

SAN DIEGO STATE COLLEGE

BULLETIN

Circular of Information

ANNOUNCEMENT
OF COURSES



FOR THE YEAR 1947 - 1948

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and State Director of Education
JOEL A. BURKMAN.....Assistant Director of Education

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FINE ARTS.....Lena E. Patterson
HEALTH, PHYSICAL EDUCATION AND RECREATION.....Carl H. Young
LANGUAGE AND LITERATURE.....John R. Adams
LIFE SCIENCE.....Robert D. Harwood
PHYSICAL SCIENCE.....Dudley H. Robinson
SOCIAL SCIENCE.....Clarence G. Osborn

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BIOLOGY.....James E. Crouch
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HISTORY AND POLITICAL SCIENCE.....Lewis B. Lesley
HOME ARTS (FAMILY LIFE EDUCATION).....Margaret H. Pritchard
MATHEMATICS.....John M. Gleason
MUSIC.....L. Deborah Smith
PSYCHOLOGY AND PHILOSOPHY.....Hunter Mead
PHYSICAL EDUCATION AND HEALTH (MEN).....Carl H. Young
PHYSICAL EDUCATION AND HEALTH (WOMEN).....Marion L. Schwob
PHYSICAL SCIENCE.....Oscar Baird
SOCIAL ECONOMICS.....Roy E. Cameron
SPEECH ARTS.....Paul L. Pfaff

BULLETIN AND ANNOUNCEMENT OF COURSES

VOLUME 34

JUNE, 1947

SAN DIEGO STATE COLLEGE
SAN DIEGO, CALIFORNIA

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1947							1948						
JULY							JANUARY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
-	-	1	2	3	4	5	-	-	-	-	1	2	3
6	7	8	9	10	11	12	4	5	6	7	8	9	10
13	14	15	16	17	18	19	11	12	13	14	15	16	17
20	21	22	23	24	25	26	18	19	20	21	22	23	24
27	28	29	30	31	-	-	25	26	27	28	29	30	31
AUGUST							FEBRUARY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
-	-	-	-	-	1	2	1	2	3	4	5	6	7
3	4	5	6	7	8	9	8	9	10	11	12	13	14
10	11	12	13	14	15	16	15	16	17	18	19	20	21
17	18	19	20	21	22	23	22	23	24	25	26	27	28
24	25	26	27	28	29	30	29	-	-	-	-	-	-
31	-	-	-	-	-	-	-	-	-	-	-	-	-
SEPTEMBER							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
-	1	2	3	4	5	6	-	1	2	3	4	5	6
7	8	9	10	11	12	13	7	8	9	10	11	12	13
14	15	16	17	18	19	20	14	15	16	17	18	19	20
21	22	23	24	25	26	27	21	22	23	24	25	26	27
28	29	30	-	-	-	-	28	29	30	31	-	-	-
OCTOBER							APRIL						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
-	-	-	1	2	3	4	-	-	-	-	1	2	3
5	6	7	8	9	10	11	4	5	6	7	8	9	10
12	13	14	15	16	17	18	11	12	13	14	15	16	17
19	20	21	22	23	24	25	18	19	20	21	22	23	24
26	27	28	29	30	31	-	25	26	27	28	29	30	-
NOVEMBER							MAY						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
-	-	-	-	-	-	1	-	-	-	-	-	-	1
2	3	4	5	6	7	8	2	3	4	5	6	7	8
9	10	11	12	13	14	15	9	10	11	12	13	14	15
16	17	18	19	20	21	22	16	17	18	19	20	21	22
23	24	25	26	27	28	29	23	24	25	26	27	28	29
30	-	-	-	-	-	-	30	31	-	-	-	-	-
DECEMBER							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
-	1	2	3	4	5	6	-	-	1	2	3	4	5
7	8	9	10	11	12	13	6	7	8	9	10	11	12
14	15	16	17	18	19	20	13	14	15	16	17	18	19
21	22	23	24	25	26	27	20	21	22	23	24	25	26
28	29	30	31	-	-	-	27	28	29	30	-	-	-

CALENDAR 1947-48

SUMMER SESSION, 1947

Term I, June 23-August 1

Term II-A, August 4-22

Term II, August 4-September 5

FALL SEMESTER, 1947-48

August 1

August 27-28

September 11

September 12

September 12

September 15-16

September 17

September 29

November 27-29

December 13

December 20

January 5

January 21-27

Applications for admission must be filed on or before this date.

Qualifying examinations for all entering freshmen.

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.

Second day of Orientation Program. All entering freshmen must appear on campus at 8.30 a.m. and remain until 3 p.m.

8.30 a.m.-12 m. Fundamentals tests.

1.00-2.30 p.m. College aptitude test for students entering with advanced standing.

Registration and payment of fees.

Instruction begins. Late registration fee becomes effective.

Last date for late registration.

Thanksgiving recess.

Last day for filing application for graduation.

Last day before Christmas recess begins.

Classwork resumes.

Semester examinations.

SPRING SEMESTER, 1947-48

January 5

February 3

February 3

February 4

February 4-5

February 6

February 16

March 22-27

May 1

May 31

June 3-10

June 11

Applications for admission must be filed on or before this date.

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.

8.30 a.m.-12 m. Fundamentals tests.

1.00-2.30 p.m. College aptitude test for students entering with advanced standing.

Second day of the Orientation Program. All entering freshmen must appear on campus at 8.30 a.m. and remain until 3 p.m.

Registration and payment of fees.

Instruction begins. Late registration fee becomes effective.

Last date for late registration.

Spring recess.

Last day for filing application for graduation.

Observed holiday—Memorial Day.

Semester examinations.

Commencement.

SUMMER SESSION, 1948

Term I, June 21-July 30

Term II-A, August 2-20

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 bachelor of arts degree or to 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 full and unhampered development 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, adjustive 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 1935-36, 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, 1931, 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 clubhouse for women students); the Cafe 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 1,500 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 135.

THE LIBRARY

The library facilities of this college are noteworthy for an institution of its size. The library consists of well 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.

Recently 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, afford special 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 Aztec Terrace, midway between Old Town and Loma Portal. Applications for housing at Aztec 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 extra-class 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 seem 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.

VOCATIONAL 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 fee, 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 fitness 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 language, 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 end of 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.

Adult special status may be granted an applicant who is over 21 years of age or is a war veteran provided that 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 lacked 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 demonstrate through the examinations of 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 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 regular status. 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 64 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 30 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 1.75 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 these 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 through the office of the Dean of General Education. A special 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 Registrar within two weeks after scheduled registration days. Registration 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

	Minimum	Maximum
Fees and deposits	\$23.50	\$30.50
Books	18.00	30.00
Board and room	275.00	---
Transportation, lunches, incidentals	20.00	60.00
Miscellaneous	---	5.00

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):	
Regular students (carrying over 5 units)	\$6.50
Limited students (carrying 5 units or less) per unit	2.50
Materials and service:	
Regular students	4.00
Limited students per unit	.50
General service deposit (unexpended portion is refunded)	3.00
Personnel 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	\$.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
(Deposits payable before laboratory work is started)	
Chemistry	5.00

Graduation Fees

State teaching credentials (each credential)	\$3.00
Diploma	1.00
The credential fee is collected through the college by 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 59 units as sophomores; 60 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; E, conditioned; F, failed; I, incomplete; Cr, credit; and W, withdrawn.

The grade E 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 institution. 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

Probation

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.

Disqualification

Any probational student whose scholarship falls below an average grade of C in any single semester is disqualified for further attendance at the college. A scholarship record below a D average for any single semester also disqualifies a student.

A disqualified student may be reinstated after an interval of one semester for reasons satisfactory to the Executive Committee of the Faculty. All applications for reinstatement must be in writing.

WITHDRAWALS FROM CLASS

Forms for withdrawal from class may be obtained at the Registrar's Office. If a student withdraws from class during the first seven weeks of a semester, a grade of W will be recorded upon his permanent record for each class which he has dropped. If he withdraws during the remainder of the semester, either an I or an F will be recorded unless a grade of W is approved by the proper dean. A grade of I automatically becomes an F unless the work is completed by the end of the next semester of attendance.

TRANSCRIPTS OF RECORD

Students may secure one transcript of record without fee. Thereafter, each request for transcript should be accompanied by the fee of \$1. Once a student has matriculated in this college, transcripts from other schools will not be returned, or copies of them made. No fees are charged for transcripts required for military purposes.

Transcripts in the possession of students are to be regarded as unofficial records.

ELIGIBILITY FOR DIRECTED TEACHING

No student shall be eligible for directed teaching (Education 116) leading to the Kindergarten-Primary, General Elementary, General Junior High, and Special Secondary Credentials who has not completed 75 units, been admitted to Teacher Education, and whose entire record, as well as for the preceding semester, does not average at least a 1.2 grade.

No student shall be eligible for directed teaching (Education 316) leading to the General Secondary Credential who has not been admitted to the teacher education program prescribed for admission to candidacy for this credential.

THE HONORS GROUP

All students who at the end of the sophomore year have attained a grade-point average of 2.5, and such others as have attained a high average in the department in which their major is selected, and who have received the recommendation of that department and the consent of the Committee on Honors, may if they so elect, constitute an honors group, for special treatment in their major subject.

Such students, so far as the facilities of the department and the best interests of the students under its charge allow, shall be treated as befits their individual needs and as their individual capacities warrant. They shall be eligible to enroll in honors or special study courses, although credit in such courses shall be limited to 5 units a semester. They shall not be held to regular attendance in the established courses of their departments if, in the opinion of the instructor, the course requirements can be met through special assignments and examinations or by satisfactory performance in the regular examinations in the course. With the consent of the major department, requirements concerning minors and specific courses or sequences in the major may be set aside. Each honor student shall be assigned to a member of his major department for advice and direction.

Students in the honors group who fail to take advantage of the opportunities there offered may at the end of any semester be transferred by the department to the general course. Students in the general course who show unusual capacity, upon recommendation of the department and the Committee on Honors, may at the end of any semester, be transferred to the honors group if such transfer appears practicable.

Students who wish to apply for entrance in the Honors Group may do so by filling out cards to be obtained from their major departments. The applications should be filed with the chairman of the major department not later than a week after registration opens. Units earned by students doing individual study under this plan will be recorded under the symbol 166 and will be subject to the formulated rules dealing with limitations of student load.

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

	Units
Physical Education	2
Health Education 21	2
English	6
Psychology	3
Foreign Language (not required in commerce, general engineering, or in teacher education in the elementary, junior high and special secondary curricula)	10
Mathematics A and B, 6 units, or high school algebra and geometry	0-6
Social Sciences	12
Natural Sciences	12
Electives to make total of 60 units, including lower division preparation for the major and minor.	12

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 in the elementary, junior high, and special secondary curricula. No degree credit is given for only the beginning college semester of a foreign language (except Spanish 70).

High school work completed with grade of C or better may meet the foreign language requirement in whole or in part. Each year course is counted in satisfaction of 3 units of this requirement. Three years of foreign language in high school will satisfy the college requirement in foreign language. If two or more years have elapsed since the completion of a high school course in any foreign language the final year of the course may be repeated for college degree credit but not for additional credit in meeting the language requirement.

Social Sciences

Twelve lower division units chosen from two or more of the following departments in the Social Science Division:

Anthropology, economics, geography (except Geog. 1, 3 and 4), history, political science, social science, and sociology.

Two high school semester courses in the fields of history, political science, sociology, and economics taken with grades of B or better may be used in satisfying 3 units of the social science requirement provided they are taken in the senior year.

Natural Sciences

Twelve lower division units chosen from courses representing each of the following groups are required:

- (a) Biology 1 or a year course in high school biology, botany, physiology, or zoology or a course in college biology, botany, physiology or zoology.
- (b) Physical Science 1A or 1B or a year course in high school physics or chemistry or a course in college physics or chemistry.
- (c) Lower division courses to meet the natural science requirement must be taken from the following lists and must include one of the college or high school laboratory courses marked with an asterisk: Astronomy 1, 2, 9; Bacteriology 1*; Biology 1, 10A-10B*; Botany 2A, * 2B, * 4; Chemistry 1A, * 1B, * 2A-2B; * Geography 1 or 3 (only one course may be counted toward requirement); Geology 1A-1B, * 2A, 2B; Physical Science 1A, 1B, 10; Physics 1A-1B, * 2A-2B, 3A-3B, * 1C-1D, * 54; Physiology 1A, 1C*; Zoology 1A, * 1B, * 8, * 20.

A high school year course in botany, * chemistry, * physics, * physiology, zoology, * or biology taken in the senior year with grades not lower than B may be used in satisfying 3 units of the 12 unit natural science requirement. These courses may be counted as meeting local laboratory requirement (asterisk) if completed in junior or senior year with grade of C or better.

Mathematics

High school elementary algebra with grade of at least C is required or completion of Mathematics A. High school plane geometry with grade of C or better is required or completion of Mathematics B.

Lower Division Preparation for the Major

See description of requirements for teaching majors on page 20. Specific requirements for the majors in the liberal arts curricula are listed in connection with the descriptive list of courses in each major field (see pages 60 to 131).

Lower Division Preparation for the Minor

See description of requirements for liberal arts minors on page 18 and for teaching minors on page 20.

Numbering of Courses

Courses numbered 1 through 99 are in the lower division, those numbered 100 through 199 are in the upper division, and those numbered 200 or over are on the graduate level.

SPECIFIC UPPER DIVISION REQUIREMENTS FOR THE A.B. DEGREE IN LIBERAL ARTS

The liberal arts curricula lead to the Bachelor of Arts Degree with majors in art, chemistry, commerce, economics, English, French, general engineering, geography, history, mathematics, music, physics, psychology, sociology, Spanish, speech arts, and zoology and qualify for graduate work in these fields in recognized American colleges and universities. Completion of the requirements of these curricula

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 senior high school or junior college.

Subject Matter Requirements in the Upper Division

Minor (minimum in upper division courses)	9
Major (upper division courses)	24

At least 40 units in upper division courses must be completed, 30 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 lower division units to complete the required minimum of 60 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 17A-17B, 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, physical education, physics, political science, psychology, recreation, sociology, speech arts, and zoology.

A minor consists of at least 15 units of work completed in one of the above fields of study. At least nine of these units must be earned in upper division courses. The entire requirement for a minor may be met with upper division courses provided these courses have no lower division prerequisites. Prerequisites for each course are listed among the course descriptions on pages 60 to 131.

Minor in Education

A student who desires a minor in education must complete at least 15 units of professional education course work. This minor must include Education 102A-102B or Education 102C-102D, Education 115A-115B and electives from education courses to complete the required number of semester units. 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. (See pages 60 to 131.) The student is advised to choose his major as early in his college course as practicable so that he may be able to plan his work according to the major requirements. Failure to meet the lower division requirements of the major department before the junior year may make it impossible to satisfy the upper division requirements within the normal period of two years.

Professional and Preprofessional Courses

See pages 24 to 59.

The General Major

The general major of 36 upper division units must be chosen from three departments with not more than 15 units nor fewer than 6 to 9 units from any one department.

A minimum of a year course in each department must be completed in the lower division as foundation for upper division work in the general major. This general major includes minor requirements.

The general major is planned for students who are preparing for home arts, law, journalism, library work, social work, theology, or for any other vocation requiring a background of general training. It is available also to certain students who want a general education and who can present satisfactory reasons for not specializing in any field. The tentative program of the student should be planned in consultation with the Dean of General Education and approved, revised, or rejected by the chairmen of the departments represented in the major.

BACHELOR OF ARTS DEGREE IN TEACHER EDUCATION

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.

<i>The credential</i>	<i>Subjects and grades for which it is valid</i>
General Elementary	All grades through the eighth.
Kindergarten-Primary	Kindergarten through third.
General Junior High	All subjects in grades seven, eight and nine in all elementary or secondary schools.
General Secondary	All subjects in the public schools in grade 7 and above.
Special Secondary in Art	Art in all grades of the public schools.
Special Secondary in Business Education	Business education subjects in all grades of the public schools.
Special Secondary in Music	Music in all grades of the public schools.
Special Secondary in Physical Education	Physical education in all grades of the public schools.
Special Secondary in Speech Arts	Speech in all grades of the public schools.
Special Secondary in Correction of Speech Defects	Correction of speech defects in the public schools.
Administration in Elementary Education	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 Elementary Education	Authorizes for certificate to supervise or coordinate instruction in elementary schools in a county.

