

**UNIVERSITY OF CALIFORNIA  
BULLETIN**

**PUBLISHED AT BERKELEY, CALIFORNIA**

**Volume XXXII**

**September 20, 1938**

**Number 9**

**GENERAL  
CATALOGUE**

**• 1938-39 •**

**DEPARTMENTS AT LOS ANGELES**

*For sale by the*  
**STUDENTS' COÖPERATIVE BOOK STORE  
LOS ANGELES**

**Price, Twenty-five cents**

# Administrative Bulletins of the University of California

1938-39

---

The administrative bulletins of the University of California present information concerning the colleges, schools, and departments of the University. For copies of the bulletins or other information concerning instruction at Los Angeles, address the Registrar of the University of California at Los Angeles; for other bulletins, and for information concerning the departments at Berkeley, address the Registrar of the University of California, Berkeley; bulletins of the schools and colleges in San Francisco may be had by addressing the deans in charge. The publications are sent free except those for which a price (which includes postage) is given.

---

## Bulletins Referring Primarily to the University of California at Los Angeles

The General Catalogue of the University of California at Los Angeles: containing general information about the University, requirements for admission, for the bachelor's degree in the College of Letters and Science, in the College of Business Administration, in the Teachers College, and in the College of Agriculture; for the master's and the doctor's degrees, and for teaching credentials; students' fees and expenses; and announcements of courses of instruction in the University of California at Los Angeles. Price, 25 cents.

The University of California—An Introduction to the Los Angeles Campus: An illustrated circular of information.

The Announcement of Graduate Study, Los Angeles.

The Announcement of the College of Business Administration.

The Schedule of Classes, University of California at Los Angeles: containing the time-schedule of exercises and an office directory of officers of instruction and administration. Published in February and August of each year for the semester immediately following. Price, 5 cents.

The Catalogue of Officers and Students, Section II (University of California at Los Angeles). Published annually in October. Price, 35 cents.

The Announcement of the Summer Session, Los Angeles.

---

## General Bulletins, and Bulletins Referring Primarily to the Colleges, Schools, and Departments of the University at Berkeley and Davis.

The General Catalogue of the University of California (primarily for those interested in the Undergraduate Division at Berkeley): General information about the University, its organization, the requirements for admission to undergraduate status, and for the bachelor's degree in the colleges of Letters and Science, Agriculture, Chemistry, Commerce, Engineering, and Mining; requirements for certificates in the several curricula; students' fees and expenses, and announcements of courses of instruction in the departments at Berkeley. Price, 25 cents.

*(Continued on page 3 of cover)*

# University of California Bulletin

Volume XXXII . Berkeley, California, September 20, 1938 . Number 9

---

## GENERAL CATALOGUE

ADMISSION AND DEGREE REQUIREMENTS

ANNOUNCEMENT OF GRADUATE AND  
UNDERGRADUATE COURSES OF INSTRUCTION

For the Academic Year

1938-1939

PRIMARILY FOR STUDENTS IN THE  
DEPARTMENTS AT LOS ANGELES

405 HILGARD AVENUE, LOS ANGELES, CALIFORNIA

## UNIVERSITY OF CALIFORNIA BULLETIN

A SERIES IN THE ADMINISTRATIVE BULLETINS OF THE UNIVERSITY OF CALIFORNIA. ENTERED JULY 1, 1911, AT THE POST OFFICE AT BERKELEY, CALIFORNIA, AS SECOND-CLASS MATTER, UNDER THE ACT OF CONGRESS OF JULY 16, 1894. ISSUED MONTHLY FROM OCTOBER TO APRIL, AND THREE TIMES A MONTH FROM MAY TO SEPTEMBER.

---

### GENERAL INFORMATION

Letters of inquiry concerning the University of California at Los Angeles should be addressed to the *Registrar, University of California at Los Angeles, Los Angeles, California.*

Letters of inquiry concerning the University in general should be addressed to the *Registrar, University of California, Berkeley, California.*

For the list of bulletins of information concerning the several colleges and departments, see pages 2 and 3 of the cover.

In writing for information please mention the college, department, or study in which you are chiefly interested.

---

The registered cable address of the University of California at Los Angeles is UCLA.

## CONTENTS

	PAGE
Calendar . . . . .	8
Regents of the University . . . . .	11
Administrative officers . . . . .	13
The University . . . . .	15
History and organization . . . . .	17
Administration . . . . .	18
University of California at Los Angeles . . . . .	19
History and development . . . . .	19
Site of the campus—Climate . . . . .	20
Survey of curricula . . . . .	21
Summer Sessions . . . . .	21
The Library . . . . .	22
University Extension . . . . .	22
Admission to the University . . . . .	23
Student Status . . . . .	23
Admission in undergraduate status . . . . .	23
Admission in freshman standing . . . . .	23
Admission by certificate . . . . .	23
Additional ways of gaining admission . . . . .	25
Admission by examination . . . . .	26
Removal of admission deficiencies . . . . .	26
Preparation for University curricula . . . . .	27
Admission in advanced standing . . . . .	28
Removal of scholarship deficiencies by applicants from other colleges . . . . .	30
Admission of special students . . . . .	30
Admission from schools and colleges in foreign countries . . . . .	31
Admission in graduate standing . . . . .	31
Admission in unclassified status . . . . .	31
General regulations . . . . .	33
Registration . . . . .	33
Late admission and registration . . . . .	33
Medical examinations—Medical facilities . . . . .	33
Military science, naval science, and physical education . . . . .	34
Gymnasiums and athletic facilities . . . . .	35
Subject A: English composition . . . . .	36
American Institutions . . . . .	37
Piano test . . . . .	37
Study-list regulations . . . . .	37
Student responsibility . . . . .	38
Authority of instructors . . . . .	38

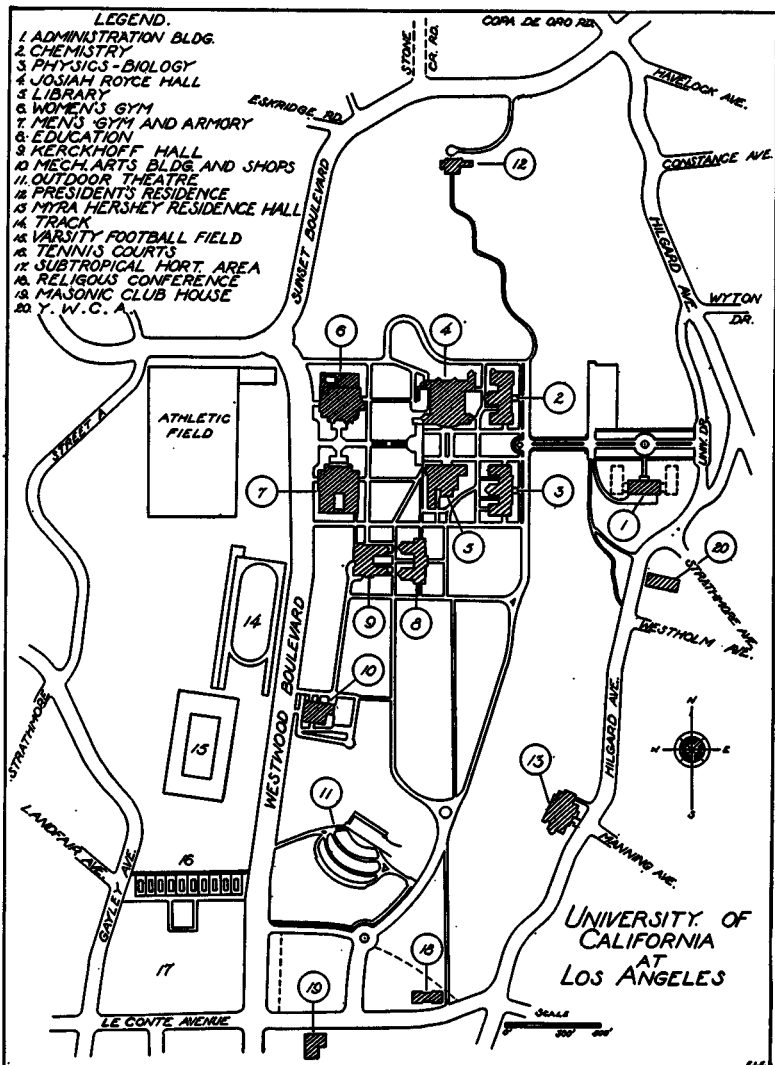
	PAGE
Degrees and teaching credentials . . . . .	38
Change of college or major . . . . .	39
Honors . . . . .	39
Credit and scholarship . . . . .	39
Study-list limits—Program limitation . . . . .	40
Grades of scholarship; grade points . . . . .	41
Removal of conditions and failures . . . . .	42
Minimum scholarship requirements . . . . .	43
Credit by examination . . . . .	44
Final examinations . . . . .	44
Leave of absence and honorable dismissal . . . . .	45
Discipline . . . . .	46
Miscellaneous information . . . . .	47
General expenses and fees . . . . .	47
Living accommodations and general expenses for women . . . . .	51
Living accommodations and general expenses for men . . . . .	52
Self-support and student employment . . . . .	53
Undergraduate scholarships . . . . .	55
Loans—Prizes . . . . .	56
Public lectures, concerts, and art exhibitions . . . . .	57
The Associated Students . . . . .	58
University Religious Center . . . . .	59
College of Letters and Science . . . . .	60
Lower division, junior certificate . . . . .	60
Upper division . . . . .	63
Letters and Science list of courses . . . . .	64
Organized majors and curricula . . . . .	66
Honors . . . . .	77
Preparation for professional curricula . . . . .	78
Pre-Chemistry . . . . .	78
Pre-Dental . . . . .	79
Pre-Engineering . . . . .	80
Pre-Legal . . . . .	82
Pre-Medical . . . . .	82
Pre-Mining . . . . .	85
Nursing . . . . .	86
Public Health Nursing . . . . .	88
Pre-Optometry . . . . .	89
Pre-Pharmacy . . . . .	89
Professional curricula in other divisions of the University . . . . .	90
Journalism . . . . .	91
College of Business Administration . . . . .	92
Lower division . . . . .	92

# Contents

5

	PAGE
Upper division . . . . .	94
Honors . . . . .	95
Teachers College . . . . .	96
Credentials . . . . .	96
Requirements for graduation . . . . .	96
Majors . . . . .	99
Honors . . . . .	101
Requirements for teaching credentials . . . . .	101
Elementary—Kindergarten-Primary . . . . .	101
Junior High School—Special Secondary . . . . .	101
College of Agriculture . . . . .	102
Requirements for graduation . . . . .	102
Honors . . . . .	105
Graduate Study . . . . .	106
Requirements for the master's degree . . . . .	106
Requirements for the doctor's degree . . . . .	109
Academic residence for graduate students . . . . .	111
Requirements for higher teaching credentials . . . . .	111
General Secondary . . . . .	112
Junior College . . . . .	115
Announcement of courses . . . . .	117
Agriculture . . . . .	118
Art . . . . .	122
Astronomy . . . . .	127
Bacteriology . . . . .	130
Botany . . . . .	132
Business Administration . . . . .	135
Chemistry . . . . .	141
Classics . . . . .	144
Economics . . . . .	149
Education . . . . .	153
English . . . . .	157
French . . . . .	163
Geography . . . . .	166
Geology . . . . .	169
German . . . . .	173
History . . . . .	177
Home Economics . . . . .	182
Italian . . . . .	186
Life Sciences Group . . . . .	187
Mathematics . . . . .	188
Mechanic Arts . . . . .	192
Military Science and Tactics . . . . .	196

	PAGE
Music . . . . .	200
Naval Science and Tactics . . . . .	204
Philosophy . . . . .	208
Physical Education for Men . . . . .	212
Physical Education for Women . . . . .	215
Physics . . . . .	220
Political Science . . . . .	224
Psychology . . . . .	230
Spanish . . . . .	234
Subject A . . . . .	237
Training Department . . . . .	238
Zoölogy . . . . .	242
Index . . . . .	247



**MAP OF THE LOS ANGELES CAMPUS  
OF THE UNIVERSITY OF CALIFORNIA**

## CALENDAR\*

1938

Sept. 6, Tuesday	Applications for admission to undergraduate or graduate study in September, 1938, with complete credentials, should be filed on or before this date to avoid penalty of late application fee.																								
Sept. 9, Friday	Admission Day: An academic and administrative holiday in all departments.																								
Sept. 14, Wednesday	9:00 A.M., Examination in Subject A.																								
Sept. 15, Thursday	Consultation with advisers by new students.																								
Sept. 16, Friday	<table border="0" style="border-left: 1px solid black; border-right: 1px solid black; padding: 0 10px;"> <tr> <td style="padding-right: 5px;">Registration of old students and reentrants (graduates and undergraduates):</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">8:00 A.M.—9:30 A.M.—A—E.</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">9:30 A.M.—11:00 A.M.—F—K.</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">12:00 M.—1:30 P.M.—L—Q.</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">1:30 P.M.—3:00 P.M.—R—Z.</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">3:00 P.M.—4:00 P.M.—All initials.</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">Registration of new students (graduates and undergraduates):</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">8:00 A.M.—9:30 A.M.—A—L.</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">9:30 A.M.—11:00 A.M.—M—Z.</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">11:00 A.M.—1:00 P.M.—All initials.</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">Registration of any student, old or new:</td> <td></td> </tr> <tr> <td style="padding-right: 5px;">11:00 A.M.—1:00 P.M.</td> <td></td> </tr> </table>	Registration of old students and reentrants (graduates and undergraduates):		8:00 A.M.—9:30 A.M.—A—E.		9:30 A.M.—11:00 A.M.—F—K.		12:00 M.—1:30 P.M.—L—Q.		1:30 P.M.—3:00 P.M.—R—Z.		3:00 P.M.—4:00 P.M.—All initials.		Registration of new students (graduates and undergraduates):		8:00 A.M.—9:30 A.M.—A—L.		9:30 A.M.—11:00 A.M.—M—Z.		11:00 A.M.—1:00 P.M.—All initials.		Registration of any student, old or new:		11:00 A.M.—1:00 P.M.	
Registration of old students and reentrants (graduates and undergraduates):																									
8:00 A.M.—9:30 A.M.—A—E.																									
9:30 A.M.—11:00 A.M.—F—K.																									
12:00 M.—1:30 P.M.—L—Q.																									
1:30 P.M.—3:00 P.M.—R—Z.																									
3:00 P.M.—4:00 P.M.—All initials.																									
Registration of new students (graduates and undergraduates):																									
8:00 A.M.—9:30 A.M.—A—L.																									
9:30 A.M.—11:00 A.M.—M—Z.																									
11:00 A.M.—1:00 P.M.—All initials.																									
Registration of any student, old or new:																									
11:00 A.M.—1:00 P.M.																									
Sept. 17, Saturday																									
Sept. 19, Monday	Instruction begins.																								
Sept. 24, Saturday	Special examination in Subject A.																								
Sept. 26, Monday	Last day to file registration books or to change study lists without fee.																								
Oct. 3, Monday	Last day to file application for admission to candidacy for the master's degree or for the secondary teaching credentials in February, 1939.																								
Oct. 7, Friday	Last day to add courses to study lists.																								
Oct. 14, Friday	Last day to drop courses from study lists without penalty of grade F (failure).																								
Nov. 11, Friday	End of mid-term period.																								
Nov. 18, Friday	Last day to file without fee, notice of candidacy for the bachelor's degrees in February, 1939.																								
Nov. 24, Thursday	} Thanksgiving recess.																								
Nov. 27, Sunday																									
Dec. 10, Saturday	Last day to file without fee, applications for supervised teaching.																								
Dec. 10, Saturday	Final examination in Subject A.																								
Dec. 15, Thursday	Christmas recess begins.																								

1939

Jan. 3, Tuesday	Classes begin after Christmas recess.
Jan. 28, Monday	} Final examinations, first semester.
Feb. 1, Wednesday	
Feb. 1, Wednesday	Last day of first semester.
Feb. 3, Friday	Applications for admission to undergraduate or graduate study in February, 1939, with complete credentials, should be filed on or before this date to avoid penalty of late application fee.
Feb. 10, Friday	9 A.M., Examination in Subject A.
Feb. 10, Friday	Consultation with advisers by new students.

\* For the calendar of the departments at Berkeley (which differs from the one given here) application should be made to the Registrar, University of California, Berkeley. Registration for the first semester at Berkeley will begin August 18, 1938; for the second semester, January 12, 1939.

1939

	Registration of old students and reentrants (graduates and undergraduates): 8:00 A.M.—9:30 A.M.—L—Q. 9:30 A.M.—11:00 A.M.—R—Z. 12:00 M.—1:30 P.M.—A—E. 1:30 P.M.—3:00 P.M.—F—K. 3:00 P.M.—4:00 P.M.—All initials.
Feb. 18, Monday	
Feb. 14, Tuesday	Registration of new students (graduates and undergraduates): 9:00 A.M.—1:00 P.M.—All initials. Registration of any student, old or new: 10:30 A.M.—1:00 P.M.
Feb. 15, Wednesday	Instruction begins.
Feb. 18, Saturday	Special examination in Subject A.
Feb. 20, Monday	Last day to file registration books or to change study lists without fee.
Feb. 22, Wednesday	Washington's Birthday: an academic and administrative holiday in all departments.
Feb. 27, Monday	Last day to file application for admission to candidacy for the master's degree or for the secondary teaching credentials in June or in August, 1939.
Feb. 27, Monday	Last day to file applications for fellowships and graduate scholarships for the academic year 1939-40, tenable at Los Angeles.
Mar. 3, Friday	Last day to add courses to study lists.
Mar. 10, Friday	Last day to drop courses from study lists without penalty of grade F (failure).
Apr. 1, Saturday	Last day to file applications for undergraduate scholarships for the academic year, 1939-40.
Apr. 5, Wednesday	End of mid-term period.
Apr. 6, Thursday	} Spring recess.
Apr. 9, Sunday	
Apr. 22, Saturday	
May 1, Monday	Last day to file without fee, notice of candidacy for the bachelors' degrees in June.
May 6, Saturday	Final examination in Subject A.
May 15, Monday	Last day for filing in final form with the committee in charge, theses for the master's degree to be conferred in June, 1939.
May 15, Monday	Last day to file notices of candidacy for any degree to be conferred in June, 1939.
May 30, Tuesday	Memorial Day: an academic and administrative holiday in all departments.
May 31, Wednesday	} Final examinations, second semester.
June 9, Friday	
June 17, Saturday	Twentieth Annual Commencement at Los Angeles.
June 26—Aug. 4	Summer Session at Los Angeles.
Sept. 15, Friday	} Registration of students for fall semester, 1939.
Sept. 16, Saturday	

## THE REGENTS OF THE UNIVERSITY

### REGENTS EX OFFICIO

- |   |  |
|---|--|
| <b>His Excellency FRANK F. MERRIAM, B.S.</b><br>Governor of California and President of<br>the Regents<br>Sacramento      | <b>A. BLANCHARD MILLER</b><br>President of the State Board of Agriculture<br>Fontana   |
| <b>GEORGE JUAN HATFIELD, J.D.</b><br>Lieutenant-Governor of California<br>417 Montgomery st, San Francisco                | <b>JOSEPH D. HODGEN, D.D.S.</b><br>President of the Mechanics Institute<br>240 Stockton st, San Francisco  |
| <b>WILLIAM MOSELEY JONES</b><br>Speaker of the Assembly<br>118 N Twenty-first st, Montebello                              | <b>HARRY L. MASSER, B.S.</b><br>President of the California Alumni Association<br>810 S Flower st, Los Angeles                                   |
| <b>WALTER F. DEXTER, M.A., Ed.D.</b><br>State Superintendent of Public Instruction<br>Library and Courts bldg, Sacramento | <b>ROBERT GORDON SPROUL, B.S., LL.D.</b><br>President of the University<br>219 California Hall, Berkeley<br>208 Administration bldg, Los Angeles |

### APPOINTED REGENTS

The term of the appointed Regents is sixteen years, and terms expire March 1 of the year indicated in parenthesis. The names are arranged in the order of original accession to the Board.

