

Courses numbered 40 and 45 are not open for credit to students in a four-year curriculum.

A provisional student may elect any other college lower division subject under guidance where his high school scholarship record, or his scores in the aptitude and achievement tests, or his college record indicates probable success in that field. He must, of course, meet all prerequisites for the course under consideration.

**A SUGGESTED PROGRAM FOR PROVISIONAL STUDENTS**

<table>
<thead>
<tr>
<th></th>
<th>Units</th>
<th>Units</th>
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<tbody>
<tr>
<td><strong>First Year</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English 40A or 40B and 40C</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>*Physical Science 40 or equivalent</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Health Education 21</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Social Science 40</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Sociology 45</td>
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<td>3</td>
</tr>
<tr>
<td>Physical Education</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Psychology 40</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>154</td>
<td>154</td>
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</tbody>
</table>

| **Second Year**    |       |       |
| English 45, 46, or 47 | 3     | 3     |
| Social Science Elective | 3     | 3     |
| Social Science 45    | 3     | 3     |
| Elective            | 12    | 12    |
| Physical Education  | 2     | 2     |
| **Total**           | 154   | 154   |

* See subject matter requirements in the lower division, page 16.

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**COURSES OF INSTRUCTION**

**BIOLOGY**

40. Man and His Biological World

A survey of the general field of biology with emphasis on the role of biological science in the welfare of man and his associates, consisting of three lectures and one demonstration period per week.

Fall and Spring (3)

45A-45B. Business Economics

A basic course in the general principles of business economics and the application of these principles to current problems of man's economic life. An interpretation of basic economic theories to everyday vocational and business practices. Special studies of various economies with respect to their organization, production methods, economic policies, and types of governmental control.

Year course (3-3) (Not open to freshmen except by permission of the instructor.)

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**ENGLISH**

40A. Beginning Composition

The elements of composition, including drill in grammar and usage; exercises in vocabulary building and careful reading; themes writing.

Fall and Spring (3)

40B. Freshman English

Composition stressing exposition. Reading from essays and articles. Prerequisite: Satisfactory Subject A test. (Not open for credit to students who have completed 40A.)

Fall and Spring (3)

40C. Freshman Literature

Literature, mainly contemporary, is read for its thought and ideals, especially in relation to human problems and their solution. Practice in writing is continued. Prerequisite: One semester of Freshman English. Required of all Provisional students.

Fall and Spring (3)

45. Sophomore English: Biography

Composition stressing personal narrative and informal essay. Reading from field of biography and memoirs. Prerequisite: English 40A or 40B, and English 40C.

Spring (3)

46. Sophomore English: Contemporary Literature

Study of contemporary literature, with emphasis on various forms, such as the novel, poetry, drama, etc., as used by the principal writers of the twentieth century. The main objective of the course is to give students a background for the major portion of their reading beyond college. Prerequisite: English 40A or 40B, and English 40C.

Fall (3)

47. Sophomore English: Periodical Literature

Composition stressing the writing of essays and articles. Reading from current periodical literature. Prerequisite: English 40A or 40B, and English 40C.

Fall (3)
PHYSICAL SCIENCE

40. Man and His Physical World
   A brief survey of the nature of the scientific method and of selected topics in
   physical science. Materials will be chosen from physics, chemistry, astronomy, and
   geology in order to give some background for an understanding of the relations of
   physical science to modern life. Not open to students who have had both high school
   or college physics and chemistry or either of these subjects together with either
   astronomy or geology.
   Fall and Spring (3)

PSYCHOLOGY

40. Psychology and Life
   An elementary survey of normal adult psychology, focused upon psychological
   principles in relation to life situations. Open only to students enrolled in the Provisi-
   onal curriculum.
   Fall and Spring (3)

SOCIAL SCIENCE

40. Contemporary Problems
   A survey of the major political, social, and economic forces in modern American
   life. Chief problems are analyzed in relation to their setting, and students are given
   sound methods of approach in dealing with them.
   Fall (3)

45. American Democracy
   The structure and function of government, as it relates to individual Americans.
   Special emphasis on popular participation through voting, political parties, pressure
   groups, and public opinion. Prerequisite: Sophomore Standing.
   Spring (3)