Combination of Credentials

Students who seek more than one teaching credential must complete in full the curriculum for each, with only such exceptions as are indicated in the statement of requirements. For each credential in addition to one, at least 12 additional units must be earned. These 12 units may be taken in non-professional courses if all basic curriculum requirements have been satisfied.

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 teaching major
- Education 100B
- Three units of directed teaching, or equivalent, in a junior high school
- Education 115B
- 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.

Lower Division Requirements

Students in teacher education curricula shall complete the lower division requirements for the A.B. Degree as indicated on page 16. 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 17A-17B, Political Science 101 or its substitute courses, and an upper or lower 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 secondary credential, will find it advantageous to use their electives to provide a 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 those curricula. It is recommended that the minor for these credentials be chosen from the academic fields of English, foreign language, mathematics, science or social science. A second minor, though not required, may be chosen from one of these fields or from art, music, physical education or speech arts. Students taking an elementary credential in combination with a special secondary credential may use the special major for their minor in 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 18 units must be in the upper division. An average of C in scholarship is required in all upper division courses in the field of the teaching major. Teaching majors may be established in the following fields: English, foreign languages, general sciences, mathematics and social sciences (anthropology, economics, geography, history, political science, sociology). A teaching major in the special secondary credential curricula of art, business education, music, physical education, 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 56A-56B or 60A-60B, and 18 units of upper division work. This credit must include 3 units in American Literature and 3 units in Shakespeare. Recommended: English 192.

A *Teaching Major in General Science for the Junior High School Credential* shall include a minimum of 24 units, not less than 18 of which are upper division, including a college year course in a biological science, a year course in high school or college physics and a concentration of 12 units, at least 6 of which are upper division, in one major subject (botany, chemistry, physics, zoology). See definition of teaching majors.

A *Teaching Major in Social Science* shall include a minimum of 24 units not less than 18 of which are upper division. There shall be a concentration of 12 units, at least 6 of which are upper division, in one major subject (anthropology, economics, geography, history, political science, sociology). A year course in American History must be included. See definition for teaching majors for the junior high school credential.

Teaching Minor for Junior High and Special Secondary Credentials

A teaching minor consists of 15 units in a given field, of which 9 or more must be in upper division courses. Teaching minors may be established in the following fields: art, business education, English, foreign language, general science, health education, mathematics, music, social sciences (anthropology, economics, geography, history, political science, sociology), physical education, recreation, and speech arts. (See requirement above for elementary school credentials).

A *Teaching Minor in English*: Candidates for the teaching minor in English must show credit in English 1A or 1B, and 1C; and in 9 elective units in upper division English. This credit must include 3 units in American Literature, taken either in lower division or in upper division. Credit in journalism and speech arts may not be used to fulfill the requirements for the English minor.

A *Teaching Minor in Health Education* shall include: Physical Education 51, Home Arts 61A, and Health Education 65 in the lower division; Health Education 152, 153, Physical Education 199 or equivalent in the upper division. For physical education majors, Health Education is allowed only as a second minor area.

A *Teaching Minor in Music*: Candidates for the teaching minor in music are required to take music aptitude tests at the time the minor is chosen and to enroll in at least one music activity each semester. In special cases this requirement may be waived by permission of the faculty of the Music Department.

Applicants for music minors must maintain a grade average of C in all music courses. All students must show credit for Music 1A or clear this requirement by examination. Music 7A is required of all candidates for the elementary credential. In the lower division, with the proper regard for course sequences, 6 units may be chosen from the following courses: Music, 1A-1B-1C-1D, 2A, 3A, 4A-4B, 6A, 8A-8B, 16, 17, 18, Aesthetics 1A-1B. Nine units of upper division music are required, not more than two of which may be selected for credit from the activity courses (Treble Clef, orchestra, etc.).

A *Teaching Minor in Physical Education*: Men must show credit for: four semesters of physical education activity courses, Physical Education 51, 53 and 72 in the lower division; Education 100B-PE, Physical Education 154, 170 and at least two units in an upper division Professional Activity course approved by the department.

Women must show credit for: four semesters of physical education activity courses, Physical Education 53, and 3½ units of electives in the lower division; nine units chosen from Physical Education 153, 156A-156B, 161, 164 and 170 in the upper division.

A *Teaching Minor in Recreation*: Non physical education majors must show credit for: four semesters of physical education activity courses, Physical Education 51, 53 and electives from Art 61B, or fields of Dance, Drama or Music in lower division; Physical Education 165, 170, 199 or equivalent from fields of Dance, Drama or Music in upper division.

Physical education majors must show credit for: Art 61B, and at least four units of electives from fields of Dance, Drama or Music in the lower division; same requirements as for non Physical Education majors except three elective units from fields of Dance, Drama or Music must be taken in lieu of Physical Education 170 in upper division. For physical education majors, Recreation is allowed only as a second minor area.

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, 12 semester units are required in the lower division and 24 semester units in the upper division. Some departments permit 6 units of these 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 post-graduate year. Refer to pages 27 to 35 for the programs for each department. Candidates 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 (chemistry or physics), 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 the A.B. Degree. This credential requires enough additional units to make a minimum 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 does not guarantee that the student will be admitted to teacher education. The following requirements must be met for admission to teacher education curricula:

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 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 with favor 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 required 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 factors established by the State Board of Education: intelligence, scholarship, professional aptitude, personality and character, speech and language usage, and many-sided interests.

Transfer Students

Students who have completed two or more semesters of work in another college, upon transferring to San Diego State College, should make application for admission to teacher education as soon as they enroll in the college. It will be advantageous for transfer students to present themselves for the necessary tests given during the orientation period preceding enrollment in the college.

Transfer Students With Emergency Credentials in Elementary Education

Certain adaptations in the education courses have been made to meet the needs of experienced teachers who hold an emergency credential in elementary education. See the Director of Elementary Education for details.

Advanced Standing in Teacher Education

A minimum of 6 units in education is required at this college. The college requires an opportunity to pass upon the effectiveness of a candidate's teaching ability either through a course in directed teaching or by observation of teaching in the field.

After an interval of 5 years, courses in education are reevaluated and subject to deduction in credit, in light of such new requirements as may have been put into effect and changes in educational procedures. Students formerly in attendance will not be considered to be working in the curriculum until an evaluation and statement of credit has been secured from the Registrar's office. All courses taken either at this college or elsewhere must be approved by an official adviser in order to be credited toward meeting degree requirements.

PROFESSIONAL AND PREPROFESSIONAL CURRICULA

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 20 for statement.

Freshman Year	Units for	
	General Elem.	Units for Kdg.- Primary
<i>First Semester</i>		
Art 6A, Design	2	2
Physical Science 1A, Introduction (if H. S. physics completed, substitute other science)	3	3
English 1A or 1B	3	3
Health Education 21	2	2
Physical Education, Freshman Activities	$\frac{1}{2}$	$\frac{1}{2}$
Elective (advisable to start social science; see page 16 for requirement and also for natural science and minor)	6	6
<i>Second Semester</i>		
Art 6B, Design	2	2
English 1C	3	3
Physical Science 1B (if H. S. chemistry completed, substitute other science)	3	3
Psychology 1	3	3
Physical Education	$\frac{1}{2}$	$\frac{1}{2}$
Elective (social science or minor)	3-5	3-5

Sophomore Year

First Semester	Units for	
	General Elem.	Units for Kdg.- Primary
Geography 1, Elements (natural science credit)	3	3
Music 1A, Musicianship—Fundamentals of Music	3	3
Art 61A, Crafts in Elementary Schools	2	2
Music 28A, Piano (or the equivalent by examination, but without credit. May be taken in junior year.)	-	1
Physical Education, Sophomore Activities	$\frac{1}{2}$	$\frac{1}{2}$
Biology 1, Survey of Biology (If no previous science laboratory, take Biol. 10A-10B or Botany 2A) (Not required if H. S. biology in junior or senior year)	3	3
Electives (for social science, natural science or minor)	3	3

(Prepare for examination in American history, institutions and ideals. History 17A-B and American Literature are recommended in freshman or sophomore year.)

Second Semester	Units for	
	General Elem.	Units for Kdg.- Primary
Geography 2, Regions (social science credit)	3	3
Music 7A, Music Materials for the Elementary School	3	3
P.E. 53, Physical Education in the Elementary School	2 $\frac{1}{2}$	2 $\frac{1}{2}$
Music 28B, Piano (or the equivalent by examination)	-	1
Spanish 70, Spanish for Elementary School Teachers (not required but recommended if no high school Spanish)	5	-
Speech Arts 2A, Fundamentals	-	3
Electives (complete social science, natural science or minor)	1-4	4

29-32

Junior Year

Students transferring from another curriculum in lower division or from another college or junior college may interchange this semester with semester II of the senior year. (Forty units of upper division work are needed.) The Education Department will probably find it necessary to ask some students who have met all requirements to defer entering practicum until the second semester of the junior year in order to equate class size. Those who defer entering the practicum should use this semester to

1. Complete lower division requirements in art, music, Physical Education 53, natural science, social science and others as needed.
2. Complete minor requirements.
3. Meet requirement for American History and U. S. Constitution.
4. Elect Education 102A or 102B if needed to complete program.

First Semester

Education 102A, Measurement in Education or	3	3
Education 102B, Child Growth and Development	2	2
Health Education 151 (taken with practicum)	10	10
Education 147, Education Practicum-Primary Level	2	
Methods in Primary Reading	2	
Elementary School Methods, including Children's Literature	2	
Elementary Music Education	1	
Elementary Art Education	1	
Mental Hygiene and Speech	2	
Directed Teaching	2	

Proficiency in use of audio-visual equipment is required. Instruction in audio-visual materials is given in each specific subject matter methods course.

Second Semester

Education 102A or 102B	3	3
Education 148, Education Practicum-Intermediate Level	12	8
Elementary Arithmetic Education	2	
Elementary Social Studies and Science Ed.	2	
Elementary Art Education	1	
Elementary Music Education	1	
Educational Psychology (learning process, including theory of audio-visual education)	2	
Additional 4 units for General Elementary, but not Kindergarten-Primary		
Language Arts	2	
Directed Teaching	2	
Education 116, Directed Teaching, primary grades	-	3

Senior Year

<i>First Semester</i>		
Education 116	7	4
Ed. 146, Kindergarten-Primary Practicum (follows Ed. 148)	-	2
Ed. 115A (or in second semester)	2	2
Elective	3	3
<i>Second Semester (and summer session if needed)</i>		
Elective to complete one minor and to equal total for degree	16-18	16-18
Total	120 units	

Summary	Units for General Elem.	Units for Kdg.- Primary
Art 6A-6B, 61A	6	6
Educ. 102A, 102B, 115A, 116, 146, 147, 148	37	37
English	6	6
Speech Arts	3	3
Health Education 21, 151	4	4
Physical Education Activities and P.E. 53	4	4
Music 1A, 7A, 28A-B	6	8
Natural Sciences (including Geog. 1)	12	12
Psychology 1	3	3
Social Science (including Geog. 2)	12	12
Electives (including minor)	30	25
Total	120	120

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	Units
Biology 1 (see p. 17)	3
English 1A or 1B	3
Geography 1, Elements (Natural Science)	3
Physical Education, Freshman Activities	3
Health Education 21, Health and Social Adjustment	1
Electives to meet Lower Division requirements	2
Second Semester	3
Physical Science 1A or 1B (see p. 17)	3
English 1C	3
Geography 2, Regions (Social Science)	3
Physical Education, Freshman Activities	3
Electives to meet Lower Division requirements	1
	6
	30

Sophomore Year

First Semester	Units
Physical Education, Sophomore Activities	1
Psychology 1, General	3
Second Semester	1
Physical Education, Sophomore Activities	1
Either Semester	1
Social Sciences (see p. 17)	3
Laboratory Science (see p. 17)	3-4
Electives to meet Lower Division requirements	22-23
	30

Junior Year

First Semester	Units
Education 115B, Secondary Education	3
Education 102C, Growth and Development of the Adolescent	3
Second Semester	
Education 102D, Measurement and Evaluation in Secondary Education	2
Education 130, Educational Psychology	2
Education 100B, Methods in Major Subject	2
Either Semester	
Health Education 151, Health Education	2
Electives, including major and minor (for the year)	17
	31

Senior Year

Education 115A, History and Philosophy of Education	2
Education 116, Directed Teaching (3 units each semester)	6
Electives, including major and minor (for the year)	21
	29

Summary

Education 100B, 102C, 102D, 115A, 115B, 116, 130	20
English	6
Health Education 21, 151	4
Natural Sciences	12
Physical Education	2
Psychology 1	3
Social Sciences	12
Electives, including teaching major and minor	61
	120

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 candidacy 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 36 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:

	Units
Ed. 102C, Growth and Development of the Adolescent	3
Ed. 115B, Principles of Secondary Education	3
Ed. 102D, Measurement and Evaluation in Secondary Education	2
Ed. 130, Educational Psychology	2
Ed. 115A, History and Philosophy of Education	2
Ed. 100B, Methods of Teaching	2

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 36 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
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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 A-B, Drawing and Composition	2-4
Art 6A, Design	2
Art elective (Art 14A, Lettering, recommended)	0-2
Aesthetics 50, Appreciation and History of Art	2

Upper Division

Upper division electives in Art	9
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	2
Commerce 223, Problems in Merchandising	2
Commerce 260, 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.

Lower Division

Commerce 14A-14B, Principles of Accounting	6
Economics 1A-1B, Principles of Economics	6

Upper Division

Upper division commerce courses selected with approval of the departmental representative	9
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Major in Economics

Lower Division

Economics 1A-1B, Principles of Economics	6
Lower division year course in history, political science or sociology	6

Upper Division

Economics 100A-100B, Modern Economic Thought	6
Economics electives, including a maximum of 6 units in a related field approved by the departmental representative	18

Graduate Year

Economics 200A-200B, Seminar in Modern Economic Thought	4
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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 6A-6B, The Study of Literature	6
English 56A-56B, Survey of English Literature or 60A-60B, The Literary Personality	6

Upper Division

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

English 201, Shakespeare, or 221, Regionalism in American Literature	2
English 192, The English Language (if not taken as an undergraduate), or 191, 193, 194, 195, 196, 201 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

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

Upper division English courses to be selected under the supervision of the departmental representative	9
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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.....	15-16
History 4A-4B, History of Modern Europe, or equivalent.....	6

Upper Division

French 101A-101B, Conversation and Composition.....	6
French Literature (select one course).....	3

Major in History*Lower Division*

History 4A-4B, History of Modern Europe.....	6
History 8A-8B, History of the Americas.....	6
Political Science 1A-1B, Comparative Government, or Political Science 71A-71B, American Government and Politics, or Economics 1A-1B, Principles.....	6

Upper Division

History 199, Special Course for Advanced Students.....	3
Select from three of the following areas with approval of departmental representative.....	21
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.....	4
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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.....	6
Political Science 1A-1B, Comparative Government, or Political Science 71A-71B, American Government and Politics.....	6

Upper Division

Upper Division History selected with approval of departmental representative.....	9
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Major in Life Science*Lower Division*

Zoology 1A-1B, General Zoology or Biology 10A-10B.....	8-6
Botany 2A-2B, General Botany.....	8
Zoology 20, Human Anatomy and Physiology, or Physiology 1A, Human Physiology.....	3
Chemistry 1A-1B or 2A-2B, General.....	10-6
Physics 2A-2B and 3A-3B, General.....	8
Geology 1-A 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.....	24
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Graduate Year

Zoology 200 Seminar.....	2
Zoology 202, Hydrobiology, or Zoology 213, Advanced Studies in Ornithology.....	2

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.....	6-8
Botany 2A-2B, General Botany.....	8
Chemistry 1A or 2A-2B.....	5-6

Upper Division

Upper division courses in Zoology and Botany to be selected with approval of the departmental representative.....	9
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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 D, Trigonometry (or high school equivalent for which pattern credit may be allowed).....	3
Mathematics 3-A, Plane Analytic Geometry.....	3
Mathematics 3B, First Course in Calculus.....	3
Commerce 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.....	3