- |  |   |
|--|---|
| <b>GARRET WILLIAM McENERNEY, B.S.,</b><br>D.O.L. (1952)<br>2002 Hobart bldg, San Francisco | <b>JOHN FRANCIS NEYLAN, LL.D. (1944)</b><br>Crocker First National Bank bldg, San Francisco |
| <b>JAMES KENNEDY MOFFITT, B.S. (1940)</b><br>599 Eighth st, San Francisco                  | <b>CHARLES COLLINS TEAGUE, LL.D. (1946)</b><br>Santa Paula                                  |
| <b>CHARLES ADOLPH RAMM, B.S. (1944)</b><br>1100 Franklin st, San Francisco                 | <b>SIDNEY M. EHRMAN, B.L., LL.B. (1948)</b><br>700 Nevada Bank bldg, San Francisco          |
| <b>EDWARD AUGUSTUS DICKSON, B.L. (1942)</b><br>425 S Windsor blvd, Los Angeles             | <b>JOHN GALLWEY, M.D., Ph.D. LL.D.</b><br>(1948)<br>1195 Bush st, San Francisco             |
| <b>JAMES MILLS (1942)</b><br>1755 Spruce st, Berkeley                                      | <b>AMADEO PETER GIANNINI (1950)</b><br>Bank of America, 1 Powell st, San Francisco          |
| <b>CHESTER HARVEY ROWELL, Ph.B., LL.D.</b><br>(1952)<br>The Chronicle, San Francisco       | <b>ELEANOR BANNING MACFARLAND (Mrs.</b><br>J.C.) (1954)<br>1130 Garfield av, Pasadena       |
| <b>MORTIMER FLEISHHACKER (1950)</b><br>Anglo-California National Bank, San Francisco       | <b>FRED MOYER JORDAN, A.B. (1954)</b><br>929 S Broadway, Los Angeles                        |
| <b>GEORGE I. COCHRAN, LL.D. (1946)</b><br>2249 S Harvard blvd, Los Angeles                 | <b>STUART O'MELVY, B.L. (1940)</b><br>483 S Spring st, Los Angeles                          |

*Officers of the Regents*

## OFFICERS OF THE REGENTS

His Excellency Frank F. Merriam, B.S.  
President  
Sacramento

Garret William McEnerney, B.S., D.C.L.  
Chairman  
2002 Hobart bldg, San Francisco

Robert M. Underhill, B.S.  
Secretary and Treasurer  
219 California Hall, Berkeley

Luther A. Nichols, A.B.  
Comptroller  
118 California Hall, Berkeley

Jno. U. Calkins, Jr., B.L., J.D.  
Attorney  
901 Crocker bldg, San Francisco

Deming G. MacIise, B.S.  
Assistant Secretary and Assistant Comptroller  
101 Administration bldg, Los Angeles

Ira F. Smith, B.S.  
Assistant Comptroller  
College of Agriculture, Davis

F. Stanley Durie  
Assistant Comptroller  
Medical Center, San Francisco

George D. Mallory, A.B.  
Assistant Treasurer  
219 California Hall, Berkeley

Ashley H. Conard, B.L., J.D.  
Associate Attorney for the Regents and  
Attorney in Residence Matters  
901 Crocker bldg, San Francisco

# THE UNIVERSITY OF CALIFORNIA

**NOTE:** General information about instruction at Berkeley and Davis may be obtained by addressing the Registrar, University of California, Berkeley; for information about instruction at Los Angeles, address the Registrar, University of California at Los Angeles; information concerning the schools and colleges in San Francisco may be obtained by addressing the deans in charge. University publications available to inquirers are listed on the cover pages of this bulletin.

## ADMINISTRATIVE OFFICERS OF THE UNIVERSITY

### *President of the University:*

Robert G. Sproul  
208 Administration bldg, Los Angeles  
219 California Hall, Berkeley

### *Vice-Presidents and Provosts of the University:*

Earle R. Hedrick  
208 Administration bldg, Los Angeles  
Monroe E. Deutch  
219 California Hall, Berkeley

### *Secretary and Treasurer of the Regents:*

Robert M. Underhill  
George D. Mallory, *Assistant Treasurer*  
219 California Hall, Berkeley  
Deming G. Maclise, *Assistant Secretary*  
101 Administration bldg, Los Angeles

### *Attorney for the Regents:*

Jno. U. Calkins, Jr.  
Ashley H. Conard, *Associate Attorney for the Regents and Attorney in Residence Matters*  
901 Crocker bldg, San Francisco

### *Comptroller:*

Luther A. Nichols  
118 California Hall, Berkeley  
Deming G. Maclise, *Assistant Comptroller*  
101 Administration bldg, Los Angeles  
F. Stanley Durie, *Assistant Comptroller*  
Medical Center, San Francisco  
Ira F. Smith, *Assistant Comptroller*  
College of Agriculture, Davis

### *Registrars:*

Harry M. Showman  
146 Administration bldg, Los Angeles  
Thomas B. Steel  
Constance M. Steel, *Assistant Registrar*  
101 California Hall, Berkeley.

### *Dean of the Graduate Division:*

Charles B. Lipman  
214 California Hall, Berkeley

### *Dean of Graduate Study:*

Vern O. Knudsen  
Bennet M. Allen, *Acting Dean* (to Dec. 31, 1938)  
186 Administration bldg, Los Angeles

### *Deans of Undergraduates:*

Earl J. Miller  
Hurford E. Stone, *Assistant Dean*  
202 Administration bldg, Los Angeles  
Thomas M. Putnam  
Elmer C. Goldsworthy, *Assistant Dean*  
Edwin C. Voorhies, *Assistant Dean*  
206 California Hall, Berkeley

### *Deans of Women:*

Helen Matthewson Laughlin  
Anne Stonebraker, *Assistant Dean*  
289 Administration bldg, Los Angeles

Lucy W. Stebbins  
Mary B. Davidson, *Associate Dean*  
Alice G. Hoyt, *Assistant Dean*  
205 California Hall, Berkeley

### *Deans of the Summer Sessions:*

J. Harold Williams  
242 Administration bldg, Los Angeles  
Raymond G. Gettell  
104 California Hall, Berkeley

### *Deans of the Colleges of Letters and Science:*

Gordon S. Watkins  
Edgar L. Lesier, *Assistant Dean*  
282 Administration bldg, Los Angeles  
George D. Louderback  
Guy Montgomery, *Associate Dean*  
201 California Hall, Berkeley

### *Dean of the College of Agriculture:*

Claude B. Hutchison  
Stanley B. Freeborn, *Assistant Dean*  
101 Giannini Hall, Berkeley  
William H. Chandler, *Assistant Dean*  
146 Physics-Biology bldg, Los Angeles  
Citrus Experiment Station, Riverside  
Knowles A. Ryerson, *Assistant Dean*  
College of Agriculture, Davis

### *Dean of the College of Commerce:*

Robert D. Calkins  
119 South Hall, Berkeley

### *Dean of the College of Business Administration:*

Howard S. Noble  
250 Josiah Boyce Hall, Los Angeles

### *Dean of the School of Education:*

W. W. Kemp  
206 Haviland Hall, Berkeley

### *Dean of the Teachers College:*

Marvin L. Darsie  
281 Education bldg, Los Angeles

### *Dean of the College of Chemistry:*

Gilbert N. Lewis  
108 Gilman Hall, Berkeley  
Charles W. Porter, *Assistant Dean*  
114 Gilman Hall, Berkeley

### *Dean of the College of Engineering:*

Charles Derleth, Jr.  
218 Engineering bldg, Berkeley

### *Dean of the College of Mining:*

Frank H. Probert  
182 Hearst Mining bldg, Berkeley

\* In residence second semester only, 1938-39.

**Dean of the School of Jurisprudence:**

Edwin D. Dickinson  
107 Boalt Hall of Law, Berkeley

**Dean of Hastings College of the Law:**

William M. Simmons  
160 State bldg, San Francisco

**Dean of the Medical School:**

Langley Porter  
Medical Center, Third and Parnassus  
avs, San Francisco

**Los Angeles Medical Department:\***

Bennet M. Allen, in charge  
207B Physics-Biology bldg, Los Angeles

**Dean of the College of Dentistry:**

Guy S. Millberry  
Willard C. Fleming, Assistant Dean  
Medical Center, Third and Parnassus  
avs, San Francisco

**Dean of the College of Pharmacy:**

Carl L. A. Schmidt  
Troy C. Daniels, Assistant Dean  
Medical Center, Third and Parnassus  
avs, San Francisco

**Director of Admissions:**

Merton E. Hill  
121 Administration bldg, Los Angeles  
101 California Hall, Berkeley  
Sue M. Love, Assistant Director  
101 California Hall, Berkeley

**Director of Relations with Schools:**

Hiram W. Edwards  
105 Administration bldg, Los Angeles  
Lester A. Williams, Associate Director  
209 California Hall, Berkeley

**Director of University Extension:**

Boyd B. Rakestraw, Assistant Director  
180 Administration bldg, Los Angeles  
801 California Hall, Berkeley

**Director of the School of Architecture:**

Warren C. Perry  
A Architecture bldg, Berkeley

**Director of the School of Librarianship:**

Sydney B. Mitchell  
217 Library, Berkeley

**Director of the George Williams Hooper Foundation (for Medical Research):**

Karl F. Meyer  
Medical Center, Third and Parnassus  
avs, San Francisco

**Director of the Training School for Nurses:**

Margaret A. Tracy  
Medical Center, Third and Parnassus  
avs, San Francisco

**Director of the Lick Observatory:**

William H. Wright  
Lick Observatory, Mount Hamilton

**Director of the Scripps Institution of Oceanography:**

Harald U. Sverdrup  
Scripps Institution of Oceanography,  
La Jolla

**Director of the Agricultural Experiment Station:**

Claude B. Hutchison  
Stanley B. Freeborn, Assistant Director  
101 Giannini Hall, Berkeley

**Director of Citrus Experiment Station:**

Leon D. Batchelor  
Citrus Experiment Station, Riverside

**Director of the California School of Fine Arts:**

Lee F. Randolph  
800 Chestnut st, San Francisco

**Librarians:**

John E. Goodwin  
284 Library, Los Angeles  
Harold L. Leupp  
Jerome K. Wilcox, Assistant Librarian  
208 Library, Berkeley

**Manager of the University Press and University Printer:**

Samuel T. Farquhar  
University Press, Berkeley

**Manager of the Bureau of Guidance and Placement:**

Herman A. Spindt  
128 Education bldg, Los Angeles  
102 Haviland Hall, Berkeley  
Mildred E. Foreman, Manager, Bureau  
of Occupations  
35 Administration bldg, Los Angeles  
Vera Christie, Manager, Bureau of  
Occupations and Personnel Officer  
South Hall Annex, Berkeley

**University Physician:**

William G. Donald  
Ernest V. Cowell Memorial Hospital,  
Berkeley

**Physician for Men:**

Donald S. MacKinnon  
15 Library, Los Angeles

**Physicians for Women:**

Lillian R. Titcomb  
40 Josiah Royce Hall, Los Angeles  
Ruby L. Cunningham  
Ernest V. Cowell Memorial Hospital,  
Berkeley

**Superintendent of the University Hospital:**

F. Stanley Durie  
University Hospital, Medical Center,  
San Francisco

**Superintendents of Grounds and Buildings:**

A. E. Davie  
100 Mechanic Arts bldg, Los Angeles  
E. A. Hugill  
Grounds and Buildings, Berkeley

\* Graduate instruction only.

# THE UNIVERSITY OF CALIFORNIA

FOUNDED 1868

THE UNIVERSITY OF CALIFORNIA is composed of academic colleges, professional schools, divisions, departments of instruction, museums, libraries, research institutes, bureaus, and foundations, and the University of California Press, situated on seven different campuses throughout the State, namely: Berkeley, Los Angeles, San Francisco, Davis, Riverside, Mount Hamilton, and La Jolla. A list of the divisions on each campus follows:

## I. AT BERKELEY

The Colleges of

Letters and Science,

Agriculture (including the Department of Agriculture, the Agricultural Experiment Station, the Agricultural Extension Service, and the Giannini Foundation of Agricultural Economics),

Chemistry,

Commerce,

Engineering (including the Surveying Camp at Fairfax),

Mining,

Pharmacy (first year of the B.S. curriculum).

The Schools of

Architecture,

Education,

Jurisprudence,

Librarianship,

Medicine (first year).

The University Extension Division (offering instruction wherever classes can be formed, or anywhere in California by correspondence, and providing lectures, recitals, moving pictures and other material for visual instruction).

The California Museum of Vertebrate Zoölogy.

The Museum of Paleontology.

The Anthropological Museum.

The Institute of Child Welfare.

The Institute of Experimental Biology.

The Institute of Social Sciences.

The Bureau of International Relations.

The Bureau of Public Administration.

The University of California Press.

## II. AT LOS ANGELES

University of California at Los Angeles:

College of Letters and Science,

College of Business Administration,

Teachers College,

College of Agriculture, including courses of instruction and the Agricultural Experiment Station's activities at Los Angeles,

The Lower Division in Chemistry, Engineering, and Mining,

Graduate Study (in academic fields, and in agriculture),

The Summer School of Surveying,

The Bureau of Governmental Research,

The Institute for Social Science Research,

The Senator William Andrews Clark Memorial Library.

Los Angeles Medical Department. Graduate instruction only.

## III. AT SAN FRANCISCO

Medical School (second, third, fourth, and fifth years, including the University Hospital and the Training School for Nurses).

The George Williams Hooper Foundation (for Medical Research).

College of Dentistry.

College of Pharmacy.

California School of Fine Arts.

Hastings College of the Law.

## IV. AT DAVIS

The College of Agriculture, including the University Farm, and certain divisions of the Department of Agriculture and the Agricultural Experiment Station.

## V. AT RIVERSIDE

The Citrus Experiment Station of the College of Agriculture and the Graduate School of Tropical Agriculture.

## VI. AT MOUNT HAMILTON

The Lick Astronomical Department (Lick Observatory).

## VII. AT LA JOLLA

The Scripps Institution of Oceanography.

## ELSEWHERE

In addition to the principal divisions named above, the University maintains the W. K. Kellogg Institute of Animal Husbandry at Pomona and several field stations of the Agricultural Experiment Station in various parts of the State.

**HISTORY AND ORGANIZATION**

The establishment of the University of California in 1868 came as the result of three separate movements—one originating in private initiative, one in State action, and one in Federal action.

Private action owed its inception to the foresight of the Reverend Henry Durant, who in 1853 opened in Oakland the Contra Costa Academy, under the auspices of the Presbytery of San Francisco and of the Congregational Association of Oakland. The name was soon changed to College School, in order to signify that the undertaking was only preparatory to a projected college. In 1855 the institution was incorporated under the name of College of California and was formally opened in 1860. Classes were graduated from 1864 to 1869, inclusive. In 1856 the College obtained a tract of land five miles to the north of Oakland and ten years later the name of Berkeley was given to the townsite about the new college campus.

State action had its start in the Constitutional Convention of 1849, which incorporated into the fundamental law recognition of and provision for a State University. There was constant public agitation down to 1868 for making the provisions effective.

Federal action began in 1853 when Congress gave the State 46,000 acres of land for a "seminary of learning." In 1862 the Morrill Act provided an additional grant of public lands for the establishment of an Agricultural, Mining, and Mechanical Arts College.

These three forces began working together to one end—the establishment of a University of California. The College of California contributed its buildings and four blocks of land in Oakland and its 160 acres of land in Berkeley; the Federal Government, the congressional gift of 150,000 acres of public lands; and the State, its property accumulated for the purpose, together with new legislative appropriations. The legislative act creating the University of California was signed by Governor Henry H. Haight on March 23, 1868, and the new institution opened its doors for instruction in September, 1869.

The first President was Henry Durant (1869–72). He was followed by Daniel Coit Gilman (1872–75), John LeConte (1875–81), William T. Reid (1881–85), Edward S. Holden (1885–88), Horace Davis (1888–90), Martin Kellogg (1890–99), Benjamin Ide Wheeler (1899–1919), David Prescott Barrows (1919–23), William Wallace Campbell (1923–30), Robert Gordon Sproul (1930–).

The University of California, under the terms of the Constitution of the State, is a public trust, charged with the function of providing education of collegiate grade. Through aid from the State and Federal governments, and by private gifts, it provides instruction in literature and the arts, in the sciences, and in the professions of architecture, engineering, teaching, law, medicine, dentistry, nursing, and pharmacy. Instruction in all of the colleges of the University is open to all qualified persons, without distinction of sex.

**ADMINISTRATION**

The administration of the University of California is entrusted, under the State Constitution, to a corporation styled **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA**, consisting of the Governor, the Lieutenant-Governor, the Speaker of the Assembly, the State Superintendent of Public Instruction, the President of the State Board of Agriculture, the President of the Mechanics Institute of San Francisco, the President of the California Alumni Association, and the President of the University as members *ex officio*, and sixteen other regents appointed by the Governor. This corporation has "full powers of organization and government, subject only to such legislative control as may be necessary to insure compliance with the terms of the endowments of the University and the security of its funds." The corporation is also vested with the legal title and the management and disposition of the property of the University and the property held for its benefit, and has the power to take and hold, either by purchase, or by donation or by gift, testamentary or otherwise, or in any other manner, without restriction, all real and personal property for the benefit of the University or incidental to its conduct. It is further authorized to delegate to its committees or to the faculty or to others such authority or functions in the administration of the University as it may deem wise. Pursuant to this authority it has created an academic administrative body called the Academic Senate.

The Academic Senate consists of the President, Vice-Presidents, Deans, Directors, the Registrars (at Berkeley and Los Angeles), the University Librarian, the Librarian of the University of California at Los Angeles, and all professors and instructors giving instruction in any curriculum under the control of the Academic Senate. Instructors of less than two years' service are not entitled to vote.

The Academic Senate is divided into two sections: The Northern Section includes members of the Senate whose duties lie primarily in Berkeley, San Francisco, or Davis, or at Mt. Hamilton; the Southern Section includes members of the Senate whose duties lie primarily in Los Angeles, Riverside, or La Jolla. The President of the University is Chairman, *ex officio*, of each Section of the Academic Senate.

The Senate, subject to the approval of the Regents, determines the conditions for admission, for certificates, and for degrees. It authorizes and supervises all courses of instruction in the academic and professional colleges and schools. It recommends to the Regents all candidates for degrees and has general supervision of the discipline of students.

# UNIVERSITY OF CALIFORNIA AT LOS ANGELES

---

## HISTORY AND DEVELOPMENT

IN MARCH, 1881, the legislature of California created the Los Angeles State Normal School. Five acres of ground were donated at the corner of Fifth Street and Grand Avenue—the present site of the Los Angeles City Library. Instruction was begun in August, 1882, with a faculty of three teachers and an enrollment of sixty-one students.

Following a legislative appropriation in 1911, a new site of twenty-five acres on North Vermont Avenue was obtained for the Normal School. In the fall of 1913 the cornerstone was laid for the first building, Millspaugh Hall, named to commemorate Jesse F. Millspaugh, who was president during the period 1904–1917. The School was moved into its new quarters in September, 1914, where it existed until the summer of 1919.