SOCIOLOGY

45. Marriage and the Family
   The purpose of this course is to prepare young people for successful marriage
   and family life. The development of the personality through family relationships, the
   choice of a life partner, and the social and economic factors involved in the establish-
   ment of a home, are given special emphasis. The importance of the family as a unit in
   larger social groupings is stressed, and both psychological and material factors which
   affect the welfare of family members are brought to the student’s attention. Prereq-
  uisite: Psychology 40 or sophomore standing.
   Spring (3)

DIRECTORY

(1946-47)

HEPNER, WALTER R. President
A.B., 1915, M.A., 1916, E.D., 1927, University of Southern California. At San
Diego State College since 1928.

ADAMS, JOHN R. Professor of English
A.B., 1930, A.M., 1932, University of Michigan; Ph.D., 1946, University of
Southern California. At San Diego State College since 1938.

ALCORN, MARVIN DOUGLAS. Assistant Professor of Education
   Director of Teacher Placement
A.B., 1926, Southwestern College; A.M., 1931, Teachers College, Columbia Uni-
versity; Ed.D., 1943, University of Southern California. At San Diego State
College since 1941.

AMSDEN, GEORGIA C. Associate Professor of Commerce
   Diploma, Gregg School, Chicago. At San Diego State College since 1926.

ASCHMANN, H. HOMER. Instructor in Geography
   B.A., 1940, M.A., 1942, University of California at Los Angeles. One-half year
   graduate study at University of California. At San Diego State College since
   1946.

AULT, JESSE W. Dean of Professional Education
   B.S., B.P.d., 1916, Valparaiso University; M.A., 1935, University of South
   Dakota. One year graduate study since 1925 at Claremont Colleges and
   University of Southern California. At San Diego State College since 1935.

BACON, GUINIVERE KOTTER (Mrs. George) Supervisor of Student Teaching
   Associate Professor of Education
   B.S., Utah Agricultural College; M.A., Stanford University. One year graduate
   study since 1926 at Stanford University, Teachers College of Columbia Uni-
   versity, University of Southern California, and University of California at Los
   Angeles. At San Diego State College since 1928.

BAIRD, OSCAR. Professor of Physics
   B.A., 1910, University of Wisconsin; M.A., 1914, University of California.
   Three years graduate study since 1924 at University of Minnesota, University
   of California and University of Southern California. University of Oregon. At
   San Diego State College since 1921.

*BAKER, CLIFFORD HENRY, JR. Instructor in Spanish
   B.A., 1938, San Diego State College; M.A., 1945, University of California. Two
   years graduate study since 1938 at University of California. At San Diego
   State College since 1947.

BARNHART, KENNETH EDWIN Associate Professor of Sociology
   A.B., 1915, Southwestern University; A.M., 1926, Southern Methodist Uni-
   versity; Ph.D., 1944, University of Chicago. At San Diego State College since
   1939.

BEATTY, LESLIE S. (Mrs. Roger) Assistant Professor of Education
   Supervisor in Campus Elementary School
   A.B., University of California; M.A., Claremont Colleges. Two years graduate
   study at University of California and San Diego State College. At San Diego
   State College since 1946.

BENSON, RICHARD M. Instructor in Sociology
   B.A., 1923, Oregon State College; M.A., 1925, University of Washington; Ed.D.,
   1931, Stanford University. At San Diego State College since 1946.

BLOCK, EDWARD A. Assistant Professor of English
   A.B., 1938, M.A., 1939, Ph.D., 1942, University of California. At San Diego
   State College since 1946.

* On leave.
BROMLEY, J. PHILIP. Assistant Professor of Commerce B.S., 1924, M.S., 1926, University of Southern California. One year graduate study at University of Southern California, Columbia University, and Texas Agricultural and Mechanical College. At San Diego State College since 1928.

BROOKS, RAYLOR. Assistant Professor of Geology B.A. 1928, Stanford University. Two years graduate study at University of Arizona and Stanford University. At San Diego State College since 1932.

BROWN, ELIZABETH (Mrs. Leslie P.) Associate Professor of French Ph.B., M.A., Ph.D., University of Chicago. At San Diego State College since 1922.