Upper Division

Select 9 units from the following:	
Mathematics 101, Elementary Geometry for advanced students.....	3
Mathematics 102, Elementary Algebra for advanced students.....	3
Mathematics 104, History of Mathematics.....	3
Mathematics 105, College Geometry.....	3
Mathematics 106, Projective Geometry.....	3
Mathematics 111, Theory of Algebraic Equations.....	3

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 206, Composition.....	3
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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.....	2-5
Music 4A-4B, Elementary Harmony.....	6
Aesthetics 1A-1B, Survey of Music.....	4
Music activities selected from Music 11, 12, 13, 15, 20, 26, 30.....	0-2

Upper Division

Select 9 units with approval of departmental representative from:	
Aesthetics 102A-102B, Music History.....	4
Aesthetics 103, Music Literature.....	2
Music 105A-105B, Advanced Harmony and Composition.....	6
Music 106, Counterpoint.....	2
Music 107, Form and Analysis.....	2
Music 119A, Instrumental Conducting.....	1
Music 120A, Vocal Conducting.....	1
Music 121A, Instrumentation.....	2
Music 117A-117B, Advanced Individual Study of Voice.....	2
Music 118A-118B, Advanced Individual Study of Piano or Organ.....	2

Major in Physical Education for Men

The requirements for the A.B. Degree and the Special Secondary Credential in Physical Education must be completed simultaneously. Refer to page 39 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 graduate year, (refer to page 22) including the following courses in his major:

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 Men

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 53, Physical Education in the Elementary Schools	2
Physical Education 72, Introduction	2

Upper Division

Professional Activity courses selected with approval of departmental representative	2
Education 100B-PE, Methods in Physical Education	2
Physical Education 154, Principles and Administration of Physical Education in Secondary Schools	3
Physical Education 170, Recreational Leadership	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

Physical Education 51, First Aid and Safety Education	2
Home Arts 61A, Nutrition	2
Health Education 65, Community Health	3

Upper Division

Health Education 152, Health Education Programs	3
Health Education 153, Administration of School Health Program	3
Physical Education 199, 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

Physical Education 51, First Aid and Safety Education	2
Physical Education 53, Physical Education in Elementary Schools	2
Electives selected from Art 61B, Crafts, or from the fields of dance, drama or music	2

Upper Division

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	1-3

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

Art 61B, Crafts	2
Electives from fields of dance, drama or music	4

Upper Division

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 1A, Fundamental Skills	1
Physical Education 1B, Folk Dancing	1
Physical Education 1C, Rhythmic Skills	1
Physical Education 1D, Team Sports	2
Physical Education 53, Physical Education in Elementary Schools	2
Physical Education electives	1

Upper Division

Physical Education 156A-156B, Sports Methods	4
Physical Education 161, Folk Dancing Materials and Advanced Techniques	2
Electives selected from Physical Education 153, 170, 164A-164B	3

Major in Physical Science (Chemistry)**Lower Division**

Chemistry 1A-1B, General Chemistry	10
Chemistry 5, Quantitative Analysis	3
Mathematics 3A-3B, Plane Analytic Geometry and First Course in Calculus	6
Physics 1A-1B-1C-1D or 2A-2B and 3A-3B	12-8
German 1A-1B	0-10

Upper Division

Chemistry 105, Advanced Quantitative Analysis	3
Chemistry 108-109, Organic Chemistry and Laboratory	6
Chemistry 111, Physical Chemistry Laboratory	3
Electives in upper division chemistry or a maximum of 6 units selected from a related field with approval of departmental representative	6

Graduate Year

Select three units from:

Chemistry 200, Seminar	3
Chemistry 208, Nuclear Physics	3
Chemistry 210, Molecular Structure	3
Chemistry 299, Special Problems	3

Minor in Physical Science (Chemistry)

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

Lower Division

Chemistry 1A-1B, General Chemistry	10
Chemistry 5, Quantitative Analysis	3
Physics 1A-1B-1C-1D or 2A-2B and 3A-3B	12-8

Upper Division

Chemistry 108, Organic Chemistry	3
Electives in upper division chemistry selected with approval of departmental representative	6

Major in Physical Science (Physics)*Lower Division*

Physics 1A-1B-1C-1D or equivalent	12
Chemistry 1A-1B, General	10
Mathematics 3A-3B, Plane Analytic Geometry and First Course in Calculus	6
Mathematics 4A-4B, Second and Third Course in Calculus	6

Upper Division

Physics 105A-B, Analytical Mechanics	6
Physics 110A, Principles of Electrostatics and Electromagnetism	3
Physics 102, Electronics, or 110B, Electromagnetism	3
Electives from upper division physics, with a maximum of 6 units selected from related areas upon approval of departmental representative	12

Graduate Year

Select three units from:

Physics 200, Seminar	3
Physics 208, Nuclear Physics	3
Physics 210, Molecular Structures	3

Minor in Physical Science (Physics)

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

Lower Division

Physics 1A-1B-1C-1D or equivalent	12
Chemistry 1A-1B, General	10
Mathematics 3A-3B and 4A-4B	12

Upper Division

Upper division courses to be selected with approval of departmental representative	9
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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 the Americas, 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 155A-155B, History of the Theater, or 140A-140B, Stage Design, or 179A-179B, Nervous Speech Disorders, or 192A-192B, Advanced Public Speaking	6
Speech Arts 179A or 179B, Nervous Speech Disorders or 158A or 158B, Advanced Radio Techniques, or 159A or 159B, Stage Direction, or 191, Organized Discussion (select two courses)	6
Speech Arts 108, Advanced Interpretation, or 118A or 118B, Playwriting, or 154A or 154B, 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 259, 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 1, Voice and Diction; or 57A-57B, Radio Production	6
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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 159A-159B, Stage Direction	
Speech Arts 108, Advanced Interpretation	
Speech Arts 179A-179B, 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

	Units
Aesthetics 50, History and Appreciation of Art	2
Art A-B, Drawing and Composition	2-4
Art 6A-6B, Design	4
Art 14A, Lettering	2
Art 61A, Crafts in Elementary Schools	2
Art 61B, Crafts	2
Electives in Art	6-8
English 1A or 1B and 1C	6
Health Education 21, Health and Social Adjustment	2
Natural Sciences (see page 17)	9-12
Physical Education, Freshman and Sophomore Activities	2
Psychology 1, General	3
Social Sciences (see page 17)	9-12
Electives, including courses for minor	9-12
	60

Upper Division

Aesthetics 150, Appreciation and History of Art	2
Art 106A and 106B or 106C	4
Art 112A-112B, Design and Composition	4
Art 116A, Advanced Painting	2
Art 195, Interior Decoration	2
Electives in U. D. Art	8
Education 115A, History and Philosophy of Education	2
Education 115B, Secondary Education	3
Education 102C, Growth and Development of the Adolescent	3
Education 102D, Measurement in Secondary Education	2
Education 130, Educational Psychology	2
Education 100B-A, Methods in Art	2
Education 116, Directed Teaching	6
Education 119, Art in the Elementary School	2
Health Education 151	2
Electives, including minor	14
	60

Summary

Aesthetics 50 and 150	4
Art major	40
Education	22
English	6
Health Education 21 and 151	4
Natural Sciences	12
Physical Education	2
Psychology 1	3
Social Sciences	12
Electives, including minor	15
	120

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-half year, or 1000 hours of approved experience in the field named in the credential must be submitted.

Accounting and Secretarial Subfields**Lower Division**

	Units
Economics 1A-1B, Principles	6
Commerce 14A-14B, Accounting	6
English 1C, Freshman Literature and English 8, Business English	6
Geography 1, Physical, and Geography 10, Economic Geography	6
Natural Sciences (Geography 1 included above)	6-9
Physical Education, Freshman and Sophomore Activities	2
Health Education 21, Health and Social Adjustment	2
Speech Arts 2A, Fundamentals of Public Speaking	3
Psychology 1, General	3
Commerce A, Business Mathematics	1
Commerce 1A-1B, Typewriting	6
Commerce 5A-5B, Shorthand	10
Social Science (Economics 1A-1B and Geography 10 included above)	0-3
	60

Upper Division

Health Education 151	2
Commerce 3A, Office Methods and Appliances	3
Commerce 18A-18B, Commercial Law	6
Economics 100, or 102 or 111 or Commerce 123	3
Commerce 121, Business Administration	3
Upper Division Accounting	6
Education 100B-B, Methods in Accounting	2
Education 100B-BE, Objectives and Curricula in Business Education	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	2
Education 115B, Secondary Education	3
Education 116, Directed Teaching	6
Education 130, Educational Psychology	2
Education 100B-SS, Methods in Secretarial Subjects	2
Education 100M-ME, Methods in Merchandising (Recommended)	0-2
Minor	9
Electives	2-4
	60

Summary

Economics 1A-1B, 100, Commerce A, 1A-1B, 3A, 5A-5B, 14A-14B, 18A-18B, 121 and Upper Division Accounting	46
English 1C and 8	6
Geography 1 and 10	6
Natural Science (Geography 1 included above)	6-9
Social Science (Economics 1A-1B and Geography 10 included above)	0-3
Physical Education	2
Health Education 21 and 151	4
Speech Arts 2A	3
Psychology 1	3
Education 100B-B, 100B-BE, 100B-ME, 100B-SS, 102C, 102D, 115A, 115B, 116, 130	24-26
Minor	15
Electives	0-5

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 the piano, music 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 7A, but if a deficiency exists in the field of general musicianship, the student will be required to take either or 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 the 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

	Units
English 1A or 1B and 1C	6
Social Science (see page 17)	9-12
Natural Science (see page 17)	9-12
Psychology 1, General	3
Health Education 21, Health and Social Adjustment	2
Physical Education Activities	2
Music 1A, 1B, 1C and 1D, Musicianship	6
Music 4A-4B, Elementary Harmony	6
Music 2A, 3A, 6A, Orchestral Instruments	3
Music 29 or 17, and 18, Applied	2-5
Music 11, 12, 13, 15, 20, 26 or 30, Music Activities	0-3
Aesthetics 1A-1B, Survey of Music	4
Minor (English, social science or natural science recommended as such minor may be completed in whole or in part by requirements as listed above)	0-6

Upper Division

Aesthetics 102A-102B, Music History	4
Music 105A-105B, Advanced Harmony and Composition	6
Music 106, Counterpoint	2
Music 107, Form and Analysis	2
Music 119A, Instrumental Conducting	1
Music 120A, Vocal Conducting	1
Music 121A, Instrumentation	2
Music 111, 112, 113, 115, 126, or 130, Activities	3-0
Music 117 or 118, Applied	3-6
Minor	9
Education 110B-MU, Methods in Music	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	2
Education 115B, Secondary Education	3
Education 116, Directed Teaching	9
Education 117A, Elementary Music Education	2
Education 130, Educational Psychology	2
Education 145, Organization and Administration of Music Education	2
Health Education 151	2

Summary

Health Education 21 and 151	4
Aesthetics 1A-1B and 102A-102B	8
Social Science	9-12
Natural Science	9-12
English	6
Psychology	3
Music 1A, 1B, 1C, 1D, 4A-4B, 2A, 3A, 6A, 29 or 17, 18, 105A-105B, 106, 107, 119A, 120A, 121A, and Music Activities as prescribed by the Department	40
Education 100B-MU, 102C, 102D, 115A, 115B, 116, 117A, 130, 145	27
Minor	9-15
Physical Education	2
Electives	3-0

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

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.

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.

	Units
English 1A or 1B and 1C	6
Speech Arts 2A, Fundamentals	3
Natural Science (including Zool. 1A or equivalent, Physiology 1A, Zool. 8 and a physical science if needed (see page 17))	9-12
Social Science (see page 17)	9-12
Psychology 1, General	3
Health Education 21, Health and Social Adjustment	2
Health Education 65, Community Health	3
Physical Education:	
41, 42, 43, 44, Professional Activities	8
51, First Aid and Safety Education	2
53, Phys. Educ. in Elementary Schools	2½
72, Introduction to Phys. Educ.	2
Minor (English, soc. science or natural science recommended as such minor may be completed in whole or in part by requirements as listed above)	0-6
Electives	0-7½
	60

Upper Division

Education 100B-PE, Methods in Phys. Ed. (Men)	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 Educ.	2
Education 115B, Secondary Education	2
Education 116, Directed Teaching	6
Education 130, Educational Psychology	2
Health Education 151	2
Zoology 114A, Genetics	2
Physical Education:	
145, 146, 147, 148, Professional Activities	8
154, Adm. of Phys. Ed. in Secondary Schools	3
155, Applied Anatomy and Kinesiology	3
168, Physiology of Exercise	3
170, Recreational Leadership	3
177, Ind. Program Adaptation	3
199, Specialized Study in Health, Recreation or Phys. Ed.—Recommended	1-3 24-26
Minor	9
Electives	2-4
	60

Summary

English 1A or 1B and 1C	6
Speech Arts 2A	3
Natural Science	9-12
Social Science	9-12
Psychology 1	3
Health Education 21, 65, 151	7
Physical Education 41, 42, 43, 44, 51, 53, 72, 145, 146, 147, 148, 154, 155, 168, 170, 177, 199	40
Education 100B-PE, 102C, 102D, 115A, 115B, 116, 130	19
Zoology 114A	2
Minor	15
Electives	1-8

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.

Lower Division	Units
Social Science (see page 17)	9-12
Natural Science (including Zoology 1A or equivalent, Physiology 1A, Zoology 8, and a physical science if needed (see page 17)	9-12
English 1A or 1B and 1C	6
Psychology 1, General	3
Health Education 21, Health and Social Adjustment	2
Speech Arts 2A, Fundamentals of Public Speaking	3
Music 1A, Musicianship—Fundamentals of Music (or equivalent)	3
Physical Education:	
1A, Fundamental Skills	1
1B, Folk Dancing	1
1C, Rhythmic Skills	1
1D, Team Sports	1
3A, Modern Dance	1
4A, Social Dancing	1
5A, Archery	1
6A, Badminton	1
10C, Life Saving	1
11A, Tennis	1
51, First Aid and Safety Education	2
53, Physical Education in the Elementary School	2
72, Introduction to Physical Education	2
Minor (see page 20)	6
Electives	1-7
Recommended Electives: Art 61B, Health Education 90, Health Education 65, Home Arts 61A-61B.	60
Upper Division	
Physical Education:	
153, Administration of Physical Education in Secondary Schools	3
155, Applied Anatomy and Kinesiology	3
156A-156B, Sports Methods	4
160, Teaching of Body Mechanics	2
161, Folk Dancing Materials and Advanced Techniques	2
164A-164B, Methods in Modern Dance	4
168, Physiology of Exercise	3
170, Recreational Leadership	3
177, Individual Program Adaptations	2
185, Techniques of Individual Sports	1
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	3
102D, Measurement and Evaluation in Secondary Education	2
115A, History and Philosophy of Education	2
115B, Secondary Education	2
116, Directed Teaching	6
130, Educational Psychology	2
Minor	2
Electives	9
	1-3
	60

Summary	Units
Education 100B-PE, 102C, 102D, 115A, 115B, 116, 130	19
English	6
Health Education 21, 151	4
Music 1A	3
Natural Sciences	9-12
Physical Education	39
Psychology 1	3
Social Sciences	9-12
Speech Arts 2A	3
Minor	15
Electives	2-12
	120

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.