Through legislative action made effective by the Governor's signature on July 24, 1919, the grounds, buildings, and records of the Los Angeles State Normal School were transferred to the Regents of the University of California. In September of that year, university instruction was begun under the name, Southern Branch of the University of California. The educational facilities were expanded to include the freshman and sophomore years in Letters and Science beginning with September, 1919; the third and fourth years with September, 1923 and 1924, respectively. The degree of Bachelor of Arts was conferred in the College of Letters and Science for the first time in June, 1925. In 1922 the teacher training courses were organized as a Teachers College. The degree of Bachelor of Education was conferred for the first time in June, 1923. On February 1, 1927, the name of the institution was changed to UNIVERSITY OF CALIFORNIA AT LOS ANGELES.

The University is now engaged in building a new physical plant upon a campus of three hundred eighty-four acres bought and presented to it by the cities of Santa Monica, Venice, Beverly Hills, and Los Angeles. The removal to the new site from North Vermont Avenue took place in August, 1929, and instruction in all departments was begun in the new buildings on September 23, 1929.

By action of the Regents work in the College of Agriculture was established in November, 1930, providing resident instruction at the University of California at Los Angeles in the plant science curriculum, with a major in subtropical horticulture. The College of Business Administration was established in June, 1935, with instruction beginning in September, 1936.

On August 8, 1933, graduate study at the University of California at Los Angeles leading to the degrees of Master of Arts and Master of Science, and

to the Certificate of Completion for the general secondary and junior college teaching credentials, was authorized by the Regents. Accordingly, in September, 1933, one hundred and fifty candidates were admitted to work in the following fields: botany, economics, education, English, geography, geology, history, mathematics, philosophy, physics, political science, psychology, and zoölogy; the first master's degrees were conferred in June, 1934. To the fields first made available there have been added agriculture (subtropical horticulture), applied physics, chemistry, French, German, home economics, Latin, microbiology, physical education, and Spanish. Beginning in September, 1936, candidates for the Ph.D. degree were accepted in the fields of English, history, mathematics, and political science; to these have been added philosophy, physics, psychology, and zoölogy. It is expected that other fields will be available in subsequent years, as circumstances warrant.

#### SITE OF THE CAMPUS—CLIMATE

The campus of the University of California at Los Angeles is situated on the lower south slope of the Santa Monica Mountains which overlook Hollywood and the western part of Los Angeles; the Pacific Ocean, visible from the grounds, is five miles distant in a direct line. The warmest month of the year is August, with a mean temperature of about 68°; the coolest is January with a mean temperature of 49°; the annual rainfall is about 18 inches, mostly between December and March. Proximity to the ocean insures an even temperature without extremes; the daily range of variation is about fifteen degrees.

The University campus is within the corporate limits of the city of Los Angeles, west of Beverly Hills. It extends along the south side of Sunset Boulevard from Hilgard Avenue to Veteran Avenue, and is bounded on the south by LeConte and Gayley avenues; automobiles should turn south from Sunset Boulevard at Hilgard Avenue, or north from Wilshire Boulevard at Westwood Boulevard.

The campus may be reached by bus as follows: From *Los Angeles* business district (Fifth and Hill streets), Los Angeles Motor Coach line, via Wilshire Boulevard, and Pacific Electric Co. Castellammare bus line, via Sunset Boulevard. From *Los Angeles*, western terminus of Pico car line, Bay Cities Transit Co. bus, via Pico and Westwood boulevards. From *Hollywood* (North Vermont Avenue and Hollywood Boulevard), Pacific Electric Co. bus, via Hollywood and Sunset boulevards. From *Santa Monica*, Pacific Electric Co. bus via Wilshire Boulevard, and Bay Cities Transit Co. bus via Santa Monica Boulevard.

Students coming to Los Angeles by rail may ordinarily obtain tickets and check baggage to West Los Angeles without additional cost if done at the time when the railroad ticket is purchased. The cost of carfare and baggage transfer from Los Angeles is thereby considerably reduced.

### **SURVEY OF CURRICULA**

Instruction at the University of California at Los Angeles is offered in (a) the College of Letters and Science, with curricula leading to the degree of Bachelor of Arts, curricula of the earlier years of the College of Dentistry, of the Medical School, of the College of Engineering, of the College of Mining, of the College of Chemistry, and of the Training School for Nurses, and a curriculum leading to the Certificate in Public Health Nursing; (b) the Teachers College, with curricula leading to the degree of Bachelor of Education and to Certificates of Completion for various teaching credentials; (c) the College of Business Administration, with curricula leading to the degree of Bachelor of Science; and (d) the College of Agriculture, with a curriculum in subtropical horticulture, leading to the degree of Bachelor of Science. Students electing other curricula in the College of Agriculture may register at Los Angeles for the first two years and then transfer to Berkeley or Davis to complete the requirements for the degree. Graduate study, leading to the degrees of Master of Science and Master of Arts, to the degree of Doctor of Philosophy (in English, history, mathematics, philosophy, physics, political science, psychology, and zoölogy), and to the Certificates of Completion for the general secondary and junior college teaching credentials, also is available at the University of California at Los Angeles.

### **SUMMER SESSIONS**

The Summer Session of six weeks is designed for teachers and other persons who are unable to attend the University in the fall and spring sessions, as well as for students in the regular sessions who wish to shorten their college courses, or who have been unable to enroll in needed subjects. Any adult of good moral character, considered by the faculty to be of sufficient maturity and intelligence to profit by attendance upon the exercises of the session, may be admitted to the Summer Session. The courses of instruction are of University level, and credit toward University degrees may be given to students who comply with the conditions of work and examinations imposed by the instructors in charge.

The tuition fee for the Summer Session is \$35, irrespective of the number of courses taken.

The ANNOUNCEMENT OF THE SUMMER SESSION is issued in January of each year, and may be obtained by addressing University of California at Los Angeles Summer Session, 405 Hilgard Avenue, Los Angeles, California.

Summer Sessions are conducted by the University at Berkeley, Los Angeles, and at Davis. An Intersession of six weeks immediately precedes the Summer Session at Berkeley.

### THE LIBRARY

The Library has more than 291,000 volumes that are accessioned and approximately 5100 periodicals and continuations are regularly received.

The Library is open daily. From Monday to Friday, inclusive, the hours are from 7:45 A.M. to 10 P.M.; Saturday, from 7:45 A.M. to 5 P.M.; Sunday, from 2 P.M. to 5 P.M. The reading rooms accommodate about 1500 students.

Supplementing the general library is the Senator William Andrews Clark Memorial Library of about 16,000 volumes featuring primarily English literature and history of the United States Northwest.

### UNIVERSITY EXTENSION

The Extension Division offers facilities to men and women who seek some form of higher education, but are prevented from taking up residence at the University. Thus, through its Extension Division, the University of California makes available to adults living in any part of the State and engaged in the pursuit of their vocations, opportunities similar to those offered to students in residence.

The work is carried on through five departments:

(1) **Class Instruction.** Classes are organized in cities and towns wherever a sufficient number of people can be gathered who wish to study the same subject. Instruction is offered in art, business methods, economics, education, engineering subjects, geography, history, languages, law, literature, mathematics, political science, psychology, public speaking, science, Americanization, etc.

(2) **Correspondence Instruction.** Courses are given by mail in art, astronomy, composition and literature, drawing, economics, education, engineering, history, the languages, mathematics, music, philosophy, physics, political science, psychology, etc. Courses may begin at any time.

(3) **Lectures, singly or in series,** are provided for any committee, club, organization, or community in the State that will make the necessary arrangements for hearing them.

(4) **Labor Education** offers educational facilities designed to serve the needs of industrial workers.

(5) **Visual Instruction.** The Extension Division circulates visual aids such as stereopticon slides and motion picture films, which cover many phases of educational work.

Persons desiring to take advantage of the facilities offered by any one of these departments may receive detailed information by addressing the Extension Division, University of California, 801 Hillstreet Building, Los Angeles, or California Hall, Berkeley, California.

# ADMISSION TO THE UNIVERSITY

---

## STUDENT STATUS

THE STUDENTS who are admitted to the University of California at Los Angeles fall into three groups: the undergraduates, the graduate students, and the unclassified students.

The undergraduates fall again into two groups: the regular students, and the special students.

The regular students are persons who have met all the requirements for admission to the University and who are pursuing within the University programs of study that comply with the established rules and regulations and lead, usually after four years' study, to the degrees of A.B., or B.S., or Ed.B.

The special students are those persons twenty-one years of age or over who have not had the opportunity to fulfill the requirements laid down for the admission of regular students. Each student in this group is admitted only after special consideration. A special student cannot be a candidate for a degree. A special student may, however, at any time attain the status of regular student by satisfying all the requirements for that status in the college that he desires to enter.

The graduate students are graduates of this University or of other institutions with equivalent requirements for graduation, who are carrying on advanced (graduate) work for higher degrees or teaching credentials.

To unclassified status are admitted students who have received a recognized degree; students so designated may take undergraduate courses only.

Detailed information concerning admission to each student status follows.

## ADMISSION IN UNDERGRADUATE STATUS

An applicant who wishes to enter the University must fulfill the general requirements for admission, as set forth below. Application blanks may be obtained from the Director of Admissions, 121 Administration Building, University of California at Los Angeles. Every applicant for admission is required to pay an application fee of \$3 when the first application is filed. Remittance by bank draft or money order should be made payable to the Regents of the University of California.

### Admission in Freshman Standing

The applicant for admission in freshman standing should read carefully the following information:

#### *Admission by Certificate—*

A graduate of an accredited high school may enter the University of Cali-

ifornia in freshman standing provided the following conditions have been satisfied:\*

1. *Graduation.* Graduation from an accredited high school usually requires the completion of sixteen matriculation units or credits in selected subjects.

2. *Subject requirements.* The high school program must include the following subjects, (a) to (f), inclusive, which represent the minimum subject requirements, and which must be approved by the high school principal as college preparatory courses.

- (a) History ..... 1 unit. —This may consist of any two semesters of history, civics, or social science.
- (b) English ..... 3 units.—These may consist of any six semesters in English, public speaking, journalism, or drama.
- (c) Mathematics ..... 2 units.—These must consist of two semesters of elementary or advanced algebra, and two semesters of plane geometry, or solid geometry and trigonometry.
- (d) Science ..... 1 unit. —This may consist of a year course in one field of science, namely, biology, botany, chemistry, physical science, physics, physiology, or zoology. The science selected must be an advanced (3rd or 4th year) laboratory science, and the two semesters must be in the same subject field.
- (e) Foreign language..... 2 units.—These must be in one language.
- (f) Advanced (3rd or 4th year) mathematics; foreign language; chemistry; physics; or two years in a second language.....1, or 2 units

3. *Scholarship requirement.* For any of these required subjects completed in the ninth grade (first year of high school), *subject credit* is given irrespective of the scholarship grade received, provided, of course, it is a passing grade. In the subjects completed in the last three years of the high school program, however, a scholarship *average* of grade B (based on a marking system of four passing grades: A, B, C, D) must have been maintained. In computing scholarship averages *semester grades* rather than year grades are used. For example, a semester grade A in either half of one prescribed course may be used with a semester grade C in either half of any other prescribed course to obtain a B average. Required subjects taken in the last three years of high school in which a grade D has been received will not be counted either in reckoning the required scholarship average or in satisfaction of the subject requirements.

A grade earned by repeating a course may not be counted as higher than C even though a higher grade may be reported. Credits reported in this way will be accepted, however, in fulfillment of specific subject requirements. For example, an applicant who earned grade D, E, or F in plane geometry in either

\* *Subject A: English Composition.* An examination in English composition designed to test the applicant's ability to write English without gross errors in spelling, grammar, diction, sentence structure, and punctuation, is required of all undergraduate intrants. The examination is given at the opening of each semester and at the opening of the Summer Session. Applicants meeting admission requirements who do not pass the examination are admitted but are required to take the Course in Subject A without unit credit toward graduation. For further information, see page 86.

semester may repeat the work of that semester with the expectation that if he attains grade C or higher upon repetition he will be regarded as having fulfilled the specific subject requirement in plane geometry. This rule does not apply to grades earned in this manner prior to March, 1931.

#### ADDITIONAL WAYS OF GAINING ADMISSION

The above-enumerated subjects have been selected as a central core of academic subjects for university preparation because it has been demonstrated that the student who completes them satisfactorily is most apt to be successful in his university work. In keeping, however, with the University's policy that no worthy student shall be denied admission, the Board of Admissions has been authorized to make certain exceptions to the general rules governing entrance for an applicant who may have subject shortages but a *superior* scholarship record. Every such applicant, upon submitting his official transcript of record, is given special consideration by the Director of Admissions. In general, an applicant with superior scholarship but with subject shortages may qualify for entrance to the University of California as follows:

(1) If he ranks in the upper tenth of his class and has a substantial academic preparation, although he may have subject deficiencies.

(2) If he has not less than 15 high school units of grade A or B in work taken in the ninth, tenth, eleventh, and twelfth years, or not less than 12 high school units of grade A or B in the work of the tenth, eleventh, and twelfth years; and not more than two subject deficiencies in the required list (a) to (f).

(3) If he has not less than 15 high school units with no grade lower than C in work taken in the ninth, tenth, eleventh, and twelfth years, or not less than 12 high school units with no grade lower than C in work taken in the tenth, eleventh, and twelfth years; and not less than 6 high school units of grade A or B selected from the following 10 units of academic subjects:

Third- and fourth-year English  
Third- and fourth-year mathematics  
Third- and fourth-year laboratory science  
Third- and fourth-year foreign language  
Third- and fourth-year history.

(4) If he has not less than 15 high school units with no grade lower than C in work taken in the ninth, tenth, eleventh, and twelfth years, or not less than 12 high school units with no grade lower than C in work taken in the tenth, eleventh, and twelfth years; and passes the *Examination in Subject A*; and has grade A or B in the following subjects:

Plane Geometry, 1 unit  
Second-year foreign language, 1 unit  
Third- or fourth-year laboratory science, 1 unit  
Requirement (f), 1 unit.

**Admission by Examination—**

An applicant for admission whose school work in California or elsewhere does not entitle him to admission under the conditions outlined above, may be admitted by passing examinations of the College Entrance Examination Board. The number and selection of examinations that each applicant must take is determined by the Director of Admissions.

The College Entrance Board examinations are held in a period beginning on the third Saturday in June (in 1939, June 17-24, inclusive), at the following places in California: Berkeley, Los Angeles, San Rafael, Stanford University, Santa Barbara, Carpinteria, La Jolla, Ojai, Avalon, and Claremont. A circular with information concerning the examinations and the necessary application form may be obtained directly from the College Entrance Examination Board, 431 West 117th Street, New York City. Applications and the required \$10 fee should reach the Board on or before May 22, 1939.

**Removal of Admission Deficiencies**

Deficiencies in the subject or scholarship requirements for admission in freshman standing by certificate may be removed in any one of eight ways, as follows:

(1) By courses in the University of California Extension Division which offers work of high school level, and college courses (class or correspondence) which may be taken to remove entrance deficiencies. Work taken in the Extension Division must be performed by achieving a standard satisfactory to the Board of Admissions, and the program of studies of the students must be approved by the Director of Admissions or by one of his associates, Berkeley or Los Angeles.

(2) By courses in the University of California Summer Sessions (Berkeley and Los Angeles), and the Intersession (Berkeley). Elementary college courses and a limited number of courses of high school level are offered. Advice about the selection of these courses should be obtained from the Director of Admissions or from one of his associates, Berkeley or Los Angeles.

(3) By courses in the College of Agriculture of the University of California, at Davis (for applicants for admission to the College of Agriculture). Entrance deficiencies may be removed by an appropriate program made up of nondegree or degree courses, or by a program combining both types of work. Advice about this work should be sought from the Recorder, College of Agriculture, Davis, or from the Director of Admissions, University of California, Berkeley or Los Angeles.

(4) By courses in other four-year colleges completed with satisfactory grades, subject to the approval of the Director of Admissions. The requirements for admission in advanced standing must also be satisfied (see page 28).

(5) By courses in junior colleges or State colleges completed with satisfac-

tory grades and in proper amount. In addition, all requirements for admission to the University in advanced standing must be satisfied. The high school record of an applicant for admission with advanced standing from another collegiate institution will be considered on the same basis as the high school record of a student applying for admission to freshman standing in the University, provided his college record is satisfactory. Students who make up deficiencies in this way must continue in junior college or State college long enough to make up entrance deficiencies and, in addition, complete at least 15 units with a C plus average (1.5), or remain until completing 60 units with a C average (1.00). Students who completed the requirements in any one of the ways described on pages 25-26 will qualify for admission, provided they have at least a C average in all college work presented for advanced standing.

(6) By junior college noncertificate courses representing work of nonuniversity level taken after high school graduation. The scholarship standards for these courses are the same as those required for work taken in the high school. Work that is clearly repetition may be offered to make up a subject, but not a scholarship deficiency, such work being awarded not higher than a C grade; other work must be completed with A or B grades in order to make up scholarship deficiencies.

(7) By postgraduate courses in accredited high schools.

(8) By College Entrance Board examinations (see page 26).

#### Information Primarily for High School Principals and Faculty Advisers

*Accrediting of schools in California.* An accredited high school is one that has been officially recognized by the University as fulfilling the regulations laid down by the Regents of the University for the accrediting of secondary schools in California. The list of accredited schools is published by the University annually in the month of June or July. For blank forms of application for accrediting and for other information, school principals may communicate with the Director of Relations with Schools, Berkeley or Los Angeles.

*Responsibility of high school authorities.* The responsibility for the granting of certificates to high school students lies with the high school authorities, and students naturally will be guided by their respective principals in making their preparation for entrance to the University.

Upon the high school authorities rests also the responsibility for determining the scope and content of courses preparatory to admission to the University and for certifying the course to the University under the proper subject designation of the high school program.

#### Preparation for University Curricula

In addition to the subjects required for admission to the University, as outlined on pages 24-25, certain preparatory subjects are recommended for each Uni-

versity curriculum which, if included in the high school program, will give the student a more adequate background for his chosen field of study.

Attention is directed especially to the fact that physics and chemistry are recommended in the preparation for the various curricula in the College of Letters and Science. This recommendation is made not only because of the value of each or both of these subjects as preparation for the courses of a particular curriculum, but also because completion of these subjects in the high school will meet a part of the requirements for the junior certificate in the College (see pages 61-62) and thereby gives the student greater opportunity in his freshman and sophomore years at the University to choose elective subjects. However, it should be understood that neither chemistry nor physics is required for admission to the University.

Especial care should be exercised by the high school student in selecting a foreign language. The study of a foreign language is important not only because of its value in a broad cultural preparation but also because a reading knowledge of foreign languages may be very useful in the pursuit of advanced work in many departments of the University. For department requirements and recommendations see pages 60 ff.

The high school student who plans to enter the University of California, but who at the outset of his high school course is uncertain concerning which of the several University curricula he may wish to follow, should provide himself with a wide range of opportunities by completing in high school a program of studies somewhat as follows: history, 1 unit; English, 3 units; elementary algebra, 1 unit; plane geometry, 1 unit; algebraic theory,  $\frac{1}{2}$  unit; trigonometry,  $\frac{1}{2}$  unit; solid geometry,  $\frac{1}{2}$  unit; chemistry, 1 unit; physics, 1 unit; foreign language, 4 units; freehand drawing,  $\frac{1}{2}$  unit; and geometrical drawing, 1 unit; total, 15 units.

The student is cautioned with respect to the choice of electives that vocational or activities courses in the high school are not regarded as acceptable substitutes for basic academic studies in the preparation for University curricula. Unless this caution is observed, the student, even though he has been admitted to the University, may find that he is not equipped to do all the work necessary for the bachelor's degree in the normal four-year period.

### **Admission in Advanced Standing**

An applicant for admission in advanced standing must present evidence that he has satisfied the subject and scholarship requirements prescribed for the admission of high school graduates in freshman standing, as described on page 24 (see also under Additional Ways of Gaining Admission, page 25), and that his advanced work in institutions of college standing has met the scholarship standard required of transferring students; namely, an average of grade C or higher in all work of college level undertaken.