BROWN, LESLIE PARKER. Professor of Spanish and French B.A., 1913, Yale College; M.A., 1915, Harvard University; Ph.D., 1925, University of Southern California. At San Diego State College since 1922.

BRIDGEAARD, MARQUERITA ANNA. Supervisor of Student Teaching; Assistant Professor of Education A.B., San Diego State College; M.A., Claremont Colleges. At San Diego State College since 1916.

CAMERON, ROY ERNEST. Professor of Economics A.B., 1922, Ph.D., 1929, University of California. At San Diego State College since 1929.

CANADAY, DYXIE D. Instructor in English B.S., M.A., Oklahoma A. and M. College. At San Diego State College since 1946.

CAVE, MARY F. Assistant Professor of Physical Education B.S., 1937, University of North Dakota; one-year study at Bennington College. At San Diego State College since 1946.

COLT, THEODORE S. Instructor in English B.A., 1928, M.A., 1940, and two years' graduate study, University of California at Los Angeles. At San Diego State College since 1946.

CORBETT, KATHERINE E. Supervisor of Student Teaching; Associate Professor of Education B.P., Michigan State College; B.S., M.A. Teachers' College, Columbia University. At San Diego State College since 1921.

CORCORAN, EUGENE F. Instructor in Mathematics B.S., 1919, North Dakota State College. At San Diego State College since 1916.

CROUCH, JAMES ENSIGN. Professor of Biology B.S., 1926, M.S., 1927, Stanford University; Ph.D., 1929, University of Southern California. At San Diego State College since 1922.

DARLING, MARY W. (Mrs.) Instructor in German A.B., M.A., Stanford University. One year graduate work at Stanford University and University of California. At San Diego State College since 1946.

DeJARNETTE, REVEN S. Assistant Professor of Music B.Mus., 1914, University of Kansas; M.A., 1936, Edd., 1938, New York University. At San Diego State College since 1946.

DE LAND, EDWARD C. Instructor in Physics B.S., 1945, South Dakota School of Mines and Technology. At San Diego State College since 1946.

DEPUTY, ERYT CHESTER. Professor of Education B.A., 1925, University of Denver; M.A., 1926, Ph.D., 1929, Columbia University. At San Diego State College since 1921.

DEVINE, WARNER R. Instructor in Physics B.S., 1932, Worcester Academy; B.S., 1936, Massachusetts Institute of Technology. At San Diego State College since 1946.

*On leave.
LINLEY, JAMES  Assistant Professor of Education
Ph.B., 1927, University of Chicago; M.S., 1924, Ph.D., 1928, University of Southern California. At San Diego State College since 1944.

LIVINGSTON, GEORGE ROBERT  Professor of Mathematics
B.S., 1911, M.A., 1922, University of California. One year graduate study at University of California and University of California at Los Angeles. At San Diego State College since 1921.

LUCIO, WILLIAM HOWARD  Principal of Calais Elementary School
A.B., 1924, M.A., 1937, Ph.D., 1943, University of California. At San Diego State College since 1939.

MADDEN, RICHARD  Director of Elementary Education; Professor of Education
B.A., 1926, Nebraska (Purdue) State Teachers College; M.A., 1939, Ph.D., 1931, Columbia University. At San Diego State College since 1939.

MARCHAND, ERNEST L.  Associate Professor of English
B.A., and M.A., 1928, University of Washington; Ph.D., 1938, University of Wisconsin. At San Diego State College since 1946.

MATSON, STEWART W.  Instructor in Physics
B.S., 1924, University of Chicago. One year of graduate study. At San Diego State College since 1946.

McCLINTIC, JOSEPH O.  Associate Professor of Economics
A.B., 1924, Central College; A.M., 1926, University of Missouri; Ph.D., 1946, University of Wisconsin. At San Diego State College since 1946.

McCOLLM, IVAN N.  Director of Summer Sessions
B.A., 1928, Central Washington College of Education; M.S., 1933, University of Oregon; Ed.D., 1940, Colorado State College of Education. At San Diego State College since 1946.