Lower Division	Units
Social Science (see page 17)	9-12
Natural Science (see page 17)	9-12
English 1A or 1B and 1C	6
Psychology 1, General	3
Health Educ. 21, Health and Social Adjust.	2
Physical Education Activities	2
Speech Arts 2A, 2B, 11A, 11B, 60A, 60B	6
Speech Arts 55A-55B or 56A-56B or 55A-56A or 55A-56B	6
Speech Arts 61A, 61B, 63A, 63B, 57A, 1	3
Speech Arts electives	5
Minor	6
Electives	0-3
	60
Upper Division	Units
Speech Arts 150 and 179	6
Speech Arts electives, selected from Speech Arts 108, 159A, 163, 192A or 192B	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	2
Education 115B, Secondary Education	3
Education 116, Directed Teaching	6
Education 130, Educational Psychology	2
Health Education 151	2
Electives	5
	60
Summary	Units
Social Science	9-12
Natural Science	9-12
English 1A or 1B and 1C	6
Psychology 1	3
Health Education 21 and 151	4
Physical Education	2
Speech Arts, major	38
Upper division English Literature	6
Education 100B-SA, 102C, 102D, 115A, 115B, 116, 130	20
Minor	15
Electives	1-7
	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

	Units
Psychology 1, 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 179A-179B 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:

- Possession of a valid general elementary credential.
- Two years of successful teaching experience in the elementary schools.
- Thirty semester hours of upper division or graduate work in addition to the holding of the general elementary credential. These hours shall include specific courses designated by the State Department of Education and the college. Write to the Director of Elementary Education for a list of course requirements.
- A grade point average of 1.75 in work at San Diego State College subsequent to receiving the general elementary credential.
- 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, $\frac{1}{2}$ unit; chemistry, 1 unit; physics, 1 unit; mechanical drawing, 1 unit; foreign language, 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		Units	
Freshman Year		$\frac{1}{2}$	$\frac{1}{2}$
Physical Education		2	—
Health Education 21		5	5
Chemistry 1A-1B		4	4
Botany 2A-2B		3	3
Physics 2A-2B		2	3
Elective			
		16 $\frac{1}{2}$	15 $\frac{1}{2}$

Sophomore Year		$\frac{1}{2}$	$\frac{1}{2}$
Physical Education		3	3
Economics 1A-1B		3	3
Chemistry 108-109		3	—
Geology 1A or 2A		—	4
Bacteriology 1		4	—
Zoology 1A		3	5
Elective			
		16 $\frac{1}{2}$	15 $\frac{1}{2}$

Curriculum in Animal Science		Units	
Freshman Year		$\frac{1}{2}$	$\frac{1}{2}$
Physical Education		2	—
Health Education 21		5	5
Chemistry 1A-1B		4	4
Zoology 1A-1B		3	3
Physics 2A-2B		—	3
Geology 2B		2	—
Elective			
		16 $\frac{1}{2}$	15 $\frac{1}{2}$

Sophomore Year		$\frac{1}{2}$	$\frac{1}{2}$
Physical Education		3	3
Economics 1A-1B		3	3
Chemistry 108-109		4	—
Bacteriology 1		4	—
Botany 2A		—	3
Zoology 100		—	3
Zoology 20 or 8		2	3
Elective			
		16 $\frac{1}{2}$	15 $\frac{1}{2}$

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 a 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 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

	Units
Physical Education	2
English 1A or 1C and 8	6
Health Education 21, Health and Social Adjustment	2
Psychology, General	3
Natural Sciences (including Geography 1)	9-12
History, Political Science or Sociology	6
Geography 10, Economic	3
Economics 1A-1B, Principles of Economics	6
Commerce 2, Mathematics of Finance	3
Commerce 14A-14B, Accounting	6
Commerce 18A-18B, Commercial Law	6
Electives	0-8
Merchandising subfield should include:	
Merchandising 24, Merchandising	3
Merchandising 25, Salesmanship	3
Merchandising 27, Advertising	3
Merchandising 20, Consumer Problems	3
Art 7 Line, Color, Display	3

Upper Division

Minor	9
Major	24
Including: Economics 111, Economic History of the United States; Economics 140, Statistics; Commerce 121, Business Administration; and 15 units selected from one of the following groups:	
A. Accounting: Commerce 160A-160B, 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, 126, 133, 137, 153; Economics 150, 142.	
D. Merchandising: Commerce 123, 153, 184, 185, 186, 187; Home Arts 160A-160B.	
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 typical 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:

Freshman Year		Units	
Physical Education	1½	1½	
Health Education 21	2		
Chemistry 1A-1B	5	5	
Physics 1A-1B or 2A-2B and 3A-3B	3-4	3-4	
English or Public Speaking	3	3	
Psychology 1	3		
Elective	0-2	0-2	
	16½	16½	
Sophomore Year			
Physical Education	1½	1½	
Chemistry 108-109	3	3	
Zoology 1A-1B	4	4	
Mathematics C-D	3	3	
Social Science Year Course (selected from Anthropology 1A-1B, Economics 1A-1B, History 4A-4B or 8A-8B or 17A-17B, Political Science 1A-1B)	3	3	
Electives	3	3	
	16½	16½	

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.

Junior Year	Units	
Chemistry 105 -----	3	—
Zoology 106 -----	4	—
Zoology 100 -----	—	4
Art 119A -----	2	—
Psychology 11 -----	—	3
Additional Year Course in Social Science -----	3	3
Electives -----	4	6
	<hr/> 16	<hr/> 16

The curriculum for Dental Hygiene is essentially the same as the above for pre-dentistry.

PRE-FORESTRY CURRICULUM

Freshman Year		Units	
Physical Education	-----	$\frac{1}{2}$	$\frac{1}{2}$
Chemistry 1A-1B	-----	5	5
Botany 2A-2B	-----	4	4
English 1A or 1B and 1C	-----	3	3
Mathematics 3A-3B	-----	3	3
		15 $\frac{1}{2}$	15 $\frac{1}{2}$
Sophomore Year		Units	
Physical Education	-----	$\frac{1}{2}$	$\frac{1}{2}$
Physics 2A-2B, 3A-3B	-----	4	4
Engineering 1A-1B	-----	3	3
Economics 1A-1B	-----	3	3
Geology 2A	-----	3	---
Health Education 21	-----	---	2
Chemistry 108	-----	3	---
Elective	-----	---	4
		16 $\frac{1}{2}$	16 $\frac{1}{2}$

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 119, Differential Equations, be included among the upper division electives. In the field of physics, a maximum of 6 units may be chosen from Mathematics 118, 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, $\frac{1}{2}$ unit; trigonometry, $\frac{1}{2}$ 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 16.)

Freshman Year		Units	
Math. 3A-3B, Analytic Geometry and First Course in Calculus	-----	3	3
Physics 1A-1B, Mechanics of Solids and Fluids, and Heat	-----	3	3
Chemistry 1A-1B, General Chemistry	-----	5	5
English 1A or 1B, English Composition	-----	3	---
Health Ed. 21, Health and Social Adjustment	-----	2	---
Biology 1, Survey of Biology (Unless taken in high school)	-----	---	3
Physical Education	-----	$\frac{1}{2}$	$\frac{1}{2}$
Electives	-----	---	2
		16 $\frac{1}{2}$	16 $\frac{1}{2}$
Sophomore year		Units	
Math. 4A-4B, Second and Third Courses in Calculus	-----	3	3
Physics 1C-1D, Electricity and Magnetism, Sound and Light	-----	3	3
Econ. 1A-1B, Principles of Economics	-----	3	3
Engineering 21, Descriptive Geometry	-----	3	---
Physical Education	-----	$\frac{1}{2}$	$\frac{1}{2}$
Other courses to complete lower division preparation, including Psychology 1, English, and Social Science (see page 16)	-----	4	7
		16 $\frac{1}{2}$	16 $\frac{1}{2}$

One of the following groups of courses is required, dependent upon the field of specialization desired in the upper division:

	Units
For Civil Engineering	
Engineering 1A-1B, Plane Surveying	6
Astronomy 3, Surveyor's Course in Practical Astronomy	3
For Mechanical, Electrical and Aeronautical Engineering	
Engineering 1A, Plane Surveying	3
Engineering 22, Machine Drawing	3
Elective	3
For Chemical Engineering	
Chem. 108 and 109, Organic Chemistry	6
Elective	3
For Engineering Economics	
Commerce 14A-14B, Principles of Accounting	6
Elective	3
For Engineering Physics	
Engineering 22, Machine Drawing (recommended)	3
Elective	6

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 faculty committee appointed 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 18.)

Completion of the requirements for the General Major. (See page 18.)

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
Engineering 100A-100B, Elements of Electrical Engineering	6
Engineering 140, Strength of Materials	3
Senior Year	
Engineering 128, Applied Engineering Thermodynamics	3
Engineering 105, Hydraulics	3
Engineering 198, Senior Report	2

Additional Requirements for Various Fields of Specialization

Aeronautical Engineering	
Junior Year	
Engineering 122, Machine Design	3
Engineering 141, Materials of Engineering Laboratory	2
Elective—including 6 units upper division economics	10
Senior Year	
Engineering 156, Aerodynamics	3
Engineering 142, Stress Analysis	3
Engineering 129, Heat Power Laboratory	2
Elective—including 9 units upper division economics and/or physics	14

Chemical Engineering

Junior Year	
Chemistry 105A, Quantitative Analysis	3
Chemistry 110A-110B, Physical Chemistry	6
Engineering 141, Materials of Engineering Laboratory	2
Elective	4
Senior Year	
Chemistry 144-145, Chemical Engineering	6
Elective	16

Civil Engineering

Junior Year	
Engineering 130, Route and Construction Surveying	3
Engineering 141, Materials of Engineering Laboratory	2
Elective—including 6 units upper division economics	10
Senior Year	
Engineering 131, Advanced Surveying	3
Engineering 106, Hydraulics Laboratory	2
Elective—including 9 units upper division economics and/or physics	17

Electrical Engineering

Junior Year	
Engineering 101A-101B, Electrical Engineering Laboratory	4
Elective—including 6 upper division economics	11
Senior Year	
Physics 107, Electrical Measurements	2
Physics 102, Electronics	3
Elective—including 4 units upper division economics and/or physics	17

Mechanical Engineering

Junior Year	
Engineering 122, Machine Design	3
Engineering 141, Materials of Engineering Laboratory	2
Elective—including 6 units upper division economics	10
Senior Year	
Engineering 129, Heat Power Laboratory	2
Engineering 106, Hydraulics Laboratory	2
Engineering 145, Internal Combustion Engines	3
Elective—including 9 units upper division economics and/or physics	15

Engineering Economics

Junior Year	
Commerce 121, Business Administration	3
Commerce 133, Corporation Finance	3
Commerce 18A, Commercial Law	3
Economics 140, Statistics	3
Elective	3
Senior Year	
Economics 171, Transportation	3
Commerce 150, Labor Problems	3
Economics 131, Public Finance	3
Electives	13

Engineering Physics

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

Senior Year

	Units
Physics 102, Electronics.....	3
Physics 107, Electrical Measurements.....	2
Physics 110A, Electricity and Electromagnetism.....	3
Elective	14

The upper division requirements for the General Engineering curriculum may be met by various combinations of courses other than those outlined above. For example, the core group of required upper division courses may be combined with selected upper division courses in Astronomy, Geology or Mathematics to make up the total of 36 upper division units required. Any such deviations from the curricula outlined above must be approved by the Chairman of the Physical Science Division.

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

	Units	
	1st Term	2d Term
First Year		
English 1A or 1B, Freshman Composition.....	3	3
English 1C, Freshman Literature.....	3	3
Psychology 1, General.....	3	3
Chemistry 2A-2B, General.....	2	2
Health Education 21, Health and Social Adjustment.....	1	1
Physical Education	2	2
Art 6A, Design.....	3	3
Home Arts 1, General.....	3	6
Electives	16½	15½

Second Year

Home Arts 61A-61B, Nutrition and Laboratory.....	3	3
Home Arts 5, Food Preparation.....	2	2
Home Arts 10, Fundamentals of Clothing.....	3	3
Sociology 50A-50B, Introduction.....	3	3
Completion of Natural Science requirement.....	3	3
Completion of Social Science requirement.....	1	1
Physical Education	3	0
Electives	15½	14½

Suggested electives for the first two years:

- Biology 10A-10B (6), or Biology 1 (3), Zoology 20 (3)
- Physics 2A-2B (6)
- 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 160A, Merchandise Analysis—Textiles (2)
- Home Arts 160B, Merchandise Analysis—Non-Textiles (2)
- Education 102B, 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:

Freshman Year		Units	
Physical Education	1	1	1
Health Education 21	2	2	2
Foreign Languages (if needed to complete requirement)	0-5	0-5	0-5
Natural Science (see lower division requirements)	3-5	3-5	3-5
English 1A or 1B and 1C	3	3	3
Commerce 14A-14B	3	3	3
Psychology 1	3	3	3
Elective	0-3	0-4	0-4
	15½	15½	15½
Sophomore Year		Units	
Physical Education	1	1	1
Additional Natural Science (if needed to meet requirement)	3	3	3
Economics 1A-1B	3	3	3
Philosophy 1A-1B, 3A-3B, or Mathematics 3A-3B	3	3	3
Political Science 1A-1B or 71A-71B	3	3	3
Electives	3	6	6
	15½	15½	15½
Junior Year		Units	
Commerce 133	3	3	3
Economics 150	3	3	3
Economics Elective	3	3	3
History 151A-151B or 172A-172B	3	3	3
Political Science 111A-111B or 143A-143B	3	3	3
Sociology 105, 106	3	3	3
Elective (see upper division requirements)	3	3	3
Examination in American History, U. S. Constitution, etc. (see page 18)	15	15	15
Senior Year		Units	
Economics 100A	3	3	3
Economics 170	3	3	3
Economics Electives	3	3	3
History 111A-111B or 121A-121B	3	3	3
Political Science 133A-133B	3	3	3
Elective	3	6	6
	15	15	15

PRE-MEDICAL CURRICULUM

The entrance requirements of medical colleges ordinarily range from three to four years of pre-medical work. The lower division requirements of the liberal arts curricula include the general requirements of standard medical colleges and should therefore be met in full whether the curriculum extends over a period of three or of four years. All plans for pre-medical work should include an arrangement of courses to meet the requirements of the medical college which the student expects to enter.

A student who is pursuing a four-year pre-medical curriculum should major in chemistry or zoology in his junior and senior years, and must meet all upper division requirements for the A.B. Degree in the liberal arts curricula.

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; chemistry, 1 unit; physics, 1 unit; French or German, 3 units. Two units of Latin are recommended.

Following is a recommended arrangement of courses:

Freshman Year		Units	
Physical Education	1	1	1
Health Education 21	2	2	2
Chemistry 1A-1B	3	3	3
English 1A or 1B, and 1C	0-5	0-5	0-5
French or German (if needed to meet requirement)	0-5	0-8	0-8
Elective	15½	16½	16½
Sophomore Year		Units	
Physical Education	1	1	1
Zoology 1A-1B	4	4	4
Psychology 1	3	3	3
Chemistry 108-109	3	3	3
Social Science	3	6	6
Elective	16½	16½	16½
Junior Year		Units	
Physics 2A-2B	3	3	3
Physics 3A-3B	1	1	1
Chemistry 105	3	3	3
Zoology 100	4	4	4
Zoology 106	4	7	7
Electives	15	15	15
Examination in American History, U. S. Constitution, etc. (see page 18)	15	15	15
Senior Year		Units	
Upper division requirements and electives for the major in Zoology or Chemistry, the minor and the degree (see page 17)	15	15	15
	15	15	15

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; chemistry, 1 unit; physics, 1 unit; French or German, 3 units; domestic science (foods), 1 unit; 2 units of Latin are recommended. The following is a recommended arrangement of courses:

Freshman Year		Units	
Physical Education	-----	$\frac{1}{2}$	$\frac{1}{2}$
Health Education 21	-----	1	2
Biology A	-----	1	---
Chemistry 2A-2B	-----	3	3
Home Arts 61A-61B	-----	3	---
English 1A or 1B and 1C	-----	3	3
French or German (if needed to complete requirements)	-----	0-5	0-5
Elective	-----	1-6	2-8
		16 $\frac{1}{2}$	16 $\frac{1}{2}$
Sophomore Year			
Physical Education	-----	$\frac{1}{2}$	$\frac{1}{2}$
Psychology 1 and 11	-----	3	3
Economics 1A-1B or Sociology 50A-50B	-----	3	3
Bacteriology 1	-----	4	---
Physiology 1A, 1C	-----	---	5
Zoology 8	-----	3	---
Elective	-----	3	5
		16 $\frac{1}{2}$	16 $\frac{1}{2}$

PRE-OPTOMETRY

The high school program should include the following subjects: elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory, 1 unit; trigonometry, $\frac{1}{2}$ -unit; physics, 1 unit; chemistry, 1 unit; foreign language, 3 units.