An applicant may not disregard his college record and apply for entrance

in freshman standing; he is subject without exception to the regulations governing admission in advanced standing. Complete official transcripts of record from preparatory schools and colleges attended, together with a statement of honorable dismissal from the latter, must be submitted to the Director of Admissions on behalf of every applicant for admission in advanced standing.

An applicant from a junior college or State college in California, who upon graduation from high school did not qualify for admission in freshman standing, must submit evidence that he has made up all entrance deficiencies and, in addition, has completed:

(a) Not less than 60 semester units of work acceptable for advanced standing in the college of the University to which admission is sought, with a scholarship average of at least grade C, or

(b) Not less than 15 semester units of acceptable advanced work with a distinctly high scholarship average.

The student should note that credit toward a degree in the University of California for an extension course or courses completed in another institution will be allowed only upon the satisfactory passing at this University of an examination in the course or courses so offered, unless the other institution maintains a classification of extension courses similar to that established by the University of California.

*Transfer to the University of California at Los Angeles in February.* It is of special importance that a student in another institution who desires to transfer to the University of California at Los Angeles after the stated registration day of the second semester should communicate in advance with the Office of Admissions, and should await assurance that late admission will be permitted before discontinuing studies in progress elsewhere. The applicant should state specifically the college in the University to which he wishes admission, and the amount of advanced credit which he expects to offer at the time of transfer.

*Subject A: English Composition.* Credit for Subject A (English Composition) is given upon certificate to those students who enter the University with credentials showing the completion elsewhere of the required training in composition. Of all other students, an examination by this University, at Los Angeles or at other centers of instruction, is required (see further statement, page 36).

*Surplus matriculation credit.* There is no provision for advanced standing in the University on the basis of surplus high school credit.

*Teaching experience.* No University credit is given for teaching experience. Students presenting evidence of successful teaching experience may substitute approved courses in education for part or all of the regular requirements in Supervised Teaching upon the recommendation of the Director of the Training Department.

**Removal of Scholarship Deficiencies by Applicants from  
Other Colleges**

Applicants otherwise eligible who seek to transfer from other institutions of collegiate rank but whose college records fail to show a satisfactory scholarship average may be admitted only when the deficiency has been removed by additional work completed with grades sufficiently high to offset the shortage in grade points. This may be accomplished by work in (1) the Intersession or Summer Sessions, (2) the Extension Division of the University, or (3) other approved higher institutions.

**ADMISSION OF SPECIAL STUDENTS**

Special students are students of mature years who have not had the opportunity to complete a satisfactory high school program, but who, by reason of special attainments, may be prepared to undertake certain courses in the University. The conditions for the admission of each applicant under this classification are assigned by the Director of Admissions. Ordinarily, a personal interview is required before final action can be taken. In general, special students are required to confine their attention to some special study and its related branches.

Transcripts of record from all schools attended beyond the eighth grade must be submitted. An applicant for special status may be required to take an aptitude test and the Examination in Subject A. The Director of Admissions will supply, upon request, the forms of application for admission and for transcripts of high school record.

No person under the age of 21 years will be admitted as a special student, but the mere attainment of any given age is not in itself a qualification for admission.

An applicant will not be admitted directly from high school to the status of special student. Graduates of high schools are expected to qualify for admission in accordance with the usual rules; students so admitted, if not candidates for degrees, may, with the approval of the proper study-list officer, pursue elective or limited programs.

The University has no "special courses"; all courses are organized for regular students—that is, for students who have had the equivalent of a good high school education and have been fully matriculated. A special student may be admitted to those regular courses for which, in the judgment of the instructor, he has satisfactory preparation. *A special student will seldom be able to undertake the work of the engineering and professional colleges or schools until he has completed the prerequisite subjects.*

A special student may at any time attain the status of regular student by satisfying all the matriculation requirements for admission to the University. Instruction is not offered in such essential preparatory subjects as elemen-

tary English, United States history, elementary physics, nor, except in the Summer Session or in the Extension Division, in elementary algebra, plane geometry, or elementary chemistry.

Students more than 24 years of age at the time of admission are excused from military science.

### **ADMISSION FROM SCHOOLS AND COLLEGES IN FOREIGN COUNTRIES**

The credentials of an applicant for admission from a foreign country, either in undergraduate or graduate standing, are evaluated in accordance with the general regulations governing admission. An application and official certificates and detailed transcripts of record should be submitted to the Director of Admissions several months in advance of the opening of the semester in which the applicant hopes to gain admittance. This will allow time for exchange of necessary correspondence relative to entrance and, if the applicant is admitted, be of assistance to him in obtaining the necessary passport visa.

An applicant from a foreign country whose education has been conducted in a language other than English may be admitted only after demonstrating that his command of English is sufficient to permit him to profit by instruction in this University. An applicant's knowledge of English is tested by an oral and written examination. This regulation applies to both graduate and undergraduate foreign students. The admission of an applicant who fails to pass this examination will be deferred until such time as he has acquired the required proficiency in the use of English.

*Language credit for a foreign student.* College credit for the mother tongue of a foreigner and for its literature is given only for courses taken in native institutions of college level, or for upper division or graduate courses actually taken in the University of California, or in another English-speaking institution of approved standing.

### **ADMISSION IN GRADUATE STANDING**

Applications for admission to graduate study will be received from graduates of recognized colleges and universities who propose to work for the degrees of Master of Arts or Master of Science, or for the degree of Doctor of Philosophy in the fields of English, history, mathematics, philosophy, physics, political science, psychology, and zoölogy, or for the certificates of completion leading to the general secondary or junior college teaching credentials. Completed applications with supporting documents should be in the hands of the Registrar not later than September 6, 1938, for the semester beginning September, 1938, and not later than February 3, 1939, for the semester beginning February, 1939. Failure to observe these dates will necessitate the payment of a late application fee of \$2.

The number of applicants that can be admitted is strictly limited. The basis

of selection is the promise of success in the work to be undertaken, evidenced largely by the previous college record. In general a minimum undergraduate scholarship equivalent to a 1.5 grade-point average (half way between grades C and B) at the University of California at Los Angeles is prescribed. Notification of acceptance or rejection is sent to each applicant as soon as possible after the receipt of his application. *Applicants are warned not to make definite arrangements for attending the University on the assumption that they will be accepted for admission, until they have received notification of acceptance.*

Applications are to be made upon the form provided for the purpose by the Registrar, and must be accompanied by the application fee (see below); transcripts of previous work must be submitted in accordance with the instructions on the application form.

An application fee of \$3 is required of every student applying for admission to graduate status, even though he may have been in previous attendance at the University in other than graduate status; it is returned to applicants who are not accepted, but may not be refunded to a person who has been accepted and who does not enroll.

#### **ADMISSION IN UNCLASSIFIED STATUS**

Attention is directed to the possibility of registration in "unclassified status," open to students holding degrees from recognized institutions; no limitation is placed upon the number of students in this status. An unclassified student is in general admitted to any undergraduate course for which he has the prerequisites; he may not enroll in any graduate course, nor is any assurance implied of later admission to graduate status. In the event of later admission to graduate study the grade-point requirements for degrees and credentials will apply to all work done in unclassified status; degree credit may be allowed for such work upon the approval of the department of the candidate's field of study.

## GENERAL REGULATIONS

STAIN GENERAL REGULATIONS govern residence and study in the academic departments. These regulations, unless otherwise stated, concern both graduate and undergraduate students.

### REGISTRATION

Each student registers in person in the University of California at Los Angeles on days appointed for this purpose, at the beginning of each semester. Registration covers the following steps: (1) filling out address card, paying fees, and receiving in exchange a card showing that the applicant has been enrolled in the University; (2) enrolling in courses according to instructions which will be posted on the University bulletin boards.

### Late Admission and Registration

The student or prospective student should consult the University calendar and acquaint himself with the dates upon which students are expected to register and begin their work at the opening of the sessions. Failure to register upon the stated registration days is certain to cause difficulty in the making of a satisfactory program and to retard the progress both of the student himself and of each class to which he may be admitted.

A student who registers after the opening of the session and who later is found to be deficient in his work may not plead late admission as an excuse for his deficiency.

A fee of \$2 is charged for late registration; this fee applies both to old and new students.

A qualified student or applicant who fails to register upon the stated registration days at the opening of the session, but who, nevertheless, appears *during the first two weeks of instruction*, will in general be permitted to register. After the first week, however, he is required to obtain the written approval of all the instructors in charge of his proposed courses and of the dean of his college, before his registration can be completed. An applicant for admission *after the first two weeks* of instruction must receive the special approval of the Director of Admissions and the dean of the college to which he seeks admission. His study list must also be approved by the dean and the instructors concerned.

### MEDICAL EXAMINATIONS

Each applicant must also appear before the University Physicians and pass a medical examination, to the end that the health of the University community as well as that of the individual may be safeguarded. Evidence, satisfactory to the University Physicians, of successful immunization against smallpox is required.

A medical examination is required of every student each year; returning students are requested to make appointments with the University Physicians at the time of registration.

#### Medical Facilities

The University of California at Los Angeles provides medical service on the campus for the care of emergencies, with physicians and trained nurses in charge. There are no facilities for hospital care. Students are entitled to medical consultation and advice; every entering student receives a medical examination; thereafter an examination is required each year.

### MILITARY SCIENCE, NAVAL SCIENCE, AND PHYSICAL EDUCATION

Upon admission, every undergraduate student, man or woman, must, unless officially notified of exemption, report immediately to the proper officer for enrollment in physical education,\* in accordance with the directions in the *Registration Circular* or the announcements which may be posted on the bulletin boards. Every able-bodied male undergraduate who is under twenty-four years of age at the time of admission and who is a citizen of the United States, unless officially notified of exemption, must report immediately for enrollment in military or naval science. The student must list the courses in military or naval science and physical education upon his study card with other University courses. Upon petition a student more than twenty-four years of age at the time of admission may be excused from military science and physical education.

Information concerning the requirements in military science and physical education, including a statement of the grounds upon which a student may be excused from this work, may be obtained from the Registrar.

Petitions from students for excuse from, or deferment of, military science or physical education, filed by the petitioner after the expiration of two weeks following the date of the student's registration, will not be received except for illness or physical disability occurring after such date. A student who petitions to be excused from one of these subjects should nevertheless present himself to the proper instructors for enrollment while action on his petition is pending.

If a student subject to these requirements lists the prescribed course or courses on his study list, and thereafter without authority fails to appear for work in such course or courses, his neglect will be reported, after a reasonable time, to the Registrar, who, with the approval of the President, will notify the student that he is dismissed from the University. The Registrar will then inform the dean of the student's college or other officer in charge of the student's program of his dismissal. Upon the recommendation of the professor in charge

\* The University requirements in physical education referred to in this section cover Physical Education 3 (men) and 4 (women),  $\frac{1}{2}$  unit courses which are required of students in each semester of the first and second years.

of the work and with the approval of the President, the Registrar is authorized to reinstate the student and will notify the dean of the student's college (or other officer in charge of the student's study list) of such reinstatement.

The student is referred to the announcements of the departments of Military Science and Tactics and Physical Education in this Catalogue.

### **Naval Science and Tactics**

Enrollment in the Naval Reserve Officers' Training Corps Unit may not, at any one time, exceed two hundred members, and students who wish to enroll should make formal application at the time of their admission to the University. Applications must be approved by the Chairman of the Department of Naval Science and Tactics. Students thus accepted are relieved of the work otherwise prescribed in military science, as set forth in these pages, and are required to give to studies prescribed by the Department at least three hours a week during the first two years of the course, and five hours a week throughout the last two years.

In the lower division, the requirement in Naval Science amounts to 10 units, 6 units in the Department of Naval Science and Tactics and 4 units in the Department of Astronomy. The work in naval science is taken at the rate of  $1\frac{1}{2}$  units a semester. In addition, Astronomy 9 and 10, two units each, are prescribed. The particular semester in which these courses are to be taken will be determined for each student as his general University program may require, provided only that Astronomy 9 precedes Astronomy 10.

The courses taken in any semester in satisfaction of these requirements must be regularly listed, with other University courses, on the student's study list for that semester. Neglect of the requirements is punishable by dismissal from the University.

For further information about the work of the Naval Unit, consult the Chairman of the Department of Naval Science and Tactics, Men's Gymnasium.

### **Gymnasiums and Athletic Facilities**

Separate gymnasiums for men and women were completed in the summer of 1932; each has an open air swimming pool. The building for men is 200 by 260 feet and has a gymnasium floor 100 by 150 feet; one wing of the building houses the headquarters of the department of military science and tactics. The building for women is of equal size and contains two gymnasium floors, of which the larger is 72 by 100 feet. These buildings are conveniently situated near the athletic grounds and tennis courts.

### **Lockers**

Lockers are issued, as long as they are available, to registered students who have purchased standard locks. These are sold at \$1 each, and may be used as long as desired, or may be transferred by the purchaser to another student.

**SUBJECT A: ENGLISH COMPOSITION**

With the exceptions noted below, every undergraduate entrant must, at the time of his first registration in the University, take an examination, known as the *Examination in Subject A*, designed to test his ability to write English without gross errors in spelling, grammar, diction, sentence structure, or punctuation.

The examination in Subject A is given at the opening of each semester and at the opening of the Summer Session. (See the *Registration Circular*, to be obtained from the Registrar.) A second examination for late entrants is given two weeks after the first examination in each semester; for this examination a fee of \$1 is charged.

The results of the first examination will be made known not later than the day preceding the date set for the filing of study cards for the current semester. Papers submitted in the examination are rated as either "passed" or "not passed." A student who is not present at the examination in Subject A which he is required to take, will be treated as one who has failed.

Every student who does not pass in the examination in Subject A must, immediately after his failure, enroll in a course of instruction, three hours weekly, for twelve weeks, known as the *Course in Subject A*, without unit credit toward graduation. Should any student fail in the course in Subject A he will be required to repeat the course in the next succeeding semester of his residence in the University.

A student who maintains in the course in Subject A a grade of A is permitted, on recommendation of the Committee on Subject A, to withdraw from the course at a date determined by that committee, and is given credit for Subject A.

Every student who is required to take the course in Subject A is charged a fee of \$10, and the charge will be repeated each time he takes the course. This fee must be paid before the study list is filed.

No student will be granted the bachelor's degree until he has satisfied the requirement of Subject A.

In respect to grading, conditions, and failure, the course in Subject A is governed by the same rules as other University courses.

A student who has received a satisfactory rating in the College Entrance Examination Board examination in English 1, in English 1-2, or in the Comprehensive Examination in English, will receive credit for Subject A. A student who has passed an examination in Subject A given by the University at Berkeley or given under the jurisdiction of the University at various centers in the State annually in May or June, will receive credit for Subject A.

A student who, at any time, has failed in the University examination in Subject A does not have the privilege of taking a second examination until he has completed the course in Subject A.

## *American Institutions; Piano Test; Study-list Regulations* 37

A student who enters the University of California at Los Angeles with credentials showing the completion elsewhere with a grade not lower than C, of one or more college courses in English composition (with or without unit credit) is exempt from the requirement in Subject A.

Passing the Examination in English for Foreign Students does not exempt a student from the Subject A requirement.

### **AMERICAN INSTITUTIONS**

Every candidate for a bachelor's degree or a teaching credential is required to present evidence of knowledge concerning the Constitution of the United States and American institutions and ideals. This requirement is called the "Requirement of American Institutions." Candidates may complete this requirement in any one of the following ways:

1. By completing any one of the following courses:  
American Institutions 101 (see page 228).  
History 171A-171B, or 172A-172B.  
Political Science 3A-3B.
2. By presenting credit for an acceptable course completed at another collegiate institution.\*
3. By completing a major in history or in political science.
4. By passing the examination in American Institutions which is offered each semester under the direction of the Academic Senate Committee on American Institutions. No fee is required for this examination, nor is degree credit granted for it. Detailed instructions, with dates of examinations, are posted upon the official bulletin boards at the proper time, or may be had at the information desk of the Registrar's Office.

### **PIANO TEST**

Every student entering the Kindergarten-Primary curriculum of the Teachers College must show ability to play on the piano music suitable for use with young children. Application for the test may be made to the departmental adviser. The test should be taken at the time of admission; it must be taken before the student may be assigned to practice teaching. See footnote on page 101.

### **STUDY-LIST REGULATIONS**

At the beginning of each semester every student is required to file with the Registrar, upon a date to be fixed by the Registrar, a registration book containing in addition to other forms, a detailed study list bearing the approval of a faculty adviser or other specified authority. Such approval is required for all students: undergraduate, graduate, unclassified, and special.

\* Candidates for general teaching credentials must have met this requirement at an approved California teacher training institution.

The presentation of a study list by a student and its acceptance by the college is evidence of an obligation on the part of the student to perform faithfully the designated work to the best of his ability. Withdrawal from, or neglect of, any course entered on the study list, or a change in program without the formal permission of the dean of the college, makes the student liable to enforced withdrawal from the University, or to other appropriate disciplinary action.

Ample provision is made for the student who desires to withdraw from courses in which he is regularly enrolled. Petition for change in study list should be presented to the Registrar. Attendance upon all exercises is obligatory pending receipt of formal permission to discontinue.

### **STUDENT RESPONSIBILITY**

Each student is responsible for compliance with the regulations printed in this Catalogue and with official notices published in the *Daily Bruin*, or posted on official bulletin boards.

Application for leave to be absent, or excuse for having been absent from a University exercise, should be made to the instructor; if for unavoidable cause the student absents himself from all college exercises for one day or several days he should present his excuse to the dean of his college. Excuse to be absent does not relieve the student from completing all the work of each course to the satisfaction of the instructor in charge. For regulations concerning withdrawals from the University, see page 45 of this Catalogue.

It is the duty of the student to inform the Registrar of changes of address.

### **AUTHORITY OF INSTRUCTORS**

No student will be permitted to enter upon the study of any subject if, in the opinion of the instructor, he lacks the necessary preparation to insure competent work in the subject.

Every student is required to attend all his class exercises and to satisfy the instructor in each of his courses of study, in such ways as the instructor may determine, that he is performing the work of the courses in a systematic manner.

Any instructor, with the approval of the President, may at any time exclude from his course any student guilty of unbecoming conduct toward the instructor or any member of the class, or any student who, in his judgment, has neglected the work of the course. A student thus excluded will be recorded as having failed in the course of study from which he is excluded, unless the faculty otherwise determines.

### **DEGREES AND TEACHING CREDENTIALS**

Detailed statements of requirements for degrees and teaching credentials issued by the University will be found in this Catalogue under headings of the

several colleges and departments; for the master's degree, the doctor's degree, and the higher teaching credentials, see also the ANNOUNCEMENT OF GRADUATE STUDY.

Every undergraduate candidate for a degree or for the completion of a regular University curriculum leading to a teaching credential should fill out a form in his registration book, indicating his candidacy. The Registrar will then consult with the appropriate dean, and will advise the student whether the program he is undertaking will satisfy the requirements of his curriculum.

*Senior residence.* Every candidate for the bachelor's degree is required to have been enrolled throughout the senior or final year of residence in that college of the University in which the degree is to be taken; the last 24 units must be done in residence while so enrolled. It is permissible to offer a total of twelve weeks of intersessions, summer sessions, or postsessions as equivalent to one semester; but, except as noted below,\* the student must complete in resident instruction either the fall or spring semester of his senior year. The regulation applies both to students entering this University from another institution and to students transferring from one college to another within the University.

All graduates of any one calendar year—January 1 to December 31—are considered as belonging to the "class" of that year.

#### **CHANGE OF COLLEGE OR MAJOR**

A student may be transferred from one college (major or department) of the University to another upon the approval of the dean or other responsible officer or committee of the college (or department) to which admission is sought. A form of petition for transfer is supplied by the Registrar.