MEAD, HUNTER  Associate Professor of Philosophy and Psychology
A.B., 1928, Central Washington College of Education; M.S., 1933, University of Oregon; Ed.D., 1940, Colorado State College of Education. At San Diego State College since 1946.

MENDEHALL, MARY  Dean of Women; Professor of Educational Guidance
B.A., University of Colorado; M.A., University of Southern California; Ph.D., Yale University. At San Diego State College since 1939.

MERRILL, JOHN E.  Assistant Professor of History
A.B., 1933, Stanford University; A.M., 1934, Harvard University. Two years graduate study at Stanford University. At San Diego State College since 1939.

MESSIER, LEONARD N.  Instructor in French

 MILNE, DAVID S.  Assistant Professor of Sociology
B.A., 1932, University of California at Los Angeles; M.A., 1932, University of Southern California. Two years graduate study at University of Chicago. At San Diego State College since 1946.

MOE, CHESEY R.  Professor of Physics
B.A., 1926, M.A., 1931, Stanford University; Ph.D., 1941, University of Southern California. At San Diego State College since 1946.

MOQUIN, WILLIAM N.  Instructor in Chemistry
B.S., 1936, University of California. One year graduate study at University of California and Ohio State University. At San Diego State College since 1946.

MORTIZ, CHARLES E.  Assistant Professor of Biology
B.A., 1932, Dartmouth College; Ph.D., 1936, University of California. At San Diego State College since 1946.

MYERS, MABEL A.  Assistant Professor of Biology
B.A., M.A., Pomona College; Ph.D. Cornell University. Post doctoral study at University of Southern California; University of California at Los Angeles, at University of Southern California, University of California at Los Angeles, University of Wisconsin and Claremont College. At San Diego State College since 1946.
NASATIR, ABRAHAM PHINEAS
Professor of History
B.A., 1921, M.A., 1928, Ph.D., 1926, University of California. At San Diego State College since 1928.

NICHOLS, AMBROSE R., Jr.
Assistant Professor of Chemistry
B.S., 1925, University of California; Ph.D., 1925, University of Wisconsin. At San Diego State College since 1935.

OLSON, ANDREW C., J.R.
Instructor in Biology
B.A., 1936, San Diego State College; M.S., 1942, University of Idaho. One year graduate study at University of California. At San Diego State College since 1946.

OSBORN, CLARENCE G.
Professor of History and Political Science

PANOSIL, ANNA M.
Instructor in Spanish
A.B., University of Denver. One year graduate study at University of Mexico; Diploma de Estudios Historicos y Universidad de California. At San Diego State College since 1949.

PATTERSON, EILEEN
Professor of Art

PEIFFER, HERBERT C., Jr.
Dean of Student Personnel and Guidance
Associate Professor of Psychology
A.B., 1926, University of California at Los Angeles; M.A., 1921, Ph.D., 1929, Stanford University. Appointed Junior College 1937. At San Diego State College since 1941.

PERRY, FAY V. (Mrs. J. M.)
Director of Guidance for Provisional Students
Associate Professor of Sociology
B.A., San Diego State College; M.A., E.D., University of Southern California. Appointed Junior College 1936. At San Diego State College since 1940.

PETTERSON, CHARLES E.
Dean of Men; Professor of Physical Education

PFAFF, PAUL LEWIS
Associate Professor of Speech Arts
B.A., 1920, Stanford University; M.A., 1927, University of Southern California. Two years graduate study at University of Southern California. At San Diego State College since 1921.

PHILLIPS, WALTER THOMAS
Professor of Spanish
A.B., 1926, University of Washington; M.A., 1926, Stanford University; Ph.D., 1940, University of Southern California. Graduate study at National University of Mexico; Institute of French Education; Middlebury College; Italian School. At San Diego State College since 1921.

POST, LAUREN SCHUSTER
Professor of Geography
A.B., 1924, M.A., 1931, Ph.D., 1937, University of California. At San Diego State College since 1951.

POVEMKINE, E. KINGSLEY
Assistant Professor of Speech Arts
B.A., San Diego State University; M.A., 1933, Yale University. At San Diego State College since 1946.