The following curriculum prepares for junior standing in university schools of optometry:¹

Freshman Year		Units	
Chemistry 1A-1B	-----	5	5
English 1A or 1B	-----	3	---
Speech Arts 2A	-----	---	3
Foreign Language (if needed to complete requirements)	-----	3-5	3-5
Physical Education	-----	$\frac{1}{2}$	$\frac{1}{2}$
Electives	-----	3-5	3-5
		16 $\frac{1}{2}$	16 $\frac{1}{2}$
Sophomore Year			
Physics 2B-2B	-----	3	3
Physics 3A-3B	-----	1	1
Psychology 1	-----	---	3
Mathematics 3A	-----	3	---
Social Science	-----	3	5
Physiology 1A, 1C	-----	---	---
Health Education 21	-----	2	---
Chemistry 108	-----	3	---
Physical Education	-----	$\frac{1}{2}$	$\frac{1}{2}$
		15 $\frac{1}{2}$	15 $\frac{1}{2}$

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		Units	
Physical Education	-----	$\frac{1}{2}$	$\frac{1}{2}$
English 1A or 1B and 1C	-----	3	3
Chemistry 1A-1B	-----	5	5
Botany 2A-2B, or Zoology 1A-1B	-----	4	4
Mathematics C-D (if not completed in high school)	-----	3-0	3-0
Physics 2A-2B and 3A-3B	-----	0-4	0-4
		15 $\frac{1}{2}$ -16 $\frac{1}{2}$	15 $\frac{1}{2}$ -16 $\frac{1}{2}$

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:

Freshman Year		Units	
Physical Education	-----	1	1
Health Education 21	-----	2	2
English 1A or 1B and 1C	-----	3	3
Biology 10A-10B	-----	3	3
Foreign Language (if needed to complete requirement)	-----	0-5	0-5
Psychology 1 and 11	-----	3	3
Elective (Speech Arts 2A-2B recommended)	-----	1-6	0-4
	-----	15½	15½
Sophomore Year		Units	
Physical Education	-----	1	1
Economics 1A-1B	-----	3	3
Political Science 1A-1B or 71A-71B	-----	3	3
Additional Natural Science (if needed to meet requirement)	-----	3	3
Sociology 50A-50B	-----	3	3
Elective	-----	3	6
	-----	15½	15½
Junior Year		Units	
Economics 103 or 111	-----	3	3
Sociology 103	-----	3	3
Sociology 109	-----	3	3
Psychology 150	-----	3	3
Psychology 145	-----	3	3
Zoology 114A	-----	2	2
Elective	-----	7	6
Examination in American History, U. S. Constitution, etc. (see page 18)	-----	15	15
Senior Year		Units	
Economics 185 or 150	-----	3	3
Sociology 197	-----	3	3
Sociology Elective	-----	3	3
Psychology 151A	-----	3	3
Political Science 143A-143B or upper division anthropology	-----	3	3
Additional upper division courses in Economics or Psychology	-----	3	3
Electives	-----	3	9
	-----	15	15

PRE-VETERINARY CURRICULUM

Most colleges of veterinary medicine require but one year (32 units) of pre-veterinary college work. There are a few colleges which require two years and it is best to consult the bulletin of the college to which admission is desired for special requirements. Freshman year.

	Units	
Physical Education	1	1
Chemistry 1A-1B	5	5
Zoology 1A-1B	4	4
English 1A or 1B and 1C	3	3
Health Education 21	2	2
Electives	2	4
	16½	16½

Suggested Sophomore Year

Botany 2A-2B	4	4
Physics 2A-2B	3	3
Physics 3A-3B	1	1
Chemistry 108	3	3
Psychology 1	3	3
Social Science	1	1
Physical Education	2	2
Electives	2	2
	16½	16½

Suggested electives are additional Mathematics, Foreign Language, Entomology.

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 also 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, outlines 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:

Freshman Year		Units	
Physical Education	1/2	1/2	
Health Education 21		2	
English 1A or 1B		3	
Foreign Language (if needed to complete requirements)	0-5	0-5	
Psychology 1	3		
Natural Science	3-5	3-5	
Commerce 14A-14B	3	3	
Elective	0-5	0-4	
	16 1/2	15 1/2	
Sophomore Year			
English 1C	3		
Physical Education	1/2	1/2	
Additional Natural Science (if needed to meet requirements)		3	
Economics 1A-1B	3	3	
Political Science 1A-1B or 71A-71B	3	3	
Elective	7	6	
	16 1/2	15 1/2	
Junior Year			
Economics 100A	3		
Economics 140	3		
Economics 100B		3	
Economics 131		3	
Political Science 143A-143B	3	3	
Elective	6	6	
	15	15	
Senior Year			
Economics 150	3		
Economics 170 or 171		3	
Economics electives	3	3	
Political Science elective	3	3	
Elective	6	6	
	15	15	

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.

Competition for opportunities of service in international affairs is severe. 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 representative 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 Officers 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:

Freshman Year		Units	
Physical Education	2	1/2	1/2
Health Education 21	3		3
English 1A or 1B and 1C	0-5	0-5	
Spanish	3-5	3-5	
Natural Science	3	3	
History 8A-8B		3	
Psychology 1	4-8	0-3	
Elective	15 1/2	15 1/2	
Sophomore Year			
Physical Education	0-3	1/2	1/2
Additional Natural Science (if needed to meet requirements)	3		3
Economics 1A-1B	3	3	
Political Science 1A-1B or 71A-71B	3		
Geography 1	0-6	9	
Elective	15 1/2	15 1/2	
Junior Year			
Economics 195	3		3
Political Science 141		3	
Political Science 142	3	3	
History 173A-173B	3	3	
Spanish 104A-104B	3	3	
Elective	3		
Economics elective			
Examination in American History, U. S. Constitution, etc. (see page 18)	15	15	
Senior Year			
Economics 190	3		3
Economics 198 (Special Study—Western Hemisphere)	3		
History 161		3	
History 162		3	
Geography 116	3		
Geography 121			
Electives from economics history, political science or geography to complete the general major	3	3	
Elective	3	3	
	15	15	

COURSES OF INSTRUCTION

Figures in parentheses indicate the unit value of the course.

Courses numbered from 1 to 99 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, beginning either Fall or Spring; (5) 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
Aesthetics 102A-102B	History 121A-121B
Anthropology 1A-1B	History 131A-131B
Anthropology 151A-151B	History 146A-146B
Economics 160A-160B	History 151A-151B
English 50A-50B	History 156A-156B
English 52A-52B	History 171A-171B
English 56A-56B	History 172A-172B
English 106A-106B	History 173A-173B
English 107A-107B	Political Science 1A-1B
English 117A-117B	Political Science 71A-71B
French 101A-101B	Spanish 101A-101B
French 105A-105B	Spanish 102A-102B
French 107A-107B	Spanish 104A-104B
French 110A-110B	Spanish 105A-105B
French 111A-111B	Spanish 110A-110B
History 3A-3B	Speech Arts 55A-55B
History 4A-4B	Speech Arts 55C-55D
History 8A-8B	Speech Arts 155A-155B
History 17A-17B	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 list of courses, it reserves the right to make changes. Classes in which the enrollment does not come up to the minimum number set by the State Department of Education 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-BE, Objectives and Curricula in Business Education
- Ed. 100B-E, Methods in English
- Ed. 100B-L, Methods in Romance Language
- Ed. 100B-MA, Methods in Mathematics
- Ed. 100B-ME, Methods in Merchandising
- Ed. 100B-MU, Methods in Music
- Ed. 100B-PE, Methods in Phys. Ed. (Men)
- Ed. 100B-PE, Methods in Phys. Ed. (Women)
- Ed. 100B-SC, Methods in Science
- Ed. 100B-SA, Methods in Speech Arts
- Ed. 100B-S.SC, Methods in Social Sci.
- Ed. 100B-SS, 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 during childhood and early adolescence.

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)

115B. 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. Fall 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 period is required as indicated in the time schedule.

The general plan is for elementary school credential candidates to take, in addition to the education practicums, a half-day of teaching daily in the campus elementary school or in one of the affiliated elementary schools throughout one semester. Junior high school and special secondary school credential candidates will be guided by their adviser relative to the distribution of their directed teaching. For those seeking 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 reduce the amount of directed teaching credit they will allow to four units. Students planning to transfer to such institutions should be prepared 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 C average in all college work and in the work of the preceding semester; three units of 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 voice. Organization of song material by grades. Procedure in presenting rote songs, ear training, elementary notation, music reading, and part singing. Conducting. Not open to students taking the elementary credential, nor to freshmen. Prerequisite: Music 1A, or the equivalent. Fall and Spring (2)

117B. Methods in Instrumental Music

A study of the theory of problems or organizing and conducting school bands and orchestras, and the selection of materials. Provides practical experience in conducting a children's orchestra and teaching sectional groups. A study of systematic 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 in elementary school problems. Not open to students taking the elementary credential. 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 procedures in the social studies in the elementary school. Opportunity will be given for the construction of curriculum units and the analysis of teaching materials. (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 techniques. Assistance given to constructing instructional materials and procedures. (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 the growth of meanings, 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 procedures in guiding children's learning to read through the first three grades. This will include practical suggestions for teachers in developing reading readiness, beginning reading, independence in word recognition and reading as a thinking process throughout this period. Analysis will be made of individual and group problems; selection, preparation 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 reading difficulty. The work is designed primarily for principals, supervisors and teachers-in-service. Prerequisite: 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 148 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. Students should take the course during the next semester after admission to Teacher Education, which is usually the first semester of the junior year. Registration is strictly limited to those who have been approved by the Committee on Admission to Teacher Education.

Education Practicum 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 reference to the actual teaching participation to which the student is assigned for one hour daily. The course includes Methods in Primary Reading (2); Elementary School Methods, including Children's Literature (2); Elementary Music Education (1); Elementary Art Education (1); 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 the general elementary credential or the kindergarten-primary credential. An extended analysis is made of the psychology of education in various fields and application is made through directed teaching in grades 4 to 6. The course includes Elementary Arithmetic Education (2); Elementary Social Studies and Science Education (2); Elementary Art Education (1); Elementary Music Education (1); Educational Psychology (learning process and theory of audio-visual education) (2). Additional 4 units for General Elementary only: Language Arts (2); Directed Teaching (2). Prerequisite: Education 147. (12)

149A. Laboratory in Elementary Education

A general course in observation and theory covering all teaching done in the summer demonstration school, including arithmetic, reading, language, music, science, social studies, art, spelling. Students in this course will observe in the summer demonstration school and discuss with the staff 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 study, field trips, subject matter areas, and many other types of experience 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 technique for use in public schools; clinic observation. Required of candidates for the Special Secondary Credential in Correction of Speech Defects. Not open to students with credit in Speech Arts 179A-179B. Year course (3-3)

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 basic 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. (3)

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 finance, curriculum, plant, community relations, and legal aspects of elementary schools. Required as prerequisite to Ed. 266. 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 or supervisor. 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 educational advisers concerning partial fulfillment of this requirement as the result of having completed the directed teaching required for the credentials mentioned above.

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. Prerequisites: 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. However, due to the erroneous popular feeling that art is a subject requiring "talent," these 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:

Units

Aesthetics 5, Art Orientation	2
Aesthetics 50, History and Appreciation of Art	2
Aesthetics 51, Survey of Mexican Art	2
Art 8, 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, Drawing 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 preparation for the liberal arts major in art: Aesthetics 5 or 51, and 50; Art A-B and 6A-6B, or the accepted equivalents, and eight elective units in art.

Liberal arts major (upper division): Twenty-four upper division units in art. These shall include Art 112A, 115A-115B, 116A, 152A, 195, or the accepted equivalent, and Aesthetics 150. It is recommended that the students in meeting degree requirements and in choosing free electives, select from the following courses: Anthropology 151A-151B; French A-B; History 4A-4B, 8A-8B, 111A-111B.

For courses in Appreciation and History of Art and Art Orientation, see Aesthetics, page 66.

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)

6A. 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. Study and observation of windows, color and materials used in display. Building models and practical problems in arranging colors, textures, and forms in windows to fit different kinds of merchandise.

Fall and Spring (2)

8. Costume and House Furnishings

An appreciative study of modern architecture and modern house furnishings, with emphasis on the spirit of gracious 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. Practice 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 195)**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 16A-16B.

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)

152. 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, 52.

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. Working with local stores and architects. 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. Students registering for this course must apply for work within a certain field after discussions with the art faculty.

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 5, 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 with 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 individuals. History of costume is studied briefly as an aid in understanding recurring cycles in fashion. A consideration of buymanship information necessary in wardrobe selection to insure satisfaction and economy. (3)

105. Family Meals

This course deals with the planning, preparing, and serving of attractive, well-balanced meals 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. Merchandise Analysis—Textiles

Properties, uses, selection and care of textile fibers and fabrics. The aim is to develop judgment in the evaluation involved in the selection of textiles. (2)

160B. Merchandise Analysis—Nontextiles

Properties, uses, selection and care of metals, glass, rubber, fur, enamels and plastics. (2)

MUSIC

Candidates for a teaching credential in music should refer to the statement "Admission to Teacher Education Curricula" on page 21 and to the other degree requirements on that page and those following. The curriculum for the A.B. Degree with a Special Secondary Credential in Music is on page 28.

Lower division preparation for the liberal arts major in music: Music 1B-1C-1D; 4A-4B; 4 units of Applied Music (study of piano, voice or orchestral instrument); Aesthetics 1A-1B.

Liberal arts major (upper division): twenty-four upper division units selected from: Music 105A-105B; 106A; 107A; 119A, 120A, 121A; 4 units of Applied Music; Aesthetics 102A-102B; and 4 units of music activity credit (Music 111, 112, 126, 113, 115, or 130).

At least a C average in upper division music courses is necessary. As laboratory work, each music major is required to carry two music activities per semester.

Lower Division Courses

1A. Musicianship—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. Musicianship—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 Musicianship Book I. Prerequisite: Music 1A, or the equivalent. Music majors not able to pass the departmental entrance examination in the fundamentals of music will take 1A without credit in preparation for this course.

Fall and Spring (2)

1C-1D. Musicianship—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-tones and diatonic harmonies. Transposition and original composition in the simpler forms. Text—Alchin: Applied Harmony Vol. I. Prerequisite: Music 1A-1B, or the equivalent, and at least one year of piano study.

Year course (3-3)

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 texts. Appreciation materials applicable to the elementary school. Required course for all general elementary credential students. Prerequisite: Music 1A.

Fall and Spring (3)

11A-B-C-D. Women's Glee Club—Treble Clef

Entrance upon examination.

Fall and Spring (1-1)

12A-B-C-D. Men's Glee Club

Entrance upon examination.

Fall and Spring (1-1)

13A-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 ($\frac{1}{2}$ - $\frac{1}{2}$)

***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 ($\frac{1}{2}$ - $\frac{1}{2}$)

26A-B-C-D. Band

Permission of the conductor required for membership.

Fall and Spring (1-1)

28A-28B. Piano

Fundamental playing and reading technics 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.

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-1B.

Year course (2-2)

105A-105B. Advanced Harmony and Composition

Study of the possible types of modulation and chromatic harmonies: continuation of harmonic analysis and original composition. Text—Alchin: 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 ($\frac{1}{2}$ - $\frac{1}{2}$) (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 ($\frac{1}{2}$ - $\frac{1}{2}$) (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 ($\frac{1}{2}$ - $\frac{1}{2}$) (A maximum of 2 units in Choral Club may be counted toward the A.B. Degree)

***116A-116B-116C-116D. Advanced Individual Study of an Orchestral Instrument**

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. Prerequisite: 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. Musicology**

Survey of bibliography and methods of research in music history and literature. Emphasis upon inter-relationship of musical developments and trends in other arts. Completion of an acceptable thesis in fields of investigation chosen by the student. Prerequisites: Aesthetics 102A-102B and consent of Music Department. Advanced courses in Harmony, Composition, and Form 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 105A-105B, 106A, 107A, 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 of the student at the beginning of his work.
4. Evidence that the standards of the Music Department have been met will be 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 (2)

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 frauds 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, emphasizing the responsibility of the teacher in health guidance; observation of school children; techniques and procedures for screening defects; promoting health instruction; and providing a safe, sanitary, healthful school environment. A study of the community agencies promoting the health and welfare of the school child.