No student is permitted to transfer from one major department to another after the opening of the last semester of his senior year.

#### **HONORS**

Honors students include those who receive honorable mention with the Junior Certificate in the College of Letters and Science, or in the Teachers College, or upon attaining junior standing in the College of Agriculture. Honors are granted also with the bachelor's degrees. For regulations concerning honors see the sections explanatory of the curricula of the various colleges, in later pages of this Catalogue.

#### **CREDIT AND SCHOLARSHIP**

In both the University and the high school the student is credited, in respect to amount of work accomplished, in terms of units; and in respect to quality of scholarship, in terms of grades. In a further, more exact determination of

---

\* Until October 1, 1943, students who have received teaching credentials from the Los Angeles State Normal School, the Southern Branch of the University of California, or the University of California at Los Angeles may complete the requirement of senior residence for the degree of Bachelor of Education in the Teachers College by attendance at summer sessions of the University of California.

the student's scholarship, the University assigns a numerical value in points to each scholarship grade. These points are called grade points and are more fully described below.

High school credit, when it is offered in application for admission to the University, is reckoned in matriculation units; one matriculation unit represents one year's work in a given subject in the high school.

High school credit, when it is offered in satisfaction of high school graduation requirements, is measured in standard secondary units; that is, the credit granted for the study of a subject throughout the school year of from thirty-six to forty weeks, is stated in terms of the standard secondary unit. Each unit represents approximately one-quarter of a full year's work in high school; in other words, four standard secondary units represents one full year's work in high school.

*Relation between high school matriculation units and University units.* One year's work in the high school is considered to be equivalent to one University semester's work of college level; that is, a student who desires to make up any high school subject deficiency by offering work of college level can in one University semester earn credit equivalent to the credit of one year's work in high school.

In the University, a unit of credit represents one hour weekly of the student's time for the duration of one semester in lecture or recitation, with the time necessary for preparation, or a longer time in laboratory or other exercises for which outside preparation is not required. It is expected that most students will spend two hours in preparation for one hour a week of lecture or recitation. Each University unit credit is thus understood to represent at least three hours of the student's time, and the credit value of a course is reckoned in units on that basis.

#### **STUDY-LIST LIMITS\***

Concurrent enrollment in resident courses and in extension courses is permitted only when the entire program of the student has received the approval of the proper dean or study-list officer and has been registered with the Registrar before the work is undertaken.

A student on scholastic probation, or subject to supervision of the Committee on Reinstatement, is limited to a program of 12 units each semester, to which may be added the required  $\frac{1}{2}$ -unit course in physical education.

In the College of Letters and Science or in the Teachers College a student may present a study list aggregating 12 to 16 units each semester without special permission. A student who has a heavy outside work program or who is not in good health is urged to plan, with the dean's approval, a study pro-

\* Certain courses which do not give units of credit toward the degree, nevertheless displace units from a student's allowable program, as follows:

Commerce B (Shorthand) by 2 units.

Course in Subject A by 2 units.

Mechanic Arts A by 2 units.

gram below the 12-unit limit. After the first semester a student may on petition carry a program of not more than 18 units, if in the preceding semester he attained an average of at least two grade points for each unit of credit in his total program (of 12 units or more). Except in the first semester of the freshman year, a student in good academic standing, may without special permission add  $\frac{1}{2}$  unit of physical education to the allowable study list. With this exception, all courses in military or naval science and physical education and repeated courses are to be counted in study-list totals. Any work undertaken in the University or elsewhere simultaneously with a view to credit toward a degree must also be included.

In the College of Business Administration, a student who is not restricted in his study list and who is not on probation may present a study list aggregating 12 to 18 units a semester without special permission with respect to quantity of work, save that in his first semester of residence the maximum is 16 units.

In the College of Agriculture a regular student who is free from deficiencies in the work of the previous semester, and who is in good academic standing may register for not more than 18 units. To this maximum may be added the required physical education course of  $\frac{1}{2}$  unit.

Students enrolled in the lower division who are carrying work preparatory to admission to the junior year of the College of Chemistry, the College of Engineering, or the College of Mining, and who are free from deficiencies in the work of the previous semester, may register for not more than 18 units of new work. Students with deficiencies will be limited to 16 units, including repeated work. If students in these professional curricula later transfer to nonprofessional curricula in the College of Letters and Science, their credits will be reduced in accordance with the limits of that college.

A special student ordinarily will have his study list specified at the time of his admission; it is limited to 16 units.

Regulations concerning study-list limits for graduate students will be found in the ANNOUNCEMENT OF GRADUATE STUDY.

#### **Program Limitation**

Undergraduate programs must not carry more than three consecutive hours of lecture, recitation, or discussion on any one day, nor may they carry a total of more than five consecutive hours including laboratory, military or naval science, physical education, typing, or field work.

#### **GRADES OF SCHOLARSHIP; GRADE POINTS**

In the University, the result of the student's work in each course (graduate and undergraduate) is reported to the Registrar in one of six scholarship grades, four of which are passing, as follows: A, excellent; B, good; C, fair; D, barely passed; E, conditioned; F, failed.

Grade E (conditioned) indicates a record below passing, but one which may be raised to a passing grade without repetition of the course by passing a further examination or by performing other tasks required by the instructor. Grade F (failure) denotes a record so poor that it may be raised to a passing grade only by repeating the course.

The term "incomplete" is not used in reporting the work of students. The instructor is required, for every student, to assign a definite grade based upon the work actually accomplished, irrespective of the circumstances which may have contributed to the results achieved.

Course reports filed by instructors at the end of each semester are final, not provisional.

In all the colleges at Los Angeles, grade points are assigned to the respective scholarship grades as follows: for each unit of credit, the scholarship grade A is assigned 3 points; B, 2 points; C, 1 point; D, no points; E, minus 1 point; and F, minus 1 point. Removal of grade E or F entitles the student to as many grade points as may have been lost by the condition or failure, but no more. For exceptions sometimes permitted when grade E is assigned, see under Removal of Conditions and Failures, below.

In order to qualify for the bachelor's degree in the College of Letters and Science, the College of Agriculture, the College of Business Administration, or the Teachers College,\* the student must have obtained at least as many grade points as there are units in the total credit value of all courses undertaken by him in the University of California. A similar regulation is in effect in the colleges on the Berkeley campus.

### **REMOVAL OF CONDITIONS AND FAILURES**

For the removal of a condition a student may, on petition, have the privilege of either a reexamination with the class next repeating the subject or a special examination out of class; in courses of the Summer Session, however, reexaminations for the removal of deficiencies are not provided. For every such examination a formal permit, to be obtained in advance on petition filed with the Registrar, must be shown to the instructor in charge of the examination. For every course in which a special examination is undertaken for the removal of a condition, a fee of \$2 is charged; there is no fee for a reexamination (final examination taken with a class), provided the final examination is the only task required by the instructor for the removal of the condition. The fee for two or more special examinations undertaken to remove conditions during a single semester is \$3. A form of petition for a special examination or for admission to an examination with a class, together with instructions for procedure, may be obtained from the Registrar.

A condition in a course in which a final examination is regularly held may

\* Candidates for teaching credentials must also maintain a C average in supervised teaching.

not be removed, unless the student has passed a satisfactory final examination in the course, either at the time when the course was originally taken, or at a later time, as above provided.

If a student has been conditioned in a course because of omitting certain parts of the required work, or because of unsatisfactory performance, the instructor may require the satisfactory completion of that work before the condition in the course is removed. Such tasks count as a special examination, subject to the fee prescribed for a special examination.

Removal of grade E (conditioned) by reexamination or otherwise entitles the student to receive *as many grade points as have been lost by the condition, but no more*. An exception to this rule is permitted, however, when the deficiency consists solely in the *omission* of the final examination or other required exercise, due to illness, or other circumstances over which the student has no control. In such circumstances the student may petition to have that grade assigned which he would have received had the work been completed without delay, together with the appropriate number of grade points. His petition must set forth in detail the reasons for his failure to complete the work; it should receive endorsement by the instructor that the work, as far as presented, was satisfactory. The Registrar will then refer the petition to the proper authority for decision.

If a student who has incurred a condition in any course fails to make up the condition by the end of the next semester of his residence in which the course is regularly given, then the condition becomes a failure and can be made up only by repeating the course.

Any student who is reported as having failed in any prescribed course in military or naval science or physical education, or the course in Subject A, will be required to repeat the course during his next regular semester of residence in which the course may be given.

A student who fails to attain grade D or a higher grade in any course following an examination for the removal of a condition will be recorded as having received grade F (failure) in the course.

### **MINIMUM SCHOLARSHIP REQUIREMENTS**

The following regulations are effective in all the academic colleges of the University:

(1) Any student who fails to maintain a C average in two consecutive semesters of attendance may be (a) warned, (b) assigned to a special adviser, (c) limited with respect to his study list.

(2) *Probation*. Any student whose record at the close of either regular semester shows a total deficiency of more than ten grade points will be placed on probation.

(3) *Dismissal*. Any student whose record for any regular semester falls below a D average, irrespective of his grade-point standing, or any student

who fails to maintain a C average while on probation, becomes subject to dismissal. A student dismissed for unsatisfactory scholarship will be excluded from the University for an indefinite period, with the presumption that his connection with the University will be ended by such exclusion.

Students at Los Angeles coming under the above regulations are subject to the supervision of the Committee on Reinstatement, which has adopted a policy of limiting study lists of students under its charge to twelve units or less, exclusive of required physical education.

The action to be taken in respect to students in graduate status who acquire scholarship deficiencies is left to the discretion of the Dean of Graduate Study.

### CREDIT BY EXAMINATION

Provision is made whereby an undergraduate student in residence and in good standing may under certain conditions take examinations for degree credit either (a) in courses offered in the University, without formal enrollment in them, or (b) in subjects appropriate to the student's curriculum, but not offered as courses by the University. The results of all such examinations, with grades and grade points, are entered upon the student's record in the same manner as for regular courses of instruction (see Grades of Scholarship, above). No fees are required.

Arrangements must be made in advance with the dean of the student's college; his approval and that of the instructor who is appointed to give the examination, is necessary before an examination can be given.

Application for examination for advanced standing on the basis of work done before entrance to the University should be made to the Admissions Office at the time of entrance to the University. If a student who has already matriculated proposes to enter upon study outside the University of California with a view to asking the University to examine him upon that work and to allow him credit toward the degree, he must make all arrangements *in advance* with the department concerned and with the Director of Admission; fees are required for such validation examinations.

The application form for examinations may be obtained from the Registrar.

### FINAL EXAMINATIONS

Final examinations are obligatory in all undergraduate courses except laboratory courses, and other courses which, in the opinion of the Committee on Courses, because of resemblance to laboratory courses, require special treatment. In laboratory courses final examinations are held at the option of the department in charge. All examinations will, so far as practicable, be conducted in writing, and a maximum time will be assigned beforehand for each examination, which no student will be allowed to exceed. The time for examination sessions will not be more than three hours. Leave to be absent from a final examination must be sought by written petition to the proper faculty.

If a final examination is one of the regular requirements in a course, there can be no individual exemption from the examination, except as provided in the preceding paragraph.

Any department may examine a student, at the end of the semester immediately preceding his graduation, in the major subject in which the department has given instruction; and a student to be examined in a major subject may, at the discretion of the department, be excused from all final examinations in courses in the department of the major subject in which he has been enrolled during the semester. Credit value may be assigned to this general examination in the major subject.

Any student tardy at an examination may be debarred from taking it, unless an excuse for his tardiness, entirely satisfactory to the examiner, is presented.

Reexaminations are permitted only for the purpose of removing conditions (grade E). In courses of the Summer Session, however, reexaminations for the removal of deficiencies are not provided by the University. A student who has received grade B, C, D, or F in any course is not allowed a reexamination.

Concerning examinations for the removal of conditions see under Removal of Conditions and Failures, above.

#### **LEAVE OF ABSENCE AND HONORABLE DISMISSAL**

A *brief leave of absence*, to expire on a definite date, may be issued to a student in good standing who finds it necessary to withdraw for a short time, but who wishes to retain his status in his classes and to resume his work before the close of the current semester. No excuse for absence will relieve the student from the necessity of completing all the work of each course to the satisfaction of the instructor in charge. Petition forms for leaves of absence, with complete instructions, may be obtained at the office of the Registrar.

A student must apply for leave to be absent from or excuse for having been absent from any college exercise other than a final examination, to the instructor in charge of the exercise; unless, for unavoidable cause, the student is obliged to absent himself from all college exercises for several days, in which event he should apply for a brief leave of absence as directed above. Leave to be absent from a final examination must be sought by written petition to the proper faculty.

An *honorable dismissal* may, upon petition, be issued to any student in good standing provided he complies with the instructions on the form of petition, which may be obtained from the Registrar.

A student is in good standing if he is entitled to enjoy the normal privileges of a student in the status in which he is officially registered. Students dismissed by reason of scholarship deficiencies, and students under supervision or on probation, may receive letters of honorable dismissal which bear a notation concerning their scholarship; students under censure or suspension may not

receive an honorable dismissal but may receive transcripts of record which bear a notation concerning such censure or suspension.

*Discontinuance without notice.* Students who discontinue their work without formal leave of absence do so at the risk of having their registration privileges curtailed or entirely withdrawn.

### **DISCIPLINE**

When a student enters the University it is taken for granted by the University authorities that he has an earnest purpose and that his conduct will bear out this presumption. If, however, he should be guilty of unbecoming behavior or should neglect his academic duties, the University authorities will take such action as, in their opinion, the particular offense requires. Students who fail to make proper use of the opportunities freely given to them by the University must expect to have their privileges curtailed or withdrawn.

There are five degrees of discipline: warning, censure, suspension, dismissal, and expulsion. Censure indicates that the student is in danger of exclusion from the University. Suspension is exclusion from the University for a definite period. Dismissal is exclusion for an indefinite period, with the presumption that the student's connection with the University will be ended by it. Expulsion is the most severe academic penalty, and is final exclusion of the student from the University.

By authority of the Academic Senate, the President of the University is entrusted with the administration of student discipline with full power to act.

## MISCELLANEOUS INFORMATION

### EXPENSES—LIVING ACCOMMODATIONS—EMPLOYMENT— SCHOLARSHIPS—LOANS EXPENSES OF STUDENTS

#### General Expenses and Fees\*

THE QUESTION OF EXPENSE while attending the University is of importance to every student. It is difficult, however, to give specific information about yearly expenditures. In a student body of several thousand members there are so many different tastes, as well as such a wide range of financial resources, that each student must determine his budget in keeping with his own needs and financial condition. It is possible to live simply, and to participate moderately in the life of the student community, on a modest budget. The best help the University authorities can offer the student in planning his budget is to inform him of certain definite expense items, and acquaint him with others that he will in all probability have to provide for.

A table of estimated minimum, moderate, and liberal budgets for one college year of nine months is given on page 53.

Fees and deposits are payable preferably in cash. If a check is presented the face amount must not exceed all the fees to be paid.

The *incidental fee*, \$27, which must be paid each semester by all undergraduates on the date of registration, covers expenses of students other than the cost of their instruction, and entitles them to the use of gymnasium, tennis courts, baths, soap, towels, washrooms, etc.; consultation, medical advice or dispensary treatment in the event of illness; and meets in part the expenses in connection with registration and graduation. It also includes the rights and privileges of membership in the Associated Students, valued at \$4; see page 58. This fee is not remitted in whole or in part for those students who may not desire to make use of any or all of these privileges. If a student withdraws from the University within the first three weeks from the date of his registration, a portion of this fee will be refunded. The incidental fee for graduate and unclassified students is \$23 each semester; it does not include membership in the Associated Students.

Students who are classified as nonresidents of the State are required to pay, each semester, in addition to the incidental fee, a tuition fee of \$75.† It is im-

\* During registration and for the first few days of instruction, fees will be paid as part of the registration procedure. Thereafter, they will be paid in the office of the Comptroller, Administration Building. The cashier's department of this office is open from 8:30 A.M. to 3 P.M. daily, and from 8:30 A.M. to 12 M. on Saturday.

† If a student registers for less than 12 units the tuition fee is: minimum, \$25, \$5 a unit for work aggregating 6 to 11 units, or additional fraction.

portant for every prospective student to note carefully the rules governing legal residence in the University, which are stated on page 50.

*Fee reduction for graduate students.* Graduate and unclassified students in full-time occupations, who under the rules of the University are not permitted to carry a program of studies in excess of 4 units, may be allowed a reduction of the incidental fee from \$23 to \$15. The term "full-time occupations" is interpreted as applying to those persons who are in regular salaried positions and whose duties require their attention for seven or eight hours a day.

*Tuition.* The University charges a tuition fee to every student who has not been a legal resident of the State of California for a period of one year immediately preceding the opening day of the semester during which he proposes to enroll. Such a student is classified as a nonresident. A student entering the University for the first time should read carefully the rules governing determination of residence, as quoted below, to the end that he may be prepared, in the event of classification as a nonresident of California, to pay the required tuition fee. This fee must be paid at the time of registration. *The attention of the prospective student who has not attained the age of 22 years and whose parents do not live in the State of California, is directed to the fact that presence in the State of California for a period of more than one year immediately preceding the opening day of the semester in which he proposes to attend the University, does not, of itself, entitle him to classification as a resident.* An alien who has not made, prior to the opening day of a semester in which he proposes to attend the University, a valid declaration of intention to become a citizen of the United States is classified as a nonresident student.

Tuition in the academic colleges is free to students who have been residents of the State of California for a period of one year immediately preceding the opening of the semester during which they propose to attend the University. Students who are classified as nonresidents are required to pay a tuition fee of \$75 each semester. This fee is in addition to the incidental fee. The tuition fee may be remitted in whole or in part for students in full graduate standing in other than professional schools and colleges.

If a student is in doubt about his residence status, he may communicate with the Attorney for the Regents in Residence Matters. On the day preceding the opening day of registration and during the first week of instruction of each semester the Attorney may be consulted upon the campus at a place which may be ascertained by inquiry at the Information Desk in the Registrar's Office; throughout the registration period, he may be consulted during the hours of registration at the place where registration is being conducted. At other times he may be consulted or communications may be addressed to him at Room 901, Crocker Building, San Francisco, California.

*The eligibility of a student to register as a resident of California may be determined only by the Attorney for the Regents in Residence Matters.* Every entering student, and every student returning to the University after an ab-

ence, is required to make a "Statement as to Residence" on the day of registration, upon a form which will be provided for that purpose, and his status with respect to residence will be determined by the Attorney soon after registration. Old students are advised that application for reclassification as a resident student must be filed within ten days after regular registration; by late registrants, within one week after registration. Application for a change of classification with respect to some preceding semester will not be received under any circumstances.

*Laboratory fees.* Laboratory charges, apportioned on the basis of materials used and for certain costs involved in the maintenance and operation of laboratory equipment, differ with the individual student's course, the range of fees in the elementary laboratories being from \$1.50 to \$30 a semester. The fees are stated in the descriptions of the several courses in later pages of this Catalogue.

### Other Fees

*Late payment fee.* For delayed payment of any of the incidental, nonresident tuition, or departmental fees or deposits, \$1. Departmental fees and deposits must be paid within seven days after registration.

*Application fee, \$3.* This fee is charged every applicant for admission to the University, and is payable at the time the first application is filed. Applicants for graduate status must pay this fee, even though it may have been paid once in undergraduate status; see page 32.

*Late application for admission, \$2.*

*Late registration, \$2.* (After date set as registration day.)

*Late filing of registration book, \$1.* (More than seven days after registration.)

*Late examination in Subject A, \$1.*

*For courses added or dropped after date set for filing registration book, \$1* for each petition.