PRITCHARD, MARGARET H.
Assistant Professor of Sociology
B.S., University of Washington; M.A., 1933, Yale University. At San Diego State College since 1946.

PRUGH, EARL E.
Assistant Professor of Mathematics
B.S., 1939, Ohio Wesleyan University; M.A., 1923, Columbia University. At San Diego State College since 1946.

RAPP, MORTON H.
Assistant Professor of English
B.A., 1932, University of Illinois; Ph.D., 1939, University of Iowa. At San Diego State College since 1946.

RIDOUT, LIONEL U.
Instructor in History
B.A., 1937, San Diego State College; M.A., 1941, and one and one-half years graduate study at University of California. At San Diego State College since 1946.

ROBINSON, DUDLEY HUGH
Professor of Chemistry
B.A., 1927, Louisiana State University; M.S., 1933, University of Iowa; Ph.D., 1937, University of Southern California. At San Diego State College since 1946.

ROBINSON, EVELYN L.
Instructor in Physical Education
B.S., University of Virginia (Mary Washington College); M.S., University of Southern California. At San Diego State College since 1946.

ROGERS, SPENCER LEWIS
Professor of Anthropology
B.A., 1929, San Diego State College; M.A., 1930, Claremont Colleges; Ph.D., 1937, University of Southern California. At San Diego State College since 1950.

ROSS, MELVYN K.
Assistant Professor of Chemistry
A.B., 1939, San Diego State College; M.S., 1949, and two years graduate study at University of Southern California. At San Diego State College since 1942.

ROWE, ROBERT D.
Associate Professor of Chemistry
A.B., 1931, Ph.D., 1939, Stanford University. At San Diego State College since 1946.

RUCCO, ILSE H. (Mrs. L.)
Associate Professor of Art
B.S., University of California at Los Angeles; M.A., Columbia University. At San Diego State College since 1946.

RYAN, FREDERICK L.
Associate Professor of Economics
B.S., 1936, Tufts College; Ph.D., 1939, University of California. At San Diego State College since 1946.

SANDERS, VIOLA
Supervisor of Student Teaching; Instructor in Education
B.A., San Diego State College; M.A., Claremont Colleges. At San Diego State College since 1948.

SCHOTT, FREDERICK W.
Instructor in Physics
A.B., 1928, San Diego State College; B.E., 1942, Stanford University. At San Diego State College since 1949.

SCHROEDER, MELVIN T.
Instructor in Physical Education
B.A., 1935, Occidental College. One year graduate study at University of Southern California. At San Diego State College since 1946.

SCHRUTTE, WILLIAM H.
Assistant Professor in Physical Education
B.S., 1923, University of Idaho. At San Diego State College since February, 1947.

SCHWARTZ, EVA H. (Mrs. H.)
Instructor in Chemistry
B.S., M.S., and one and one-half years graduate study at University of California. At San Diego State College since 1946.

SCHWEB, MARION LYNON (Mrs. W. E.)
Associate Professor of Physical Education
B.A., University of Iowa; M.S., University of Southern California. At San Diego State College since 1941.

SELLMAN, HUNTON D.
Professor of Speech Arts
B.S., 1927, Purdue University; M.A., 1928, University of Arizona. Three and one-half years graduate study at University of California. At San Diego State College since 1946.

SELLWOOD, JOHN J.
Instructor in Physical Education
B.S., 1926, M.S., 1941, Ph.D., 1946, and one year of graduate study at University of Southern California. At San Diego State College since 1946.

* SHAFER, FLORENCE L.
Assistant Professor of Physical Education
B.A., University of California; M.A., University of Southern California. At San Diego State College since 1946.

SHOECKER, CAROLYN M. (Mrs. W. C.)
Instructor in English and Speech Arts
A.B., 1928, M.A., University of California. At San Diego State College since 1946.

* On leave.
THEOBALD, JOHN R.  Associate Professor of English
B.A., 1925, St. Catherine's College, Oxford University; M.A., 1928, Mansfield College, University of Chicago; Ph.D., 1942, University of Iowa. At San Diego State College since 1948.

TILLEY, EDWARD B.  Instructor in Mathematics
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William Dunne Head Gardener
Myrella Southworth Engineer
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