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 living, 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 is studied through 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 to care 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 1-18. 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

Activity Courses	Units
1A-1B-1C-1D. Developmental Physical Education, Fall and Spring	($\frac{1}{2}$ - $\frac{1}{2}$)
2. Basketball, Fall and Spring	($\frac{1}{2}$ - $\frac{1}{2}$)
3. Boxing, Fall	($\frac{1}{2}$)
4. Gymnastics, Fall	($\frac{1}{2}$)
5. Soccer, Fall and Spring	($\frac{1}{2}$ - $\frac{1}{2}$)
6. Softball, Fall and Spring	($\frac{1}{2}$ - $\frac{1}{2}$)
7. Touch Football, Fall	($\frac{1}{2}$)
8. Track and Field, Spring	($\frac{1}{2}$)
9. Volley Ball, Spring	($\frac{1}{2}$)
10. Wrestling, Spring	($\frac{1}{2}$)
13. Archery, Spring	($\frac{1}{2}$)
14. Badminton, Fall and Spring	($\frac{1}{2}$ - $\frac{1}{2}$)
15. Fencing, Fall	($\frac{1}{2}$)
16. Golf, Spring	($\frac{1}{2}$)
17. Handball, Fall and Spring	($\frac{1}{2}$ - $\frac{1}{2}$)
18. Tennis, Fall and Spring	($\frac{1}{2}$ - $\frac{1}{2}$)

Intercollegiate Sports

21. Archery, Spring	($\frac{1}{2}$)
22. Badminton, Spring	(1)
23. Baseball, Fall and Spring	(1)
24. Basketball, Fall and Spring	(1-1)
25. Boxing, Fall	($\frac{1}{2}$)
26. Cross Country, Fall	($\frac{1}{2}$)
27. Fencing, Spring	($\frac{1}{2}$)
28. Football, Fall and Spring	($\frac{1}{2}$)
29. Golf, Spring	(1- $\frac{1}{2}$)
30. Gymnastics, Spring	($\frac{1}{2}$)
32. Rowing, Spring	($\frac{1}{2}$)
33. Swimming, Spring	($\frac{1}{2}$)
34. Tennis, Spring	($\frac{1}{2}$)
35. Track, Spring	($\frac{1}{2}$)
36. Wrestling, Spring	($\frac{1}{2}$)

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.

	Units
41. Wrestling and Speedball, Fall	(2)
42. Gymnastics-Tumbling and Volleyball, Spring	(2)
43. Boxing and Handball, Fall	(2)
44. Soccer and Dance, Spring	(2)
145. Baseball and Tennis, Fall	(2)
146. Football and Golf, Spring	(2)
147. Basketball and Badminton, Fall	(2)
148. Track-Field and Archery or Swimming, Spring	(2)

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 freshman and sophomore years. Freshmen students may choose courses only from 1A, 1B, 1C, 1D. Sophomore students may choose from all activity courses offered.

The individual activities, tennis, golf, archery, badminton and dancing are offered through the year. Candidates for the special credential in physical education 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 ($\frac{1}{2}$ - $\frac{1}{2}$)

1B. Folk Dancing—Elementary (Men and Women)

Fall and Spring ($\frac{1}{2}$ - $\frac{1}{2}$)

1C. Rhythmic Skills

Practice in dance techniques and rhythms.
Fall and Spring ($\frac{1}{2}$ - $\frac{1}{2}$)

1D. Team Sports

Fall and Spring ($\frac{1}{2}$ - $\frac{1}{2}$)

2A-2B. Folk Dancing—Advanced

Fall and Spring ($\frac{1}{2}$ - $\frac{1}{2}$)

3A-3B. Modern Dance

Continuation of practice in dance technique and an introduction to dance composition.
Fall and Spring ($\frac{1}{2}$ - $\frac{1}{2}$)

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

Fall and Spring ($\frac{1}{2}$ - $\frac{1}{2}$)

5A-5B. Archery

Fall and Spring ($\frac{1}{2}$ - $\frac{1}{2}$)

6A-6B. Badminton

Fall and Spring ($\frac{1}{2}$ - $\frac{1}{2}$)

7A-7B. Golf

Fall and Spring ($\frac{1}{2}$ - $\frac{1}{2}$)

11A-11B. Tennis

Fall and Spring ($\frac{1}{2}$ - $\frac{1}{2}$)

12A-12B. Advanced Modern Dance (Men and Women)

Laboratory experiments in advanced choreography and percussion accompaniment. Prerequisites: 1C and 3A 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 school-room, play or on the athletic field, beach, 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 contents 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 (2½)

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 school 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: 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. Prerequisite: 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 various 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 (2-2)

165. Administration of Community Recreation

An introductory course in the principles of organization and promotion of leisure time and recreation activities. Content consists of a study of recreation leadership, the growth of the recreation movement, the operation of areas and facilities, program of activities, features, services, organization and administration problems. A 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 divergencies, selecting and assigning of students, instructional problems, motivation, follow-up, teacher limitations and public relations are considered. Prerequisites: P.E. 155 and senior standing.

Spring (3)

185. Techniques of Individual Sports (Women)

A course summarizing rules and teaching methods, and testing individual playing ability.

Fall (1)

199. 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, construction and interpretation of results. Prerequisite: Graduate standing. (3)

201. Developmental Physical Education

Intensive study of postural divergencies, lack of physical development, and methods of correcting such conditions through exercise are studied. Practice in making physical examinations, constructing individual exercise programs, teaching remedial exercises, as well as ethical procedures and limitations are considered. Prerequisite: Graduate standing, Applied Anatomy and Kinesiology.

Fall (2)

203. Problems in Physical Education

A survey of current problems facing the Physical Education profession is studied through 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. (2)

204. Problems in Recreation

A survey of current problems facing the Recreation profession is studied through 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. (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 (3-3)

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 16th, 17th, 18th and 19th century authors. The contributions to world thinking of Rabelais, Montaigne, Moliere, Racine, Descartes, Pascal, Montesquieu, Voltaire, 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)

152A. Survey of Drama: Comedy

For description, see English 152A.

Fall (3)

152B. Survey of Drama: Tragedy

For description, see English 152B.

Spring (3)

155. 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)

158. 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)

159. 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 Staël, and others.

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

ENGLISH

Lower division preparation for the liberal arts major in English: At least 15 units of work, including English 1B, 6A-6B, and either 56A-56B 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 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 the readings. No prerequisite. Required of English majors; open to other students as an elective.

Year course (3-3)

8. English in Business

Theory and practice of business correspondence. Business letters as applied salesmanship; problems in writing credit and collection letters, applications for employment, adjustment letters, and sales letters. Prerequisite: English 1A or equivalent, as indicated by Subject A Examination, or record from college. This course is planned for students in the accounting and secretarial fields; units obtained in it cannot 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)

50A-50B. Survey of American Literature

Semester I: A survey of American literature from its beginning to 1860. Semester II: American literature from 1860 to the present. Lectures, discussions, and reports.

Year course (3-3)

52A-52B. Types of World Literature

A chronological survey from Homer to modern times. The first semester stresses the classical epic and tragedy. The second semester, beginning with the Renaissance, stresses prose fiction, the drama, and the essay.

Year course (3-3)

56A-56B. Survey of English Literature

The study of some important works of English literature from the Anglo-Saxon period through the Victorian age, with emphasis upon the literary history of each period.

Year course (3-3)

60A-60B. The Literary Personality

The first semester is devoted to two or three of the great creators of English and American literature; the second semester is devoted to Shakespeare. A study in several representative figures, of the way in which the issues of life are stated and resolved in great literature; and of the interplay between dynamic forces within the writer and the cultural world in which he lives. Special emphasis is laid on deriving, from markedly different specific artistic creations, a generalized understanding of literature as a complex language transcribing a great response to life.

Year course (3-3)

61. Sophomore Composition

An elective course designed to give further training to the student who wishes practice in writing beyond the freshman level. Prerequisites: English 1A or 1B, and 1C, or equivalent.

Fall (3)

62. The Short Story

A practical course in writing, including a study of short story techniques and purposes, and the writing of complete short stories. Prerequisites: English 1A or 1B, and 1C, or equivalent.

Spring (3)

Upper Division Courses**101A. Modern Continental Fiction**

A survey of leading French, Russian, Scandinavian, Italian, and German novelists and short story writers, from Tolstoy and his associates to the present day.

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

106A-106B. Advanced Composition

A laboratory course in modern prose writing. Semester I: Artistic narrative, with description; the short story. Semester II: the essay, the magazine article, criticism. Outside readings. Prerequisite: One year of college composition. Either semester may be taken first.

Fall, Spring (3-3)

110. Recreational Reading

An advanced course in the group reading of modern drama, poetry and fiction.

Fall and Spring (1)

115. The English Bible as Literature

A study of the narrative, poetry and prophecy of the King James version of the Bible. Readings, reports, lectures, and discussions.

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

- 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 1948-49 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, Synge, 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, Freneau, and Brockden Brown.
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 more 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 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 English, and to majors in art, anthropology, economics, history, philosophy, political science, psychology, and sociology. 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 5-1 to 5)
- 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 as 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

A 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 each subject for a more complete description of the offerings under that designation. 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 116, 118; History 121A, 121B, 131A, 131B, 143, 144; Aesthetics 50 or 150; English 52A, 52B, 56A, 56B, 101A, 116, 118A, 118B, 119, 126, 143, 152A, 152B.

FRENCH

Lower division preparation for the liberal arts major in French: French A-B-C-D; either German A-B or Spanish A-B; History 4A-4B.

Liberal arts major in French: Twenty-four units of upper division work, of which at least twenty-one must be in French, and of which three units may be selected from Geography 118, History 143, 121 or Comparative Literature 118, 155 or 158 in consultation with the chairman of the department. At least a C average in upper division major courses.

Lower Division Courses**A-B. Elementary**

Intensive study of French grammar and syntax; daily written work discussed in class; class drill in conversational idiom and pronunciation; reading with oral discussion and résumés; dictation; introduction to contemporary prose writers. Credit not given for French A unless followed by French B. Students who have had one year of French in high school should register for two units of work in French A. Those who have had two years of French in high school should register for four units of work in French B.

Year course (5-5)

C-D. Intermediate Reading

Reading and composition; study of standard prose as a basis for class work, collateral reading with résumés and written reports in French; dictation. Individual conferences. Prerequisite for C: French B or three years of high school French. Prerequisite for D: French C or four years of high school French.

Year course (3-3)

SC. Scientific Reading

Reading taken from the fields of chemistry, physics, medicine, zoology, biology, etc. Outside readings of books and periodicals. Oral and written reports. Prerequisite: French B or equivalent.

Fall (2)

Upper Division Courses**101A-101B. Conversation and Composition**

Translation into French from moderately difficult English prose. Outside reading of modern French prose, with written reports in French monthly. Readings and oral discussions in French of various facets of French life and culture.

Prerequisite: French D, or its equivalent, with grade of C.

Year course (3-3) (Offered in 1948-49)

105A-105B. Modern French Drama

Plays of Musset, Scribe, Augier, Dumas fils, Pailleron, Brieux, Hervieux, Maeterlinck, Rostand, and others read and discussed as to subject matter and technique. Outside reading and reports. Prerequisite: French D, or its equivalent, with grade of C.

Year course (3-3) (Offered in 1949-50)

107A-107B. Eighteenth Century Literature

The works of Montesquieu, Voltaire, Rousseau, the Encyclopédistes, and others. Prerequisite: French D, or its equivalent, with a grade of C.

Year course (3-3) (Offered in 1948-49)

110A-110B. Modern French Novel

The French novel from Victor Hugo to the present day, including such authors as: Hugo, Dumas, Stendhal, Balzac, Flaubert, Loti, Anatole France, Bourget, Boreas, Bazin, Barrès, Romain Rolland, A. Gide, Marcel Proust, and others. Class reading, outside reading, and reports. Prerequisite: French D, or its equivalent, with grade of C.

Year course (3-3)

111A-111B. Seventeenth Century Dramatic Literature

Reading in class of plays of Molière, 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 1950-51)

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 Courses****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 a basis; dictation. Prerequisite: German B or three years of high school German, or its equivalent. Students with credit for four years high school German, or its equivalent, should enter German D.

Year course (3-3)

SC-SD. Scientific Reading

First semester, readings in scientific reader on chemistry, physics, etc.; occasional written reports on scientific subjects read outside of class; sight reading. Second semester, readings in special scientific or technical works; weekly written reports required; sight reading. Prerequisite for SC: German B with a grade of C or three years of high school German; for SD: German SC, German C, with a grade of C, or four years of high school German.

Year course (3-3)

SPANISH

Lower division preparation for the liberal arts major in Spanish: Spanish A-B-C-D; French A-B or German A-B; History 4A-4B or 8A-8B.

Liberal arts major in Spanish: Twenty-four units of upper division work, of which at least 21 must be in Spanish, and three units may be selected from Geography 116, 118, History 161, 162, or Comparative Literature 118, 155, 158 in consultation with the chairman of the department. At least a C average in upper division major courses.

Lower Division Courses**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 résumés; 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 (5)

Upper Division Courses**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 *Rogueria*; selections from *Don Quixote*, and the *Cien Mejores Poesias* of Lope de Vega, Calderon, Alarcon, Castellanas; one drama each from the works of Lope de Vega, Calderon, Alarcon, and Moreto; collateral reading and reports. Prerequisite: A grade of C in Spanish D or permission from the instructor.

Year course (3-3) (Offered in 1949-50)

104A-104B. Spanish-American Literature

Reading from representative Spanish-American authors during the colonial revolutionary and modern periods. Lectures, class reading, collateral reading and reports. Prerequisite: A grade of C in Spanish D or permission from the instructor. Students who do not read Spanish may take this course for credit in comparative literature, doing 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 D 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 1830 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 (3-3)

Upper Division Courses**101. Feature Writing**

Study and practice in writing special articles for newspapers, general circulation magazines and nontechnical 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 1948-49 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 150, 6 units selected from 155A-155B, 140A-140B, 179A-179B, 192A-192B (the first semesters of any of these courses may be combined); 6 units selected from 157A-157B, 158A-158B, 159A-159B, 159A and 191; 6 units selected from 154A, 154B, 108, 118A, 192A, 192B; 3 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 speaking voice leading to good usage in standard American speech. Preparatory to 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 speaking and open forum debating; practice in construction and delivery of type forms of speech.

Fall and Spring (3)

2B. Extemporaneous Speaking (or Forum Speaking)

Practice 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 elementary 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)

Upper Division Courses

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 deportment 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 produced. 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)

140A-140B. 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. Prerequisite—56A-56B 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 light crews for departmental production.

(3) (Not offered 1947-1948)

150. Phonetics

Auditory and kinaesthetic analysis of the sounds of the English language. Valuable as a corrective 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 a mirror of the social and cultural background of the various countries and periods in which it is studied. Carries aesthetics 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: 55AB or the 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)

158A-158B. Advanced Radio Techniques

Designed to enable students to specialize in different fields of radio. Special attention given to original work. Permission of the instructor is necessary for registration.

Year course (3-3) (Offered in 1947-1948 and alternate years.)

159A-159B. Stage Direction

This course is planned for prospective directors of plays in schools, colleges and community theaters. Through lectures, discussions, and exercise projects the student will become acquainted with the principles, procedure and methods of stage direction. Each student will be required to direct several short plays during the year.

Year course (3-3)

163. Rhythm and Pantomime

Training in basic bodily movements and facial expression in the interpretation of dramatic or musical material.

Spring (3) (Offered 1948 and alternate years)

179A-179B. Nervous Speech Disorders

Clinical survey of newest methods of speech correction with special emphasis given to stammering. Required course for Special Corrective Credential. Not open to students with credit in Educ. 179A-179B.

Year course (3-3)

191. Organized Discussion

Consideration of the symposium, the panel, the open forum, the business session, and varieties of conference speaking. Emphasis upon organization and presentation. Attention to parliamentary procedure for informal groups. Prerequisite: Speech Arts 60 or equivalent.

Fall (3)

192A-192B. Advanced Public Speaking

Careful attention given to the preparation and delivery of longer speeches, using as models classics in the field of oratory. Prerequisites: Speech Arts 1A-1B.

Year course (3-3)

199. Special Problems in Speech and Dramatic Art

Fall or Spring (1-3)

Graduate Courses

201. Advanced Rhythm and Pantomime

History and application to different types of drama—including motion picture and television. Demonstrations. Prerequisite: Graduate standing.