*For reinstatement of lapsed status, \$5.*

*For duplicate registration card, \$1.*

*For late application for teaching assignment, \$1.*

*For late notice of candidacy for the bachelor's degree, \$2.*

*Medical examination:* original appointment, or deferment arranged in advance, no fee; *fee for a second appointment, \$1.*

*Deposit required of applicants for teaching positions who register with the Appointment Secretary:* Persons registering with the Appointment Secretary are required to make a deposit of \$5 to cover the clerical cost of correspondence and copying of credentials.

**Refunds**

Refund of a part of the incidental fee is made to a student who withdraws from the University within four weeks from the date of his registration.

Refund on the nonresident fee of \$75 is made in accordance with a schedule on file in the offices of the Registrar and Cashier; dates are computed from the first day of instruction of the semester.

No claim for refund of fees will be considered unless such claim is presented during the fiscal year to which the claim is applicable. No student will be entitled to a refund except upon surrender to the Comptroller of his registration certificate and receipt. Students should preserve their receipts.

**Rules Governing Residence**

The term "nonresident student" is construed to mean any person who has not been a bona fide resident of the State of California for more than one year immediately preceding the opening day of a semester during which he proposes to attend the University.

The residence of each student is determined in accordance with the rules for determining residence prescribed by the provisions of Section 52 of the Political Code of California, provided, however:

1. That every alien student who has not made a valid declaration of intention to become a citizen of the United States, as provided by the laws thereof, prior to the opening day of the semester during which he proposes to attend the University, is deemed to be a nonresident student.

2. That no person is deemed to have made a valid declaration of intention to become a citizen of the United States whose declaration of intention at the time when it is presented in support of an application for classification as a resident student in the University has lost its force or effectiveness, or who can not, under said declaration, without renewing the same or making a new declaration, pursue his declared intention of becoming a citizen of the United States.

Every person who has been, or who shall hereafter be classified as a nonresident student shall be considered to retain that status until such time as he shall have made application in the form prescribed by the Registrar of the University for reclassification, and shall have been reclassified as a resident student.

Every person who has been classified as a resident student shall, nevertheless, be subject to reclassification as a nonresident student and shall be reclassified as a nonresident student whenever there shall be found to exist circumstances which, if they had existed at the time of his classification as a resident student, would have caused him to be classified as a nonresident student. If any student who has been classified as a resident student shall be determined to have been erroneously so classified, he shall be reclassified as a nonresident student, and if the cause of his incorrect classification shall be found to be due to any concealment of facts or untruthful statement made by him at or before the time

of his original classification, he shall be required to pay all tuition fees which would have been charged to him except for such erroneous classification, and shall be subject also to such discipline as the President of the University may approve.

The nonresident tuition fee may be remitted in whole or in part in the case of students in full graduate status [except in the professional schools, e.g., Jurisprudence, Medicine, Education (leading to the Ed.D. degree), and except in the case of foreign students whose tuition is paid by their governments], who have proved that they are distinguished scholars and who are carrying full programs of work toward the fulfillment of requirements for academic higher degrees. No graduate student in full graduate standing, no matter how distinguished his scholarship may have been, will be exempted from the payment of the tuition fee if he is merely carrying some lower division courses for his cultural advancement.

The term *distinguished scholarship* in connection with the question of exemption from the payment of the tuition fee is interpreted as follows: The scholarship standing must have been excellent throughout a period of no less than two years just preceding the time of application for this privilege. Moreover, only students from institutions of high standing in scholarly work will be considered. Applicants for this privilege will be required to have sent to the Dean of Graduate Study confidential letters about themselves from persons who are thoroughly acquainted with their personalities and their intellectual achievements. It should be clear from these statements, therefore, that only the decidedly exceptional student will be eligible for the privilege of exemption from the payment of tuition if he is a nonresident. Students exempted from the tuition fee pay only the incidental fee.

The privilege of exemption from the nonresident tuition fee may be revoked at any time at the discretion of the Dean of Graduate Study if in his judgment a student fails to maintain distinguished scholarship, or if he proves himself unworthy in other respects.

### **LIVING ACCOMMODATIONS AND GENERAL EXPENSES FOR WOMEN**

A list of approved accommodations for women students is prepared for distribution at the beginning of each semester by the Dean of Women and may be obtained at her office, 239 Administration Building. No woman is permitted to complete her registration until her living accommodations have received the approval of the Dean of Women. *Women are not permitted to live in public apartments unless satisfactory arrangements concerning chaperonage are made in advance with the Dean of Women.*

Mira Hershey Hall, made available by the will of the late Miss Mira Hershey, is the only dormitory maintained on the Los Angeles campus. It is conveniently situated on the campus and accommodates one hundred thirty-one women stu-

dents. Board and room costs \$45 a month. Applications for residence should be filed with the Dean of Women as early as possible.

A number of desirable privately owned halls of residence offer accommodations to women; two, each with a capacity of fifty students, provide board and room for from \$35 to \$47.50 a month; others, with capacities ranging from twenty to ninety-nine, have housekeeping accommodations for from \$12.50 to \$20 a month. Fifteen dollars a month is suggested as a sufficient amount for food for housekeeping students. Private homes offer housekeeping accommodations for as low as \$10 a month, and board and lodging for \$30 a month.

Self-supporting women students usually can get board and lodging in exchange for three hours of household work daily. All self-supporting women should consult the staff of the Dean of Women with respect to their plans.

Extracurricular expenses may be kept at a minimum. The expense of participating in general and honorary or professional organizations need not cost more than \$5 a semester. Membership in a social sorority may be estimated at from \$15 to \$20 a month, in addition to the cost of board and lodging.

The student living at home, although she may have no expense for board and lodging, must plan for transportation and lunch on the campus. While transportation varies according to the location of each student's home, \$10 a month is an average estimate. Lunches may be estimated at \$5 to \$6 a month. Some students reduce or eliminate this expense by bringing their lunches from home.

Personal expenses are obviously variable items. The average woman student's estimate for clothing is from \$100 to \$300 for each University year; for drugs and beauty shop, from \$15 to \$40; for recreation, from \$10 to \$50.

### **LIVING ACCOMMODATIONS AND GENERAL EXPENSES FOR MEN**

The cost of attending the University varies greatly with the individual student; however, the majority of men students living away from home spend between \$600 and \$800 a year. Students classified as nonresidents of California must also pay the tuition fee of \$75 each semester.

The cost of board and room is estimated as from \$35 to \$45 a month. A list of rooming and boarding houses for men is prepared by the Dean of Undergraduates, and may be obtained at Room 202; Administration Building. The University does not maintain on the Los Angeles campus any dormitories for men. Students attending the University and living at home should make an estimate of the cost of transportation and include this item in the year's budget.

The initiation fees for professional fraternities vary from \$5 to \$12, and for social fraternities from \$50 to \$100. The dues for social fraternities average about \$5 a month and the cost of living in a fraternity house averages about \$40 a month. This amount does not include the cost of social affairs which may be given by the fraternity in the course of the year.

**PRINCIPAL ITEMS OF EXPENSE ESTIMATED ON A  
NINE MONTHS' BASIS**

Expense Items	Minimum		Moderate		Liberal	
	Men	Women	Men	Women	Men	Women
Incidental Fee.....	\$ 54	\$ 54	\$ 54	\$ 54	\$ 54	\$ 54
Books and Supplies.....	20	20	40	40	60	60
Board and Room or Housekeeping.	180	200	325	315	400	405
Miscellaneous (Recreation, club dues, laundry, drugs, etc.).....	25	30	75	75	200	250
<b>Total.....</b>	<b>\$279</b>	<b>\$304</b>	<b>\$494</b>	<b>\$484</b>	<b>\$714</b>	<b>\$769</b>

NOTE: It is impossible to include in the above figures such variable items as clothes or transportation to and from home, or fees other than the incidental fee. Students classified as nonresidents of the State must also add to their estimated budgets the yearly tuition fee of \$150.

**SELF-SUPPORT AND STUDENT EMPLOYMENT**

Many students earn part, and a few earn all, of their expenses while attending the University. The University authorities are eager to offer as much encouragement as possible to students who must maintain themselves, but long experience has brought out the fact that the self-supporting student, early in his college life, may have to face unforeseen problems which affect his welfare.

University work demands the best that a student can give to it. The following statements are made, therefore, not to discourage the able student who must do outside work, but to forewarn him with facts and information so that he may plan carefully and intelligently, and by so doing overcome many of the difficulties that might otherwise lead to disappointment and failure.

(1) Whenever possible, it is wise for a student to use his savings to make the first semester of residence in the University one of freedom to give full time to academic work. He may then have an opportunity to adjust himself to new surroundings, to establish sound habits of study, and to maintain a good scholastic standing, and thereby build a foundation for the rest of his University course. By the end of the first semester the student should know the demands of university life and his own capabilities well enough to make it possible to plan, for subsequent semesters, a combined program of studies and work for self-support. Furthermore, a new student usually has difficulty in finding remunerative employment.

(2) The regular undergraduate four-year course based on an average of 15 units of academic work a semester is organized on the supposition that students will give the major part of their time and attention to their studies while attending the University. Therefore, a student who must give considerable time and energy outside work should consider at the outset the possibility

that more than the usual eight semesters (four years) may be required to complete the program for the degree, if he is to maintain his scholastic standing and his health, and to enjoy the advantages of university life.

With reasonable diligence, a student in good health carrying an average program of study in the undergraduate departments can give as much as twelve hours a week to outside employment without seriously interfering with his college work; employment in excess of this amount should be accompanied by a reduction of the academic program carried.

(3) Students who are not physically strong or in good general health should not, under ordinary circumstances, attempt to be wholly self-supporting because of the danger of jeopardizing health and academic progress.

### **Bureau of Guidance and Placement**

The newly-organized Bureau of Guidance and Placement has as its chief function the coördination, under one executive officer, of the various placement activities on the Los Angeles and Berkeley campuses, including those of the Bureaus of Occupation and of the Offices of the Appointment Secretary.

*Bureau of Occupations.* Students desiring employment should register with the Bureau of Occupations, 35 Administration Building.

Little can be done in obtaining employment for students who are not actually on the ground to negotiate for themselves. Since, in general, it is difficult for a stranger to get remunerative employment, no student should come to Los Angeles expecting to become self-supporting at once but should have on hand sufficient funds to cover the expenses of at least the first semester.

Board and lodging can frequently be had in exchange for three hours of household work daily. Limited opportunities also exist for obtaining employment on an hourly basis in the following fields: typing and stenography, clerical work, housework, care of children, general manual labor, etc. The rates paid for this kind of employment vary from twenty-five to fifty cents an hour. A student qualified to do tutoring and other specialized types of work can occasionally find employment on a more remunerative basis.

In 1937-38 the Federal Government provided funds at this institution for approximately six hundred jobs, paying students from \$5 to \$20 a month. These students were selected according to need and scholarship by an administrative committee of the University. No assurance can be given of the continuation of this policy, but needy students are advised to make application at the Bureau of Occupations, 35 Administration Building, after August 1, 1938, to determine if similar aid will again be made available.

*Appointment Office for Teachers.* The Appointment Secretary recommends graduates, students, and former students for positions in universities, colleges, junior colleges, high schools, and elementary schools, and for educational research, thereby assisting qualified candidates to obtain permanent employment or promotion in the work for which they have prepared themselves. A fee

of \$5 is charged each candidate for clerical services; there is no expense to school officials seeking teachers through this office. Communications should be addressed to the Manager of the Bureau of Guidance and Placement, 123 Education Building.

The University reserves the right to refuse to extend its coöperation to candidates who apply for positions for which they are manifestly unfit. In every recommendation the aim is to keep in mind the best available persons, remembering candidates already employed as well as those who may be out of employment.

Candidates for positions are urged to inform the office of the result of their candidacy, and of their desires for future promotion or change of occupation. All persons who obtain the services of students through either the Bureau of Occupations or the Office of the Appointment Secretary are urged to inform the Manager of the Bureau of Guidance and Placement concerning the quality of service given.

#### **UNDERGRADUATE SCHOLARSHIPS**

The Committee on Scholarships of the University of California at Los Angeles recommends annually for award a limited number of scholarships to undergraduate students in the University of California at Los Angeles. Because of the limited number of scholarships available, the Committee must restrict the awards to students who have been in attendance at least one semester (except for the La Verne Noyes Scholarship and for the Alumni Freshman Scholarships described below). The Committee rates all candidates with respect to scholarship, need, and character, and bases its recommendations upon relative ratings of all the candidates applying at any one time. Applications for these scholarships with letters and testimonials, should be filed with the Registrar on or before March 25 preceding the academic year for which the awards are to be made; if received later they will not ordinarily be considered until the following year. A blank form of application, which gives all the necessary information, may be obtained from the Registrar.

The scholarships awarded for the year 1938-39 were as follows:

*University Scholarships*: twenty-three of \$200 each.

*Charles N. and Jennie W. Flint Scholarships*: three of \$100 each.

*E. B. Campbell Scholarships*: four of \$50 each, awarded to freshmen who have completed one semester at the University of California at Los Angeles.

*Lena De Groff Scholarships*: eight of \$50 each.

*Cercle Français—Pi Delta Phi Scholarship* of \$75.

*The Governor Gage Scholarship* of \$300.

*The Governor Stephens Scholarship* of \$300.

*The Governor Merriam Scholarship* of \$300.

*M. Effie Shambaugh Scholarship* of \$25.

*Walter Loewy Scholarships*: two of \$250 each.

*Prytanean Alumnae Scholarship in Memory of Margaret Sartori* of \$54.

*Pi Lambda Theta Scholarship* of \$50.

*Lulie Chilton Scattergood Scholarships*: two of \$150 each.

A limited number of scholarships known as the *La Verne Noyes Scholarships* are available to needy veterans of the World War or their children; fourteen were awarded for 1938-39.

Certain scholarships are available for students in the College of Agriculture; for definite information consult the PROSPECTUS OF THE COLLEGE OF AGRICULTURE.

In addition to the above-enumerated scholarships, there are several whose recipients are named by the donors; among them is the *American Legion Auxiliary Scholarship*, which is awarded to the child of a World War veteran.

#### **Alumni Freshman Scholarships**

The California Alumni Association makes available each year a certain number of scholarships to entering freshmen. These Alumni Freshman Scholarships provide for part payment (for 1937-38 the amount was \$250 each) of the cost of board and room for men students in Bowles Hall on the Berkeley campus, for women students in Mira Hershey Hall on the Los Angeles campus, for men and women in the dormitories at Davis, and a number of cash scholarships of varying amounts for freshmen who enroll on any of the three campuses. Candidates for the Alumni Freshman Scholarships may receive information by writing to the Executive Manager, California Alumni Association, 301 Stephens Union, University of California, Berkeley. Applications must be on file on or before March 25 in any one year.

In the selection of the beneficiaries of these awards, the alumni committees in charge will choose applicants not only with substantial scholastic ability but also of high character and outstanding qualities of leadership, and who give promise of reflecting credit upon themselves and the University.

#### **GRADUATE SCHOLARSHIPS AND FELLOWSHIPS**

For information concerning graduate scholarships, consult the ANNOUNCEMENT OF GRADUATE STUDY.

#### **LOANS**

Various organizations and individuals have contributed toward the building up of several student loan funds. The gifts for this purpose are administered by the University in accordance with the conditions laid down by the donors, and are sufficient to make small loans, for short periods of time and usually without interest, to students in an emergency. For further information, apply to the Dean of Undergraduates or the Dean of Women.

**PRIZES**

The generosity of alumni and friends of the University also provides each year for competitive prizes and awards in several fields. The following awards were announced at Commencement, June 11, 1938:

*The J. Gimbel Award.* A medal and prize given by Mr. J. Gimbel to the man who has shown the best attitude toward the University in athletic endeavor.

*Pi Mu Epsilon Prize.* Awarded on the basis of a competitive examination in mathematics including calculus.

*Blue Circle C Society Honor Medal.* Awarded on the basis of scholarship, character and service.

*Medals of the Government of France.* Awarded for meritorious record in scholarship in French.

*Phi Beta Awards.* Awarded to the outstanding seniors for activity and scholarship in the respective fields of music and drama.

*Alpha Chi Sigma Prize.* Awarded on the basis of a competitive examination in chemistry, open to students who are taking, or who have taken, freshman chemistry but have not had more advanced work in chemistry.

*Alpha Chi Delta Award.* Given by Alpha Chi Delta fraternity to the junior woman in economics, commerce or business administration with the highest academic scholarship.

*Phi Lambda Upsilon Prize.* Awarded on the basis of a comprehensive examination covering the four-year course in undergraduate chemistry.

*Alpha Kappa Psi Medallion Award.* Given by the Alpha Kappa Psi fraternity to the man graduating in business administration with the best scholastic average in that department after the receipt of the Junior Certificate.

*Gamma Phi Beta Prizes.* Awarded by Gamma Phi Beta fraternity on the basis of originality, artistic ability, and technical facility of the composer of various forms of music.

**PUBLIC LECTURES, CONCERTS, AND ART EXHIBITIONS**

As opportunity offers, the University presents to its members and to the public lectures of general and of special or scholarly interest by qualified persons. These lectures are intended to supplement and stimulate the work of all departments of the University.

The musical interests of the University are served by numerous concerts open also to the public. The University organ, installed in 1930 as the gift of an unnamed donor, makes possible the offering of a regular series of programs. In 1937-38 these comprised fifty-nine week-day noon recitals, and thirty-seven weekly Sunday concerts, besides special concerts and music incidental to other gatherings. In addition to the organ, there are special concerts which in 1937-38 included recitals by Marian Anderson and John Charles Thomas, two

concerts by the Los Angeles Philharmonic Orchestra, programs by the Horton Dance Group, the Charles Weidman and Doris Humphrey dance troupe, the Humana Symphony Choir, the Budapest String Quartet, and the Federal Theater Projects dance, chorus and opera groups. Student musical programs included the University Glee Clubs and the University Bands from the Los Angeles and Berkeley campuses, the University Symphony Orchestra, the A Cappella Choir, and weekly student recitals and hours of recorded music arranged by student music fraternities. The concert series for 1938-39 will present the Don Cossack Chorus, Arturo Rubinstein, Trudi Schoop, Hizi Koyke, and Jan Kiepura.

In the past year a group of illustrated lectures was presented under the auspices of the University Extension Division. A series of public Monday night lectures by members of the University faculty is also contemplated for the coming year.

The Department of Fine Arts schedules a series of exhibitions of painting, design, and craft-work in its exhibition hall. These illustrate the work of students, local artists, national exhibitors, and occasionally of old masters. A series of dance recitals is regularly presented under the auspices of the Department of Physical Education for Women and the University Dramatic Society. An annual Greek drama has been presented by the University for twenty-one years.

### **THE ASSOCIATED STUDENTS**

The extracurricular activities are administered and controlled by the Associated Students, in which all undergraduates hold membership by virtue of paying at registration the regular University incidental fee. The organization has an executive council composed of a president, two vice-presidents, two representatives of groups, and the chairmen of five activity boards. The activity boards control the activities in definite fields, such as debating, athletics, dramatics, and publications; the council coordinates the work of these boards and administers the general business of the Association.

Members are entitled to participation in the affairs of the Associated Students, to a subscription to the *California Daily Bruin*, to free admission to many athletic contests, and to reduced rates to all other athletic contests, as well as to dramatic, social, and similar events coming under the jurisdiction of the Associated Students.

The Students' Coöperative Book Store is owned and operated by the Associated Students.

The *California Daily Bruin* and the *Southern Campus* are the official publications of the students. The *California Daily Bruin* contains news of all campus and college activities, official University announcements, and is under direct charge of an editor and a manager appointed by the Council. The *Southern Campus* is the yearbook and contains a record of the college life of the year. It is edited, managed, and financed by the students.

**UNIVERSITY RELIGIOUS CENTER**

In the immediate vicinity of the campus, at 10845 LeConte Avenue, is the University Religious Center where official representatives of the Jewish, Catholic, Episcopal, Methodist, Presbyterian, Baptist, Congregational, Disciple, Lutheran, Unitarian, and Latter Day Saints denominations, and the Y.M.C.A. have student headquarters. At this common center, which is open at all times, are held religious discussion groups, lectures, Bible classes, social gatherings, luncheons, dinners, and other student meetings.

The Y.W.C.A. occupies its own building, near the Hilgard Avenue entrance to the campus.

## COLLEGE OF LETTERS AND SCIENCE

THE CURRICULA of the College of Letters and Science are designed to provide opportunities and facilities for broadening the basis of culture, preparing a student for specialized professional studies, and developing intelligence.

Breadth of culture can be attained only through familiarity with the best that has been thought and known in the arts and the sciences. To this end the student is required to select courses in the general fundamentals of human knowledge, which are available in the lower division. In the more diverse and abundant offering of the upper division the student is relatively free to continue his liberal education along lines which appear best suited to his aptitudes, needs, and purposes.

Specialization in some field of study is generally regarded as indispensable to a well-rounded education. The pursuit of a special course of study, that is, of a "major," in the upper division necessarily requires a knowledge of antecedent courses known as "prerequisites." With the assistance of his counselor the student is expected to select those lower division courses which are definitely related to his proposed advanced study. Through such guidance and selection, continuity in a chosen field of learning is assured.

The College is vitally interested in the University's broad purposes of developing qualities of leadership, initiative, responsibility, and self-discipline. For this reason, considerable freedom of choice is permitted through a system of electives, that is, of courses not directly related either to the student's major subject or to the basic requirements of the curriculum of the College. A liberal education presupposes a reasonably wide distribution of courses which contribute to a desirable balance of intellectual interest and activity.

With a view to realizing the cultural objectives outlined above, each student in his freshman and sophomore years is required to consult an educational counselor, and during his junior and senior years is strongly urged to seek the advice and direction of the teaching faculty in his major department.

### LOWER DIVISION

#### *Junior Certificate Requirements*

The work of the lower division comprises the studies of the freshman and sophomore years. The Junior Certificate in the College of Letters and Science is required for admission to the upper division.

A student who transfers from another college of this University or from another institution must meet the Junior Certificate requirements; but, if credit of 60 or more units is allowed him, he is given upper division standing and may meet subject shortages concurrently with degree requirements.

Certain courses taken in the high school are accepted as fulfilling in part or in whole some of the Junior Certificate requirements. The student should so

arrange his high school program as to reduce the required work in the fields of foreign language, mathematics, and natural science. However, the fulfillment of Junior Certificate requirements in the high school does not reduce the number of units required in the University for the Junior Certificate (60) or for the degree (120).

The degree requirement of 120 units is calculated on the assumption that the student will normally take 15 units of work each semester, including the prescribed work in military science and physical education. The Junior Certificate will be granted on the completion of 60 units of college work and the fulfillment of the following general and specific requirements:

(a) *General University requirements.*†

Subject A.‡

Military Science and Tactics, or Naval Science and Tactics, 6 units  
(men).

Physical Education, 2 units.

(b) *Foreign Language.* At least 15 units in not more than two languages. Each year of high school work in a foreign language not duplicated by college work§ will be counted in satisfaction of 3 units of this requirement, without, however, reducing the total number of units required for the Junior Certificate (60) or for the degree (120). Courses given in English by a foreign language department will not be accepted in fulfillment of this requirement.

(c) *Matriculation Mathematics.* Elementary algebra and plane geometry. If these subjects were not completed in the high school, they may be taken in the University of California Extension Division or Summer Sessions, but will not be counted as a part of the 60 units.

(d) *Natural Science.* At least 12 units chosen from the following list, of which more than one unit must be in laboratory work. Courses marked with an asterisk meet the laboratory requirement.

High School Physics,\* 3 units (1 high school credit).

High School Chemistry,\* 3 units (1 high school credit).

Astronomy 1A, 1B, 2, 10.

Bacteriology 1,\* 6.

Biology 1, 12.

Botany 1A,\* 1B.\*

† For information concerning exemption from these requirements apply to the Registrar.

‡ An examination in Subject A (English Composition) is required of all entrants at the time of their first registration in the University. For further regulations concerning Subject A, see page 86.

§ Any student who because of lapse of time or other circumstance feels unable to continue successfully a language begun in high school may consult the department of the language concerned regarding the possibility of repeating all or a part of the work for credit. Such credit would count on the 60 units required for the Junior Certificate and on the 120 units required for the degree; but credit is not allowed toward the required 15 units in foreign language for both the high school and college work thus duplicated.

*Undergraduate Curricula*

Chemistry 1A,\* 1B,\* (2A-2B),\* 6A,\* 6B,\* 8.  
 Geography 3.  
 Geology 1A, 1B, 1C, 1D.  
 Paleontology 1.  
 Physics (1A-1B),\* (1C-1D),\* (2A-2B),\* 4A-4B.  
 Physiology (1, 2).<sup>\*</sup>  
 Zoölogy 1A,\* 1B.\*

(e) *Three Year-Courses.* A year-course chosen from *three* of the following five groups. Only the courses specified below are acceptable.

1. English, Public Speaking:

English 1A-1B, 36A-36B.

Public Speaking 1A-1B.

2. Foreign language (courses offered in satisfaction of this requirement may not include any of the work offered as part of the 15-unit requirement in language under requirement (b) above. No high school work may be counted on this requirement).

French, any two consecutive courses from the following: A, B, C, D, CD, 5A, 5B.

German, any two consecutive courses from the following: A, B, C, D, CD, 5A, 5B, 6A, 6B.

Greek, 1A-1B, 4A-4B, 101, 102.

Italian, any two consecutive courses from the following: A, B, C, D.

Latin, any two consecutive courses from the following: A, B, 1, 2, 5A, 5B, 102, 106.

Spanish, any two consecutive courses from the following: A, B, C, D, CD, 5A, 5B, 35.

3. Mathematics:

Any two of the following courses: Mathematics C, 2, 6, 7, 8, 3A, 3B, 4A.

4. Social Sciences:

Anthropology 1A-1B.

Economics 1A-1B.

Geography 1A-1B.

History 4A-4B, 5A-5B, 8A-8B.

Political Science 3A-3B, 31 and 32.

Psychology 1A-1B, 3A-3B.

5. Philosophy:

Philosophy 1A-1B, 2A-2B, 3A-3B.

*Summer Session Courses.* Summer session courses acceptable in meeting Junior Certificate requirements are listed each year in the bulletins of the summer sessions.

*University Extension.* Courses in the University of California Extension

Division may be offered in satisfaction of Junior Certificate requirements provided they bear the same number as acceptable courses in the regular session. (Equivalent courses bear the prefix "XL".)

*Honorable mention with the Junior Certificate.* Honorable mention will be granted with the Junior Certificate in accordance with the regulations on Honors, page 77.

#### UPPER DIVISION

Only those students who have been granted the Junior Certificate or who have been admitted with 60 or more units of advanced standing will be registered in the upper division.

The degree of Bachelor of Arts will be granted upon the following conditions:

1. The total number of units in college courses offered for the degree must be at least 120, of which at least 108 must be in courses chosen from the Letters and Science List of Courses (see page 64).

2. The student must attain at least a C average (one grade point for each unit of credit) in all courses undertaken by him in the University. See also regulations concerning negative grade points, page 41.

3. At least 50 units of college work must be completed after the receipt of the Junior Certificate.

4. At least 36 units must be completed (after receipt of the Junior Certificate) in upper division courses selected from the Letters and Science List of Courses (see page 64).

5. The student must complete a major (or curriculum) of not less than 24 upper division units in one of the subjects listed under the heading Organized Majors and Curricula for the Degree of Bachelor of Arts (see page 66).

Each student is required to take at least 6 units in his major (either 3 units each semester or 2 units one semester and 4 units the other) during his last or senior year.

6. The course in American Institutions 101 (or its equivalent) must be completed by all candidates for the degree.

7. All candidates for the degree must complete the final 24 units of work in the College of Letters and Science. At least 12 units of the final 24 must be taken in fall or spring sessions. The remaining 12 units may be taken in the University of California summer sessions. This regulation applies to students entering this University from other institutions or from the University of California Extension Division, and to students transferring from other colleges of this University.

8. Students who transfer to the University of California at Los Angeles from other institutions or from the University of California Extension Division with senior standing must complete at least 18 units in upper division

courses selected from the Letters and Science List of Courses (see below), including at least 12 units in the major department. This regulation does not apply to students transferring from other colleges within the University.

9. No student is permitted to change his major after the opening of the last semester of his senior year.

10. Any department offering a major in the College of Letters and Science may require from the candidates for the degree a general final examination in the department.

Students who fail in the lower division to attain a C average in any department may be denied the privilege of a major in that department.

The major department may submit to the Dean of the College the name of any student who in the opinion of the department cannot profitably continue in the major, together with a statement of the basis for this opinion, and the probable cause of the lack of success. The Dean may permit a change in the major, or may, with the approval of the President, require the student to withdraw from the College.

#### LETTERS AND SCIENCE LIST OF COURSES

At least 108 units offered for the degree of Bachelor of Arts must be in subjects chosen from the Letters and Science List of Courses, and the 36 units in upper division courses (numbered 100-199) required in the upper division must be selected from the same list.

Any course not included in the Letters and Science List of Courses but required or accepted by a department as part of its major or as a prerequisite therefor, will, for students offering a major in that department at graduation, but for no others, be treated as if it were on the Letters and Science List of Courses.

The following list refers to the courses as given in the departmental offerings for the year 1938-39:

**Agriculture.** Entomology 1, 134; Soil Science 110; Plant Pathology 120.

**Art.** 1A-1B, 2A-2B, 4A-4B, 21, 32, 121, 131A-131B, 137A-137B, 144A-144B, 161, 164A-164B, 172A-172B, 198A-198B.

**Astronomy.** All undergraduate courses.

**Bacteriology:**

Bacteriology. All undergraduate courses.

Public Health Nursing. All undergraduate courses.

**Botany.** All undergraduate courses.

**Business Administration.** 1A-1B, 131, 132, 136, 140, 145, 153, and 180.

**Chemistry.** All undergraduate courses except 10.

**Classical Languages.** All undergraduate courses.

**Economics:**

Economics. All undergraduate courses.

Sociology. All undergraduate courses.

Education. 112, 120, 123A-123B, 150, and 170.

**English:**

English. All undergraduate courses.

Public Speaking. All undergraduate courses.

French. All undergraduate courses.

Geography. All undergraduate courses.

Geology. All undergraduate courses.

**German:**

German. All undergraduate courses.

Swedish. All undergraduate courses.

History. All undergraduate courses.

Home Economics. All undergraduate courses except 32, 43A-43B, 102A-102B, 108, 175.

Italian. All undergraduate courses.

**Mathematics:**

Mathematics. All undergraduate courses except 19.

Civil Engineering. All undergraduate courses.

Mechanic Arts. Mechanical Engineering D, 1, 2, 6.

Military Science and Tactics. All undergraduate courses.

Music. All undergraduate courses except 7A-7B, 18A-18B, 46ABCD, 108A-108B, 112A-112B.

Naval Science and Tactics. All undergraduate courses.

Philosophy. All undergraduate courses.

Physical Education for Men. 1, 3.

Physical Education for Women. 2, 4, 44, 114A-114B, 133, 135, 180B.

Physics. All undergraduate courses.

Political Science. All undergraduate courses.

**Psychology:**

Psychology. All undergraduate courses.

Anthropology. All undergraduate courses.

**Spanish:**

Spanish. All undergraduate courses except 25.

Portuguese. All undergraduate courses.

Zoölogy. All undergraduate courses.

## ORGANIZED MAJORS AND CURRICULA IN THE COLLEGE OF LETTERS AND SCIENCE

A major (or curriculum) consists of a substantial group of coördinated upper division courses. The upper division unit requirement may represent courses in one or more departments. The details of the program must be approved by the officer in charge.

Special attention is directed to the courses listed as preparation for the major. In general, it is essential that these courses be completed before upper division major work is undertaken. In any event they are essential requirements for the completion of the major.

Not more than 30 units of upper division courses taken in one department after receiving the Junior Certificate will be counted toward the degree. *Note:* In economics, this limitation is inclusive of courses in business administration.

The major must, in its entirety, consist (1) of courses taken in *resident instruction* at this or another university (fall, spring, and summer sessions), or (2) of courses taken in the University of California Extension Division with numbers having the prefix XL, XB, or X.

The student must attain an average grade of C (1 grade point for each unit of credit) in all courses offered as part of the major (or curriculum).

Courses numbered in the 300 series (teachers' courses) or in the 400 series (professional courses) are not accepted as part of the major.

See further under Regulations for Study Lists, on page 40.

### CURRICULUM IN APPLIED PHYSICS

The Curriculum in Applied Physics consists of four years of undergraduate work, leading to the degree of Bachelor of Arts, and a fifth year of graduate study leading to the degree of Master of Science. The undergraduate program is as follows:

<i>Freshman</i>	Units first semester	Units second semester
Subject A (if required) .....	..	..
Physical Education .....	$\frac{1}{2}$	$\frac{1}{2}$
Military or Naval Science (men) .....	$1\frac{1}{2}$	$1\frac{1}{2}$
Physics 1A-1B .....	3	3
German 1A-1B or French 1A-1B .....	5	5
Mathematics 8-3A .....	3	3
English 1A-1B .....	3	3
	16	16

*Sophomore*

	Units first semester	Units second semester
Physical Education.....	1½	1½
Military or Naval Science (men).....	1½	1½
Physics 1C-1D.....	3	3
Chemistry 1A-1B.....	5	5
Mathematics 3A-4B.....	3	3
Year-course (social science, philosophy, or foreign language) .....	3	3
	—	—
	16	16

The above program for the first two years satisfies the requirements for the Junior Certificate, and contains the prerequisites for a major in physics.

*Junior*

Physics 107A-107B.....	3	3
Physics 110A.....	2	..
Physics 105.....	3	..
Mathematics 109-119.....	3	3
American Institutions 101.....	2	..
Chemistry 8.....	..	3
Mechanic Arts 17A.....	2	..
Mechanical Engineering D.....	..	2
Electives .....	..	3
	—	—
	15	14

Electives: Physics 110B, 121, 108A; Mathematics 125; Chemistry 9; English 31; Mechanical Engineering 6; Civil Engineering 8.

*Senior*

Physics 114A-114B.....	3	3
Physics 108B.....	4	..
Chemistry 110A-110B.....	3	3
Chemistry 111B.....	..	2
Electives .....	4	5
	—	—
	14	13

Electives: Physics 112, 113, 113C, 114C; Mathematics 122; Scientific German.

**ASTRONOMY**

*Preparation for the Major.*—Required: General lower division physics (Physics 1A-1B-1C-1D, or in exceptional cases, Physics 2A-2B, or their equivalents); plane and spherical trigonometry, plane analytic geometry, and differential and integral calculus (Mathematics C, F, 3A, 3B, 4A, or their equivalents). Recommended: a reading knowledge of French and German.

*The Major.*—At least eighteen upper division units of astronomy, including courses 103A-103B and 117A-117B, and, preferably, 104A-104B; and as many more upper division units as are required to total twenty-four, chosen from courses in astronomy, physics, or mathematics, according to some definite plan approved by the Department of Astronomy.

## BACTERIOLOGY

*Preparation for the Major.*—Bacteriology 1, Chemistry 1A-1B, Zoölogy 1A-1B, Botany 1A, Physics 2A-2B, French or German. Recommended: Chemistry 6A, 8, 9; Zoölogy 4.

*The Major.*—Bacteriology 103 (four units) and Bacteriology 199A-199B (four units) together with sixteen units of upper division work in related subjects selected from the following series: Bacteriology 104, Public Health 101A, 101B; Botany 105A, 119, 120, 195; Zoölogy 101, 105, 106, 107, 107C, 111, 111C; Chemistry 107A-107B, 110, 195; Home Economics 159; Soil Science 110; Plant Pathology 120. Courses are to be chosen with the approval of the department.

## BOTANY

*Preparation for the Major.*—Botany 1A-1B, 6, and 7, Chemistry 1A-1B or 2A-2B, German A, B. In addition to these courses, certain phases of botanical work require Geology 1A-1B, Physics 2A-2B, Bacteriology 1, and Zoölogy 1A.

*The Major.*—Seventeen units of upper division botany, including courses 105A-105B and 106A-106B; and in addition seven units in botany or in related courses—bacteriology, chemistry, geology, paleontology, and zoölogy—to be chosen with the approval of the department.

## CHEMISTRY

*Preparation for the Major.*—Required: Chemistry 1A-1B, which must be passed with a grade of C or better before any further work in chemistry is taken; Physics 1A-1C; trigonometry, Mathematics 8, 3A-3B, 4A, and a reading knowledge of German. Recommended: a second course in chemistry, Physics 1D, Mathematics 4B.

*The Major.*—All units in chemistry in excess of fourteen are counted as upper division units when taken by a student in the upper division. The minimum requirement for the major is: Chemistry 6A-6B (6), 8 and 9 (6), 110A-110B (6), 111A-111B (4). The remainder of the twenty-four required upper division units may be taken in chemistry or allied subjects in accordance with some definite plan approved by the department. A student whose work in the major subject does not average C or better will be required to withdraw from the department.

## ECONOMICS

*Preparation for the Major.*—Required: Economics 1A-1B, Business Administration 1A-1B, and a year-course in philosophy or in a social science other than economics.

*The Major.*—Twenty-four upper division units including Economics 100 and Business Administration 140. Six units may be offered toward the major from the following list of courses: Business Administration 131, 132, 136, 145, 153, 160A-160B, 180, or History 112A-112B (the six units must be entirely in one of these two departments).

A total of not more than 30 upper division units in economics and business administration may be counted toward the bachelor of arts degree.

Students planning to undertake graduate work in economic theory will do well to study mathematics. For those who have not the background or the time for more extended work, Mathematics 7 is recommended.

**CURRICULUM IN SOCIOLOGY.**—Students specializing in sociology are referred to page 75 of this Catalogue.

### ENGLISH

*Preparation for the Major.*—English 1A–1B and 36A–36B or the equivalent, with an average grade of C; History 5A–5B or the equivalent.

*Recommended:* Ancient and modern foreign languages. A reading knowledge of French or German is required for the M.A. degree. For the Ph.D. degree a reading knowledge of both French and German is required; a reading knowledge of Latin is essential for work in some fields.

*The Major.*—1. Students must present, in the first half of the junior year, a program to be examined and approved by the departmental adviser to upper division students. The program may be amended from time to time after consultation with the department representative.

2. The program must comprise 24 units of upper division courses, including (a) English 117J, to be taken in the junior year; (b) at least one of the type courses; (c) at least two of the period courses (see page 159); (d) English 151L, to be taken in the senior year. Public Speaking 155 and 156 may be applied toward the English major.

3. The student must maintain an average grade of C in upper division English courses, and at the end of the senior year must pass a comprehensive final examination.

### FRENCH

*Preparation for the Major.*—French A, B, C, D, or their equivalents. Two years of high school Latin or Latin A and B, or the equivalent, must be completed before the beginning of the senior year. History 4A–4B, Philosophy 3A–3B, and a modern language are strongly recommended.

*The Major.*—Required: twenty-four units of upper division French, including courses 101A–101B, 109A–109B, 112A–112B. Any of the remaining upper division courses except 140A–140B and 109M–109N may be applied on the major. With the permission of the department four units of the twenty-four may be satisfied by appropriate upper division courses in the following departments: English, German, Greek, Latin, Spanish, Italian, or philosophy.

### GEOGRAPHY

*Preparation for the Major.*—Required: Geography 1A–1B, 3, and 5B, Geology 1C or 1A. Recommended: Anthropology 1A–1B, Botany 1A, Economics 1A–1B, Geology 1B, one year of history, Physics 1A–1B, Political Science 3A–3B, and at least one modern foreign language.