Spring (2)

221. Articulatory Problems of Speech

Analysis and discussion of articulatory problems as encountered in public school work, particularly in California. Required of all students for the speech correction credential. Prerequisite: Graduate standing and Speech Arts 150.

Fall (2)

245. Seminar in Technical Practice

Advanced technical projects in planning school theaters and their mechanical equipment, lighting control and lighting instruments and the design of lighting layouts for elaborate plays will be assigned, executed and discussed. Prerequisite: Graduate standing.

(2)

259. Seminar in Stage Direction

An advanced course for those who are ready to direct full-length plays and to consider the problems of handling various styles and types of drama in the great periods of dramatic literature for modern production. For graduates with experience in directing plays.

(2)

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 is 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 analysis to every day 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 lectures per week. Designed for those who do not expect to specialize in zoology or botany; not open for credit to students who have taken Zoology 1A, Biology 1, or Botany 2A. Students who have taken 10A-10B may elect Zoology 1B or Botany 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.

2A. General Botany

Lower Division Courses

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 (2) (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 is 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) Twenty-four 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 courses in zoology, botany, physiology, bacteriology, physics, 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 chordates. 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 (3)

8. Human Anatomy

A study of human structure through the use of models, prepared dissections and microscope slides. Prerequisite: high school biology, Biology 10A, 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 (3)

Upper Division Courses

100. 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 (3)

106. Comparative Anatomy of the Vertebrates

Dissection, study and comparison of organ systems of typical vertebrates. Two hours per week of lecture and six hours of laboratory. Prerequisite: Zoology 1B or Biology 10B.

Fall (4)

112. Marine Invertebrates

Identification and study of behavior and life histories of invertebrates of the San Diego region. Frequent collecting trips to the beaches required. Prerequisite: Zoology 1A or Biology 10B. One hour of lecture and six hours of laboratory or field work per week.

Fall (3)

113A. Taxonomy and Natural History of Vertebrates

Lectures on classification, adaptations and ecological relationships of fish, amphibians, reptiles and mammals. Laboratory and frequent field trips to familiarize the student with the local fauna and with taxonomic procedures. One lecture and six hours of laboratory per week.

Spring (3)

113B. Ornithology

The study and identification of birds, especially those of the Pacific Coast and the San Diego region. One hour of lecture and six hours per week of laboratory, or field excursions. Prerequisite: Zoology 1B or Biology 10B.

Spring (3)

114A. Genetics

General introductory course designed to acquaint the student with the fundamental principles of heredity and variation. Special attention given to the Mendelian interpretations of the facts of inheritance. Two lectures per week.

Fall (2)

114B. Evolution

The development of theories of evolution. Two lectures or discussion periods per week.

Spring (2)

121. General Entomology

The classification, life history, structure, and physiology of insects. Prerequisite: Zoology 1A or Biology 10B. Two hours of lecture and three hours of laboratory per week.

Spring (3)

122. Systematic Entomology

Classification of insects with especial emphasis on a group of insects of the student's choice. To be taken with or to follow 121. May be repeated for credit but with a total of not more than 3 units. Three to six hours of laboratory work each week.

Spring (1 or 2)

123. Economic Biology

Study of the uses of plants and animals to man and the ways in which they injure him and his possessions. Consideration is also given to general methods of control and conservation. Prerequisite: Zoology 1A, Biology 1, or Biology 10B.

Fall (2)

124. Scientific Illustration

Drawing and Photography of scientific subjects. Students are assigned individual projects, following their respective inclinations. It is desirable for students electing this course to have a definite project, or projects in mind and to confer with the instructor in advance in case specialized needs are required. Six hours of laboratory work per week.

(2)

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, zoogeography, 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. Especial 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 3A-3B, 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. Especial 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 sidereal astronomy and astrophysics in the light of modern research, especially photographic and spectrographic. Prerequisite: Astronomy 1 or permission of the instructor.

Spring (3)

3. Surveyor's Course in Practical Astronomy

The principles of spherical astronomy adapted to the needs of engineering students. Computation and observation. Prerequisite: 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 observations of celestial objects with the six-inch telescope. Prerequisite: Astronomy 1 or registration in Astronomy 1 or permission of the instructor.

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 Agaton, Dreisonstok 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**100. 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. Historic Development of Astronomy

A study of the more important problems and astronomical concepts in the light of their historical development. Particular attention is given to the biography and contributions of the more important astronomers, such as, Galileo, Kepler, Newton, Herschel, and Bessel.

Spring (3)

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 1A-1B-1C-1D (or Physics 2A-2B and 3A-3B), Mathematics 3A-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 105, 108, 109, 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. Prerequisites: 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 pre-nursing 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 samples. One lecture and quiz, and two laboratory periods per week. Prerequisite: Chemistry 1A-1B.

Fall (3)

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: Credit or registration in Chemistry 108.

Fall (3)

110A-110B. Physical Chemistry

Theoretical principles of chemistry, with emphasis on mathematical relationships. Three lectures per week, problems and reports. Prerequisites: Physics 1A-1B-1C-1D (or Physics 2A-2B and 3A-3B), a knowledge of calculus, and credit or registration 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 and physical testing laboratories. Discussions, laboratory work and field trips. Two laboratory periods per week. Prerequisite: Chemistry 5.

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 109 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 109.

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. Prerequisites: 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 (1-3 1-3)

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)

S3. 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 professional skill on the part of the student. Four weeks course held in the mountains near San Diego. For details regarding location of camp, date of registration, date of opening, and other arrangements, a special announcement of the surveying camp may be secured at the Registrar's Office. Offered if demand is sufficient. Prerequisite: Surveying 1A-1B.

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 3A-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 three 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 hydrodynamics applied to the flow of water through orifices, over weirs, through pipes and canals. Lectures and problems. Prerequisites: Mathematics 4A, Physics 1C. Recommended: Physics 105A-105B.

Spring (3)

106. Hydraulics Laboratory

Laboratory determination of the characteristics of fluid flow and hydraulic equipment. Includes flow through pipes, orifices, weirs; characteristics of various 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. Flue 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. 3.

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

Elastic and ultimate strengths of materials. Analyses of types and failure. Stress analysis and deformation of simple structural and machine members. Photoelasticity. Lectures and problems. Prerequisite: Physics 105A.

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

Determination of stresses in simple framed structures such as roof trusses and highway bridges. Aircraft structures. Effects of combined stresses. Statically indeterminate beams. Special problems. Analytical and graphical methods of solution. Lectures and problems. Prerequisites: Physics 105A-B, Engr. 140.

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. Designs of riveted and welded joints. Design of simple machine parts such as clutches, gears, and couplings. Two lectures, one three-hour drafting 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 performance and stability, types of aircraft, aircraft instruments. Lectures and problems. Prerequisites: Physics 105A-5.

Fall (3)

199. Senior Report

Investigation of specific problems of advanced nature. Preparation of report. Prerequisite: Advanced senior standing.

Spring (2)

NOTE.—In laboratory courses special emphasis is placed upon the preparation of neat, concise, complete and intelligent reports.

GEOLOGY

Department requirement in Geology for liberal arts major in Physical Science includes in addition to Geology 1A-1B, the completion of: Chemistry 1A-1B, Physics 1A-1B-1C-1D or 2A-2B; 3A-3B. Students preparing for advanced work in Geology may add Engineering 21 and Geology 21A. Geology 2A may be substituted for Geology 1A in department prerequisite requirements provided the additional necessary unit of laboratory work is completed.

French or German, Engineering 1A-1B and Geology 21A-21B are recommended.

Lower Division Courses**1A. Physical**

The composition, origin, and distribution of earth materials, and their modification through mechanical and chemical process 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. Prerequisite: Geology 1A and high school chemistry, or equivalents.

Year course (3-3)

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. Prerequisite: Geology 1A-1B 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)

MATHEMATICS

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 111A-111B, 144, 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 counsel of the departmental representative regarding preparatory courses. All students will take the core course, Mathematics 3A-3B, 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, 104, 106, 111, 117, 119.

Lower Division

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 (3-3)

C. Intermediate Algebra

The course begins with an extensive review of elementary algebra. Topics covered include quadratic equations, simultaneous equations, ratio and proportion, 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)

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. Prerequisites: 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 3A.

Spring (3)

4A. Second Course in Calculus

Differentiation, 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. Prerequisites: 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. Prerequisites: 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 1948-49 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)

105. College Geometry

A continuation of the geometry of the high school with emphasis on modern topics. Prerequisite: Mathematics 3B.

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

106. Projective Geometry

Concurrence of lines, collinearity of points and other properties of figures not altered by projections; construction and study of ellipses, hyperbolas and parabolas by means of projections. Prerequisites: Mathematics 3A-3B.

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

111. 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)

112. Analytic Geometry of Space

The coordinate systems in space; lines, planes, and quadric surfaces; applications. Prerequisite: Mathematics 4A.

Spring (3) (Offered 1948-49 and alternate years)

117. 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)

118. Advanced Mathematics for Engineering Students

Hyperbolic, elliptic, Bessel and gamma functions; line integrals; Fourier series, etc. Applications.

Fall (3)

119. Differential Equations

Ordinary differential equations of first and second order, with applications. Prerequisite: Mathematics 4A-4B (4B concurrently if desired).

Spring (3)

124. Vector Analysis

Theory and applications to engineering problems.

Fall (3)

140. Probability and Statistics

Statistical theory and method from the mathematical standpoint; applications in social and natural science. Prerequisite: Mathematics 4A.

Spring (3) (Offered in 1948-49 and 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 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 36 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.

Fall and Spring (3) (Not offered in 1947-48)

PHYSICS

Lower division preparation for the liberal arts major in physics: Physics 1A-1B-1C-1D; 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 105A-105B, 110A, three units chosen from 102 or 110B, and 199 (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 adviser.

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 intensive preparation in the field. Lectures, demonstrations and discussions. 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. First semester: Properties of matter, mechanics and heat. Second semester: Electricity and magnetism, sound and light. One three-hour laboratory period per week.

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. Prerequisites: Physics 1C and Mathematics 4A.

Spring (3)

105A-105B. Analytical Mechanics

Treatment 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 elemental physical particles and their properties and of the physical concepts to which this experimental evidence has led. Prerequisites: Physics 1C or 2B.

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)

128. Experimental Atomic Physics

Laboratory measurements in the fundamental properties of atomic particles. Prerequisite: Previous or concurrent registration in Physics 108 or permission of the instructor. This course replaces Physics 108L.

Spring (1)

132. Heat and Pyrometry Laboratory

Laboratory work selected from experiments in thermal expansion, specific heat, heat of combustion, radiation, calibration and use of various temperature measuring devices. Prerequisite: Previous or concurrent registration in Physics 112 or permission of the instructor. This course replaces Physics 112L.

Fall (1 or 2) (Offered in 1947-48 and alternate years)

134. Acoustical Measurements

Experimental study of wave motion, velocity of sound in various media, diffraction, refraction and reflection of sound, directional and frequency characteristics of loudspeakers and microphones, architectural acoustics. Prerequisite: Previous or concurrent registration in Physics 114 or permission of the instructor. This course replaces Physics 114L.

Spring (1 or 2) (Offered in 1947-48 and alternate years)

199. Special Study

Reading and laboratory work on a special problem in physics selected by the student. Each student will be assigned a member of the staff who will supervise his work. All candidates for the A.B. Degree in physics are required to enroll for two units of this course during the upper division work. Credit, hours and topics to be arranged in each case.

Fall and Spring (1 or 2-1 or 2)

Graduate Courses**200. Seminars**

An intensive study of some phase of advanced physics under the immediate direction of a member of the staff. Each student will choose one of the following fields for study and will prepare and present a paper on this field to the combined staff and all students enrolled in this course.

- A. Mathematical Physics
 - B. Advanced Mechanics
 - C. Kinetic Theory of Gases
 - D. Advanced Acoustics
 - E. Advanced Electronics and Electricity
 - F. Electromagnetic Radiation
 - G. Atomic Physics
- 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.

Spring (3)

210. Molecular Structure

A lecture course designed to develop familiarity with modern concepts of valence; correlating magnetic, dielectric and spectrographic information with chemical properties. Prerequisite: Chemistry 11A-11B or Physics 108.

(3) (This course will be offered either semester as justified by the demand)

299. Special Study

Independent theoretical and experimental investigation of some topic in physics chosen by the student. Each student taking work in this course will be required to write a paper reporting his results. A member of the staff will be assigned to supervise the work.

Fall and Spring (1 to 3-1 to 3)

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 36 units. See page 18.)

Lower Division Courses

1A-1B. General Anthropology

Origin and antiquity of man. Theories of human descent. Classification of races. Origin and early development of civilization.

Year course (3-3)

2. Physical Anthropology

An introduction to the studies of primatology and anthropometry. The comparative anatomy of the monkeys and great apes, the emergence of the anthropoids, 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 supernaturalism 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

Beliefs and ritual of primitive man. Magic and religion. Forms of animism and polytheism. Primitive mentality and the supernatural.

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 evidences.

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 archaeology. Recent trends in archaeological 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 preparation for the Liberal Arts Major in Commerce and for the Junior Certificate: Economics 1A-1B, Commerce 2, 14A-14B, 18A-18B, Geography 10. Students majoring in the merchandising subfield should also include Commerce 20, 24, 25, 27 and Art 7.

Liberal Arts Major in Commerce, 24 upper division units required as follows: Economics 111, 140, Commerce 121, and 15 units selected from one of the following groups:

A. Accounting: Commerce 160A-160B, 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, 126, 133, 137, 153, Economics 150, 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 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)

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 (3-3)

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, arrangement and operation. Study and use of modern office appliances such as the multi-graph, 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 balance sheet; profit and loss statement; various types of 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 confine their preparation to one or two years. Open only to students enrolled in a two-year curriculum.

Year course (3-3)

16A-16B. Secretarial Accounting

A course in secretarial accounting covering the fundamental principles of accounting and the application of these principles to the accounting work required by one employed in a secretarial capacity. 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 actual application of the principles to commercial and business transactions, rather than the development of those principles. The subjects covered: 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; 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.

(3)

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 backgrounds of salesmanship, newer concepts of selling; the selling of ideas and services; steps in a sale: attention, interest, desire, closing; the development of clientele 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 psychological aspects of insurance selling, and on specific techniques for finding prospects, and for managing the sales interview. A course for students interested in 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 employed; market analysis as an advertising tool; budgeting of appropriations; selection of mediums; layout, art work, copy; publicity devices; institutional advertising; the function of agencies; radio as a specialized advertising problem.

Spring (3)

65A-65B. Record Keeping

An advanced course in the application of accounting theory and principles to accounting practice; the technical arrangement of accounting forms, records and reports found in business; advanced theory. Opportunity afforded students through the use of practice sets, etc., to secure practice in applying principles to actual work done in business. Prerequisite: Accounting 15A-15B or 16A-16B or Economics 14A-14B. Open only to students enrolled in a two-year curriculum.

Year course (3-3)

Upper Division Courses**121. Business Administration**

Problems of business administration as an interrelated whole and as an indication of lines of study which may lead to the solution of those problems. A discussion of the problems of the business administrator with particular reference to the character of the problems involved and to the control policies and devices of the manager. Questions, problems, and case studies. Prerequisite: Economics 1A-1B.

Fall (3)

123. Marketing

A survey of the fundamental principles and methods of marketing. Intended as a basic training for students interested in the economics of advertising, sales management, retailing, and foreign trade, as well as for those wishing a knowledge of the existing market structure. Subjects covered include price policies, distribution methods, finance, risk, market information, and governmental regulation. Prerequisite: Economics 1A-1B.

Spring (3)

125. General Insurance

Economic theory of risk, its extent and importance to both the individual and business; transfer of risk; distribution and prevention of loss; types of insurance carriers; problems of rate making; the insurance contract; coverages; special forms of life, fire, marine and casualty insurance; state supervision.

Fall (3)

126. Casualty Insurance

The nature and reasons for existing practices in compensation and casualty insurance. The social and legal bases of insurance, fundamental principles of rate making, policy provisions, state regulation and state insurance.

Spring (3)

127. Life Insurance—Principles and Practice

A study of social and individual values involved in the institution of life insurance. The student is then directed to the types of life insurance companies and associations, home office and agency organization, types of contracts, surrender value, policy loans and extended insurance, surplus and dividend policies, reserves, group, industrial and social insurance, and state supervision.

Fall (3)

133. Corporation Finance

The corporate form of organization, instruments of long-time finance, methods of raising capital, efficient financial management, the financing of reorganizations, and governmental control. Prerequisite: Economics 1A-1B.

Fall (3)

134. Investments

Investment principles and practices with emphasis upon problems of the small investor, such as tests of a good investment, sources of information, types of stocks and bonds, mechanics of purchase and sale, investment trusts, real estate mortgages, and the like.

Spring (3)

137. 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)

153. Personnel Administration

A discussion of employment, hours, wages, working conditions, insurance, pensions, workmen's compensation, labor organizations, and labor legislation. Organization of personnel functions; selective devices, training and safety programs, compensation plans, morale.

Spring (4)

160A-160B. Advanced Accounting

An intensive study of the corporation, its accounting and financial problems; a thorough study of the balance sheet; depreciation; factory accounting, etc. Under practical accounting an endeavor is made to design, construct, and operate sets of books to meet the needs of different conditions and kinds of businesses. Six hours lecture and laboratory. Prerequisite: Commerce 14A-14B.

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 procedure, the forms used, and their application to practical problems. Prerequisite: Commerce 14A-14B.

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 devising and installing systems. Prerequisite: Commerce 14A-14B.

Spring (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 the interests he represents as well as from the accounting point of view. No knowledge of accounting procedure 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 handling budget accounts, appropriations, and encumbrances; subsidiary records; cost records; internal checks; auditing.

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

184. Sales Management Problems

Problems of sales department organization, recruiting, training, supervising and paying salesman, setting of sales territories, quotas and policies are covered in this course. Time is also given to a brief review of principles of salesmanship, and to a summary of product and market research techniques as they relate to sales administration. (2)

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, selections, 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 14A-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 160A-160B, 161, 165. (2)

ECONOMICS

Lower division preparation for the liberal arts major in economics and for the junior certificate: Economics 1A-1B, Commerce 14A-14B and at least one of the following: Political Science, 1A-1B, 71A-71B, History 4A-4B, 8A-8B, 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, and 15 additional units 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 (3-3)

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. (3)

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. (3)

Spring (3)

102. Comparative Economic Systems

A study of the economic aspects of laissez-faire and regulated capitalism, socialism, communism, Nazism, Facism. Comparative experience in Russia, Germany, the United States, Great Britain. Criteria for evaluating economic systems. Positions of the individual and government in each system. Planning in a liberal capitalism society. Cooperatives. (3)

Spring (3)

111. Economic History of the United States

A comprehensive survey of American economic development and of national legislation in the field of industry and commerce. (3)

Spring (3)

128. 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. (3)

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. (3)

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. (3)

Spring (3)

140. Statistical Methods

The nature and uses of statistical method in the social sciences. Practice in tabular and graphic presentation of data; analysis of frequency and time series; index number construction and study of correlation techniques. Prerequisite: Mathematics A-B, and C or equivalent. (3)

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. (3)

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. (3)

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 regulation of business in its historical, legal and economic aspects, including recent developments in the United States and abroad; proposed policies. (3)

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 (3) (Not offered 1947-48)

185. 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 (3)

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)

198. Investigation and Report

Designed 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

Designed 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 199, 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: 1500-1799. Spring semester: 1799-1914.

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 Napoleonic Era

Study of conditions in France prior to 1789, the Revolution, 1789-1799, 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 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 ebb 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; Tsarist 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)

Graduate Course**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.

LIBRARY SCIENCE**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 classification, 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)

Upper Division**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, Kropotkin, Mill, Marx, Mussolini, Dewey, Pius XI, 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 esthetic experience, both in itself and in relation to the rest of human experience. Particular effort is made to disentangle man's esthetic 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 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, relation of the scientific interest to other interests, and contributions of the special sciences to a view of the universe as a whole.

Fall (3)

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.

Fall (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 foundation 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 organization: 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: Function 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 corporation; 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; 6 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 160.

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 an 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)

Upper Division Courses

102. Child Psychology

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. Prerequisite: 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. Prerequisites: 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 150.

Fall (3)

151B. Clinical Psychology: Therapies

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 marriages; higher education and the birth rate; married women in industry and professions; 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; consideration 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 neighborhoods; 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 students 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

	Units Sem. I	Units Sem. II
First Year		
English 40A or 40B and 40C.....	3	3
*Physical Science 40 or equivalent.....	3	3
*Biology 40 or equivalent.....	3	3
Social Science 40.....	3	3
Sociology 45.....	3	3
Health Education 21.....	2	2
Physical Education.....	$\frac{1}{2}$	$\frac{1}{2}$
Psychology 40.....	3	3
Elective.....	3	4
	15 $\frac{1}{2}$	15 $\frac{1}{2}$
Second Year		
English 45, 46, or 47.....	3	3
Social Science Elective.....	3	3
Social Science 45.....	3	3
Elective.....	9	12
Physical Education.....	$\frac{1}{2}$	$\frac{1}{2}$
	15 $\frac{1}{2}$	15 $\frac{1}{2}$

* See subject matter requirements in the lower division, page 16.

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 made of business and industrial concerns 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.)

ENGLISH

40A. Beginning Composition

The elements of composition, including drill in grammar and usage; exercises in vocabulary building and careful reading; theme writing.

Fall and Spring (3)

40B. Freshman English

Composition stressing exposition. Reading from essays and articles. Prerequisites: 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 thoughts and ideas, 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 world. 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 Provisional 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 establishment 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. Prerequisite: Psychology 40 or sophomore standing.

Spring (3)

DIRECTORY

(1946-47)

- HEPNER, WALTER R.-----President
A.B., 1913, M.A., 1916, Ed.D., 1937, University of Southern California. At San Diego State College since 1935.
- ADAMS, JOHN R.-----Professor of English
A.B., 1920, A.M., 1922, University of Michigan; Ph.D., 1940, University of Southern California. At San Diego State College since 1928.
- ALCORN, MARVIN DOUGLAS-----Assistant Professor of Education;
Director of Teacher Placement
A.B., 1925, Southwestern College; A.M., 1931, Teachers College, Columbia University; Ed.D., 1942, 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 1925.
- 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,
Professor of Education
B.S., B.Pd., 1910, Valparaiso University; M.A., 1925, University of South Dakota. One year graduate study since 1925 at Claremont Colleges and University of Southern California. At San Diego State College since 1925.
- 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 University, 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., 1924, University of California. Three years graduate study since 1924 at University of Minnesota, University of California, University of Southern California, University of Oregon. At San Diego State College since 1921.
- *BAKER, CLIFFORD HENRY, JR.-----Instructor in Spanish
B.A., 1933, San Diego State College; M.A., 1935, University of California. Two years graduate study since 1935 at University of California. At San Diego State College since 1937.
- BARNHART, KENNETH EDWIN-----Associate Professor of Sociology
A.B., 1915, Southwestern University; A.M., 1920; Southern Methodist University; Ph.D., 1924, 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.S., 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., 1943, University of California. At San Diego State College since 1946.

* On leave.

- *BROMLEY, J. PHILIP**-----Assistant Professor of Commerce
B.S., 1934, M.S., 1936, University of Southern California. One year graduate study since 1936 at University of Southern California, Columbia University, and Texas Agricultural and Mechanical College. At San Diego State College since 1936.
- BROOKS, BAYLOR**-----Assistant Professor of Geology
B.A., 1928, Stanford University. Two years graduate study since 1928 at University of Arizona and Stanford University. At San Diego State College since 1931.
- BROWN, ELIZABETH (Mrs. Leslie P.)**-----Associate Professor of French
Ph.B., M.A., Ph.D., University of Chicago. At San Diego State College since 1926.
- BROWN, LESLIE PARKER**-----Professor of Spanish and French
B.A., 1912, Yale College; M.A., 1913, Harvard University; Ph.D., 1935, University of Southern California. At San Diego State College since 1922.
- BRYDEGAARD, MARGUERITE 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 1936.
- 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., University of North Dakota; one-half year's study at Bennington College. At San Diego State College since 1946.
- COLTON, THEODORE S.**-----Instructor in English
B.A., 1939, 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.Pd., 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., 1940, North Dakota State College. At San Diego State College since 1946.
- CROUCH, JAMES ENSIGN**-----Professor of Biology
B.S., 1930, M.S., 1931, Cornell University; Ph.D., 1939, University of Southern California. At San Diego State College since 1932.
- 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., 1924, University of Kansas; M.A., 1936, Ed.D., 1939, New York University. At San Diego State College since 1946.
- DELAND, EDWARD C.**-----Instructor in Physics
B.S., 1943, South Dakota School of Mines and Technology. At San Diego State College since 1946.
- DEPUTY, ERBY CHESTER**-----Professor of Education
B.A., 1922, University of Denver; M.A., 1926, Ph.D., 1929, Columbia University. At San Diego State College since 1931.
- DEVINE, WARREN R.**-----Instructor in Physics
B.S., 1932, Worcester Academy; S.B., 1936, Massachusetts Institute of Technology. At San Diego State College since 1946.

* On leave.

- DICKHAUT, FLORENCE LILLIAN SMITH (Mrs. Charles A.)**-----Professor of English
B.A., Northwestern University; M.A., University of Chicago. At San Diego State College since 1917.
- EAGLE, JOHN E.**-----Assistant Professor of Mathematics
B.S., 1930, Montana State College; A.M., 1940, Stanford University; Ed.D., 1947, Stanford University. At San Diego State College since 1946.
- ESTEP, LEWIS I.**-----Instructor in Physics
A.B., 1940, San Diego State College. At San Diego State College since 1946.
- EVANS, BRYANT F.**-----Instructor in Journalism
B.J., 1931, University of Missouri. On editorial staff of San Diego Union. At San Diego State College since 1945.
- EVANS, ROSS A.**-----Instructor in Chemistry
A.B., 1937, San Diego State College; M.A., 1939, University of California at Los Angeles. At San Diego State College since 1946.
- GENTRY, ADRIAN N.**-----Instructor in Biology
Sc.B., 1934, Ottawa University; M.A., 1935, University of Kansas. Three years of graduate study at University of Washington and University of California. At San Diego State College since 1946.
- GLEASON, JOHN MORTIMER**-----Assistant Professor of Mathematics
B.A., 1929, University of California at Los Angeles; M.A., 1930, University of California. One and a half years graduate study since 1930 at University of Southern California, University of California at Los Angeles and Claremont Colleges. At San Diego State College since 1930.
- GRESS, IRVIN S.**-----Assistant Professor of Psychology
A.B., 1922, George Washington; M.Ed., 1938, University of Pittsburgh. Two years graduate study at Columbia University, Pennsylvania State College and University of Pittsburgh. At San Diego State College since 1946.
- GULICK, SIDNEY L., JR.**-----Associate Professor of English
A.B., 1923, A.M., 1925, Oberlin College; Ph.D., 1931, Yale University. At San Diego State College since 1945.
- HALE, HELENE E. (Mrs. Wm.)**-----Instructor in English;
Provisional Program
B.S., M.A., University of Minnesota. At San Diego State College since 1945.
- HAMMACK, EDITH CHASTAIN**-----Supervisor of Student Teaching;
Associate Professor of Education
B.A., San Jose State College. At San Diego State College since 1911.
- HAMMACK, ISABELLA STEWART**-----Supervisor of Student Teaching;
Assistant Professor of Education
B.A., M.A., University of California. One-half year graduate study since 1929 at University of California. At San Diego State College since 1936.
- HARCLEROAD, FRED F., JR.**-----Assistant Professor in Education;
Supervisor in Campus Elementary School
A.B., 1939, M.A., 1942, Colorado State College of Education. Three years graduate study at Stanford University. At San Diego State College since 1946.
- HARVEY, DOROTHY R. (Mrs. F. A.)**-----Assistant Professor in Botany
B.A., San Diego State College; M.A., University of Southern California. One year graduate study since 1928 at University of Southern California and University of Chicago. At San Diego State College since 1924.
- HARWOOD, ROBERT DANIEL**-----Professor of Zoology
A.B., 1920, Pomona College; Ph.D., 1928, Cornell University. At San Diego State College since 1928.
- HASKELL, HARRIET**-----Instructor in English
A.B., Mills; A.M., Bryn Mawr; Ph.D., University of Wisconsin. At San Diego State College since 1945. In S. D. Junior College at S. D. S. C. 1940-1943.
- HAYS, MAHELA W. (Mrs. Frank B.)**-----Assistant Professor of Psychology
A.B., Ph.D., University of California. At San Diego State College since February, 1946.

- HOUSER, LOWELL D.**-----Assistant Professor of Art
Diploma, 1924, Chicago Art Institute. Five years' special study since 1924 in Mexico, Yucatan, Haiti, and New York City. At San Diego State College since 1938.
- HUNTER, JAMES J., JR.**-----Director of Secondary Education;
Associate Professor of Education
A.B., 1932, Cornell University; M.S., 1936, Ph.D., 1940, Syracuse University. At San Diego State College since 1946.
- IMEL, ETHEL D. (Mrs. Kenneth S.)**-----Assistant Professor of Speech Arts
A.B., A.M., University of California. One semester graduate study Washington State College and Whittier College. At San Diego State College since 1946.
- JACKSON, EVERETT GEE**-----Professor of Art
B.A., 1930, San Diego State College. Three years special study in Mexico. M.A., 1939, University of Southern California. At San Diego State College since 1930.
- JEWETT, ARNO J.**-----Associate Professor in English and Education
B.S., 1932, M.A., 1937, Ph.D., 1939, University of Minnesota. At San Diego State College since February, 1947.
- JOHNS, EDWARD B.**-----Associate Professor of Health and Physical Education
A.B., 1932, M.A., 1934, Ed.D., 1943, Stanford University. At San Diego State College since 1946.
- JOHNSON, FRANK LOUIS**-----Assistant Professor in English
B.A., 1928, M.A., 1929, University of Minnesota; Ph.D., 1934, University of Wisconsin. At San Diego State College since 1939.
- JONES, SYBIL ELIZA**-----Associate Professor of Speech Arts
B.L., M.L., University of California. Two years special study since 1907. At San Diego State College since 1925.
- KAPLAN, OSCAR J.**-----Assistant Professor of Psychology
A.B., 1937, M.A., 1938, University of California at Los Angeles; Ph.D., 1940, University of California. At San Diego State College since 1946.
- KEENEY, JOSEPH SUMNER**-----Associate Professor of English
B.A., 1921, Yale College; M.A., 1928, Ph.D., 1933, University of California. At San Diego State College since 1933.
- KENNEDY, CHESTER BARRETT**-----Assistant Professor of English
B.A., 1927, Chico State College; M.A., 1939, Stanford University. Two and one-half years graduate study since 1928 at Stanford University and the University of California. At San Diego State College since 1937.
- KITZINGER, ANGELA MAE**-----Assistant Professor of Physical Education
A.B., Barnard College; M.A., Teachers College, Columbia University. Year of additional work at Central School of Hygiene and Physical Education and at Gymnastic Institute, Ollerup, Denmark. At San Diego since 1945.
- KRESS, RALPH**-----Instructor in Mathematics
B.M.E., 1943, Ohio State University. At San Diego State College since February, 1947.
- LeBARRON, EVANGELINE O. (Mrs. H. E.)**-----Instructor in Commerce
B.A., B.S., University of Iowa; B.A., Sioux Falls College. One year of graduate work at Claremont Colleges, University of Southern California and University of Minnesota. At San Diego State College since 1946.
- LEIB, JULIUS**-----Assistant Professor of Music
Three years special study at Leipzig Conservatory. At San Diego State College since 1938.
- LEONARD, CHARLES B.**-----Professor of History
B.A., 1921, M.A., 1922, Ph.D., 1929, University of California. At San Diego State College since 1921.
- LESLEY, LEWIS B.**-----Professor of History
B.A., 1920, Stanford University; M.A., 1923, Ph.D., 1933, University of California. At San Diego State College since 1924.

- LINLEY, JAMES**-----Assistant Professor of Education
Ph.B., 1927, University of Chicago; M.S., 1934, Ph.D., 1938, University of Southern California. At San Diego State College since 1945.
- LIVINGSTON, GEORGE ROBERT**-----Professor of Mathematics
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