*The Major.*—The minimum requirement for the major is eighteen or twenty units of upper division work in geography, including courses 101, 113, and 115, plus six or three units selected from courses in fields approved by the department; a list of such courses may be secured from the department adviser.

### GEOLOGY

*Preparation for the Major.*—Required: Chemistry 1A–1B; elementary physics; Civil Engineering 1LA, 1LB, 1FA, 1FB (geology section); Geology 1A–1B; Mineralogy 3A–3B; trigonometry; engineering drawing. Certain of these preparatory courses may be postponed to the upper division by permission of the department. Recommended: French and German.

*The Major.*—Courses 102A–102B, 103, 107, 199A–199B, Paleontology 111, and at least four units of other upper division courses in the department which may include paleontology and mineralogy. Certain allied courses in chemistry, physics, mathematics, biological sciences, and geography are recommended. The student's program is to be made out in accordance with some definite plan approved by the department.

## GERMAN

*Preparation for the Major.*—Required: German A, B, C, D, and 6A-6B or their equivalents. Recommended: History 4A-4B, English 1A-1B, Philosophy 3A-3B.

*The Major.*—Twenty-four units in upper division courses, including courses 105A-105B, 106A-106B, 117, 118A-118B, and at least four units made up from the senior courses 111A-111B and 119. Students looking forward to the secondary credential should take also 106C-106D.

## GREEK

*Preparation for the Major.*—Required: either course 1A-1B or 4A-4B, or two years of high school Greek; and course 5A or 5B, or 100A-100B (which may be taken concurrently with courses 101 and 102); and History 111A-111B. Recommended: Latin, French, German, Italian, Spanish.

*The Major.*—Courses 101, 102, 103, 104, 105, 114, plus six units of upper division courses in Latin, English, French, German, Italian, Spanish, philosophy, ancient or medieval history, to be chosen with the approval of the department.

## HISTORY

*Preparation for the Major.*—Required: (1) History 4A-4B or 5A-5B, and (2) History 8A-8B, or equivalent preparation for students transferring from other departments or other institutions. Recommended: Political Science 3A-3B, Political Science 31A-31B, Economics 1A-1B, Geography 1A-1B and Philosophy 3A-3B. One of these recommended courses may be substituted for one of the required history courses, with the approval of the department.

Recommended: French, German, Latin, Spanish, Italian, or Scandinavian language. For upper division work in history a reading knowledge of one of these is usually essential. For language requirements for graduate work, see the ANNOUNCEMENT OF GRADUATE STUDY.

*The Major.*—Twenty-four units of upper division work in history. In certain cases two to six upper division units in either political science or economics approved by the department may be counted on the major.

The major must include a year course in European history [one of the following: 111A-111B, 112A-112B, 121A-121B, 142A-B-C-D (any two consecutive semesters), 153A-153B] and a year course in American history (one of the following: 162A-162B, 171A-171B).

The major must also include History 199A-199B in a field for which preparation has been made in the junior year. This course may not be entered in February. (See below, under History 199, page 180.) Fields in which work in History 199 is normally offered are: Medieval Europe, Modern Europe, Great Britain and the Empire, United States, and Hispanic America.

## HOUSEHOLD SCIENCE

*Preparation for the Major.*—Home Economics 11A-11B; Chemistry 1A-1B, 8; Economics 1A-1B; Physiology 1.

*The Major.*—Required: eighteen units in home economics, including (1) course 162A-162B; (2) at least six units chosen from 110, 118A, 120; (3) five to eight units chosen from 125, 159, 164A-164B, 168, 199A, 199B; and six additional units to be selected with the approval of the department from upper division courses in business administration, chemistry, economics, psychology, or zoölogy.

CURRICULUM IN INTERNATIONAL RELATIONS

This curriculum is designed primarily for the students in the College of Letters and Science whose interests, while not specialized, fall in the field of foreign relations and diplomacy. Those interested especially in the American Foreign Service should consult the adviser.

LOWER DIVISION

Required:

Political Science 3A-3B, American Government.....	6 units
History 4A-4B, History of Modern Europe, or 5A-5B, History of England, or 8A-8B, History of the Americas.....	6
Economics 1A-1B, Principles of Economics.....	6

Recommended:

Political Science 31, European Democracies; 32, European Dictatorships .....	6
Geography 1A-1B, Elements of Geography.....	6

UPPER DIVISION

Candidates for the degree in this curriculum will be required to give evidence of their ability to read the current literature in the field in one modern language: French, German, Spanish, or Italian. With special permission, students may offer Oriental or Slavic languages. Candidates for honors must enroll in Political Science 199A-199B, Section 2 (International Relations). The student must maintain an average grade of C in all upper division courses. The curriculum comprises 36 upper division units, distributed as follows:

I. Required (20 units):

Political Science 125, Foreign relations.....	3 units
Political Science 127, International Relations.....	3
Political Science 133A-133B, International Law.....	6
History 142c-142d, Modern Continental Europe since 1648, or 148A-148B, Diplomatic History of Europe in the Nineteenth Century, or 153A-153B, Social and Political History of Modern England .....	6
Geography 181, Current Problems in Political Geography.....	2

II. Required: Nine units in one of the four fields of specialization named below:

A. *Far Eastern Affairs*

Political Science 136, Problems of the Pacific Area.....	3 units
Political Science 138, International Relations of the Far East..	3
History 191A-191B, History of the Far East.....	6
Geography 124, The Geography of Asia.....	3

B. *Latin American Affairs*

Political Science 126, Contemporary Hispanic American International Relations.....	3
Political Science 151, The Governments of Hispanic America...	3
History 162A-162B, History of Hispanic America from 1808 to the Present.....	6
Geography 122A-122B, The Geography of Latin America.....	6

*Undergraduate Curricula**C. European Affairs*

Political Science 154, The Governments of Central Europe.....	3 units
Political Science 155, The Governments of Eastern Europe.....	3
History 148A-148B, Diplomatic History of Europe in the Nineteenth Century (if not offered under I, above).....	6
History 149A-149B, History of Russia.....	4
History 142A-142B, Modern Continental Europe since 1648.....	6
Geography 123A-123B, The Geography of Europe.....	4

*D. British Empire Affairs*

Political Science 153, The Government of the British Empire...	2
History 153A-153B, Social and Political History of Modern England: 1485 to the Present.....	6
History 152A-152B, Constitutional History of English.....	4
History 155A-155B, History of the British Empire.....	4
Geography 121, The Geography of Anglo-America.....	3

## III. Remaining units necessary to complete the curriculum selected from:

Political Science 110, History of Political Ideas.....	3
Political Science 112, Modern Political Thought.....	3
History 112A-112B, Economic History of the Western World....	6
History 144A-144B, History of Northern and Eastern Europe..	4
Economics 195, Principles of International Trade.....	3

## LATIN

*Preparation for the Major.*—Required: four years of high school Latin, or two years of high school Latin and courses C and D; courses 3A-3B, 5A-5B. Recommended: Greek, French, German, Italian, Spanish.

*The Major.*—Courses 102, 104, 106, 115, 117, 120, 191, plus six units of upper division courses in Latin, English, French, German, Greek, Italian, Spanish, philosophy, ancient or medieval history, to be chosen with the approval of the department.

## MATHEMATICS

*Preparation for the Major.*—Required: Mathematics C (or the equivalent), 8, 3A, 3B, 4A, and 6, with an average grade of C or higher, except that students who have completed two years of high school algebra and also trigonometry may be excused, upon examination, from course 8. Course 109 may be replaced, by permission, by the equivalent course 4B. Recommended: physics, astronomy, and a reading knowledge of French and German.

*The Major.*—Courses 111, 112A-112B, and 119, together with fourteen additional upper division units, must be included in every mathematics major. The student must maintain an average grade of C or higher in upper division courses in mathematics.

Students who are preparing to teach mathematics in high school are advised to elect courses 101, 102, 104, 190.

## CURRICULUM FOR MEDICAL TECHNICIANS

(with the major in Bacteriology, Chemistry, or Zoölogy)

## Required:

1. The premedical curriculum (see page 82).
2. The following courses, together with such other courses as may be required for the major in bacteriology, chemistry, or zoölogy:
 

Bacteriology 1, General Bacteriology.....	4 units
Bacteriology 103, Advanced Bacteriology.....	4
Chemistry 9, Methods of Organic Chemistry.....	3
Chemistry 107A-107B, Biological Chemistry.....	6
(or Home Economics 159, Metabolism Methods, 3 units)	
Zoölogy 4, Microscopical Technique.....	2
Zoölogy 111, Parasitology.....	2
Zoölogy 111c, Parasitology Laboratory.....	2

## PHILOSOPHY

*Preparation for the Major.*—Twelve units of lower division courses in philosophy, including course 3A-3B.

*The Major.*—Twenty-four units in upper division courses, not more than six of which may be taken in allied courses in other departments with the approval of the departmental adviser. Not later than the beginning of the senior year, the student must submit for approval to the department a statement of the courses which he expects to offer in fulfillment of major requirements for graduation.

## PHYSICS

*Preparation for the Major.*—Required: Physics 1A, 1B, 1C, 1D, or their equivalents (in meritorious cases Physics 2A-2B may be accepted); Chemistry 1A-1B; Mathematics C, 3A, 3B, 4A, or their equivalents. Recommended: a reading knowledge of German and French.

*The Major.*—Twelve units of upper division physics, consisting of 105, 107A, 108B, 110A; and twelve units chosen from other upper division courses in physics, Mathematics 119, 122A-122B, 124, 125, Chemistry 110, and Astronomy 117A-117B, 199A-199B. At least eight of these latter twelve units shall be courses in the Department of Physics.

See also Applied Physics, page 66.

## POLITICAL SCIENCE

*Preparation for the Major.*—Political Science 3A-3B, or its equivalent, and one of the following: Political Science 10, 31, 32, 34. Recommended: Economics 1A-1B, Geography 1A-1B, History 4A-4B, 5A-5B, or 8A-8B.

Students intending to select political science as a major subject are advised to take one course in political science throughout the year in each of the freshman and sophomore years.

*The Major.*—Twenty-four units in upper division courses, not more than four of which may be taken in courses approved by the department in anthropology, business administration, economics, geography, history, philosophy, psychology, or sociology. The work must be divided among the different fields of political science in accordance with the requirements of the department. A copy of the regulations may be secured from the departmental adviser. The student must maintain an average grade of C or higher in upper division courses in political science.

## PSYCHOLOGY

*Preparation for the Major.*—(1) Psychology 1A-1B or 3A-3B; (2) nine units selected from the following (at least six of these units to be in one subject): physical science, life science, Greek, calculus; (3) a semester of logic.

*The Major.*—Psychology 106A or 107A; and fifteen other units, all of which may be in upper division courses in psychology, or which may include Anthropology 103 or 125 or both. The six remaining units may be in upper division courses in psychology, or, subject to the approval of the department, in related courses offered by other departments.

## CURRICULUM IN PUBLIC SERVICE

The Curriculum in Public Service is designed to be of assistance to students who wish to qualify themselves for positions in government work.

## LOWER DIVISION

## Required:

Business Administration 1A-1B, Principles of Accounting.....	6 units
Economics 1A-1B, Principles of Economics.....	6
Political Science 3A-3B, American Government.....	6
In certain fields, Sociology 30A-30B, Psychology 1A-1B, and six units of lower division history are prerequisite to upper division courses included in the curriculum.	

## Recommended:

English 1A-1B, First Year Reading and Composition.....	6
Public Speaking 1A-1B, Elements of Public Speaking.....	6
Mathematics 8, College Algebra.....	3

## UPPER DIVISION

Required: Thirty-six units of work selected from one of the following fields. Variations in the programs here outlined may be made, with the approval of the adviser, to fit the needs of individual students. The student must maintain an average grade of C or higher in all upper division courses.

A. *Financial Administration*

Business Administration 140, Business Statistics.....	4 units
Business Administration 160A-160B, Advanced Accounting.....	6
Economics 131A-131B, Public Finance.....	4
Political Science 141, Political Parties and Practical Politics...	3
Political Science 143, Legislatures and Legislation.....	2
Political Science 156, Administrative Law.....	3
Political Science 157A-157B, Constitutional Law.....	8
Political Science 163, Municipal Administration.....	3
Political Science 181, Principles of Public Administration.....	3
Political Science 182, Lectures in Public Administration.....	1

B. *Public Management*

Business Administration 140, Business Statistics.....	4
Business Administration 153, Personnel Management.....	3
Economics 131A-131B, Public Finance.....	4
Economics 132, Economics of Industrial Control.....	3
Economics 150, Labor Economics.....	3
Political Science 113, American Political Theory.....	3

Political Science 141, Political Parties and Practical Politics . . .	3 units
Political Science 143, Legislatures and Legislation . . . . .	2
Political Science 146, Public Opinion and Propaganda . . . . .	2
Political Science 156, Administrative Law . . . . .	3
Political Science 158, Government and Business . . . . .	3
Political Science 162, Municipal Government . . . . .	3
Political Science 163, Municipal Administration . . . . .	3
Political Science 181, Principles of Public Administration . . . . .	3
Political Science 182, Lectures in Public Administration . . . . .	1
Political Science 183, Administrative Functions . . . . .	3

*C. Public Welfare Administration*

Business Administration 140, Business Statistics . . . . .	4
Business Administration 153, Personnel Management . . . . .	3
Economics 152, Social Insurance . . . . .	3
Sociology 120, Social Pathology . . . . .	3
Sociology 181, Care of Dependents . . . . .	2
Political Science 112, Modern Political Thought . . . . .	3
Political Science 141, Political Parties and Practical Politics . . .	3
Political Science 156, Administrative Law . . . . .	3
Political Science 163, Municipal Administration . . . . .	3
Political Science 181, Principles of Public Administration . . . . .	3
Political Science 182, Lectures in Public Administration . . . . .	1
Political Science 183, Administrative Functions . . . . .	3
Psychology 112, Child Psychology . . . . .	3
Psychology 168, Abnormal Psychology . . . . .	3

*D. Public Relations*

Business Administration 140, Business Statistics . . . . .	4
Business Administration 153, Personnel Management . . . . .	3
Economics 150, Labor Economics . . . . .	3
History 171A-171B, History of the United States . . . . .	6
Political Science 125, Foreign Relations of the United States . . .	3
Political Science 127, International Relations . . . . .	3
Political Science 141, Political Parties and Practical Politics . . .	3
Political Science 142, Elections . . . . .	2
Political Science 143, Legislatures and Legislation . . . . .	2
Political Science 146, Public Opinion and Propaganda . . . . .	2
Political Science 156, Administrative Law . . . . .	3
Political Science 162, Municipal Government . . . . .	3
Political Science 181, Principles of Public Administration . . . . .	3

**CURRICULUM IN SOCIOLOGY**  
(with the major in Economics)

The following courses, for students taking the Curriculum in Sociology, constitute the major in Economics:

**LOWER DIVISION**

Required:

Economics 1A-1B, Principles of Economics . . . . .	6 units
Sociology 30A-30B, Social Institutions . . . . .	6
Psychology 1A-1B, General Psychology . . . . .	6
Business Administration 1A, Principles of Accounting . . . . .	3

## Recommended:

Anthropology 1A-1B, General Anthropology.....	6 units
Geography 1A-1B, Elements of Geography.....	6
Philosophy 3A-3B, History of Philosophy.....	6
Philosophy 40, Problems of Ethics and Religion.....	2
Biology 1, Fundamentals of Biology.....	3
Biology 12, General Biology.....	3

## UPPER DIVISION

## Required:

Sociology 120, Social Pathology.....	3
Sociology 121, Social Processes.....	3

## Three of the following four courses:

Sociology 181, Care of Dependents.....	2
Sociology 182, Crime and Delinquency.....	2
Sociology 186, Population Problems.....	3
Sociology 189, Culture and Race Relations.....	2

## One of the following two courses:

Psychology 145A-145B, Social Psychology.....	4
Psychology 147, Psychological Methods in the Social Sciences	3

## One of the following two courses:

Business Administration 140, Business Statistics.....	4
Psychology 107A, Mental Measurements.....	3

In addition to the above, sufficient selections from the following list of recommended upper division courses must be completed to bring the total to twenty-four units.

## Recommended:

Business Administration 153, Personnel Management.....	3 units
Economics 100, Economic Theory.....	2
Economics 107, Comparative Economic Systems.....	2
Geography 108, The Geographic Basis of Human Society.....	3
Home Economics 168, Family Relationships.....	2
Philosophy 173, The Social Mind.....	2
Sociology 199, Special Problems.....	2

## SPANISH

*Preparation for the Major.*—(1) Spanish A, B, C, D, and 5A-5B or 35, or the equivalent to be tested by examination. (2) Students who wish to make Spanish their major subject must have maintained at least an average grade of C in the college courses in Spanish taken prior to obtaining the Junior Certificate. (3) A minimum of two years of high school Latin, French, German, or Italian, or Latin A and B, or English 36A-36B, or History 8A-8B. This requirement must be completed before entering upon the senior year. (4) Only students who pronounce Spanish correctly and read it fluently will be admitted to upper division courses. Students transferring from other institutions may be tested by oral examinations. (5) English 1A-1B.

**NOTE.**—Students who have not completed Spanish 5A-5B or 35 in the lower division must take 101A-101B.

*The Major.*—Required: twenty-four units of upper division courses including 102A-102B and 116A-116B. The remaining units may include not more than four units of upper division work in French or Latin, or may be completed from courses 101, 104, 108, 109, 110, 114, 115, and 124.

Students who fail to maintain at least an average grade of C in the Spanish courses taken in the upper division will, upon approval of the Dean of the College of Letters and Science, be excluded from the major in Spanish.

The department recommends as a supplementary choice among the free electives: (1) history of the country or countries most intimately connected with the major; (2) additional study in Latin and English literature; (3) French, German, Greek, and Italian language and literature; (4) the history of philosophy.

### ZOÖLOGY

*Preparation for the Major.*—Zoölogy 1A-1B, and one year of college chemistry, preferably Chemistry 1A-1B. French and German are recommended.

*The Major.*—Eighteen units of upper division work in zoölogy and six units of upper division work chosen from zoölogy or from *related* courses in anthropology, bacteriology, botany, chemistry, entomology, genetics, geography, home economics, paleontology, philosophy, physics, physiology, or psychology.

### HONORS

#### *Honorable Mention with the Junior Certificate.*

1. Honorable mention is granted with the Junior Certificate to students who attain at least an average of two grade points for each unit undertaken.
2. The list of students who receive honorable mention with the Junior Certificate is sent to the chairmen of departments.
3. A student who gains honorable mention has thereby attained the honors status for his first semester in the upper division.

#### *Honor Students in the Upper Division.*

1. An honors list is prepared in the fall semester, and also in the spring semester if the Committee on Honors so decides. This list is published in the CATALOGUE OF OFFICERS AND STUDENTS. The department of the student's major is named in the list.
2. The honors list includes the names of:
  - (1) Students who have received honorable mention with the Junior Certificate and who are in their first semester of the upper division.
  - (2) Upper division students who have an average of at least two grade points for each unit undertaken in all undergraduate work at the University of California at Los Angeles.
  - (3) Other upper division students specially approved for listing in the honors status by the Committee on Honors, either upon recommendation made to the Committee by departments of instruction, or upon such other basis as the Committee may determine.

*Honors with the Bachelor's Degree.*

1. Honors are granted at graduation only to students who have completed the major with distinction, and who have a general record satisfactory to the Committee on Honors.
2. Before Commencement each department determines, by such means as it deems best (for example, by means of a general final examination), which students it will recommend for honors at graduation, and reports its recommendations to the Registrar.
3. Students who, in the judgment of their departments, display marked superiority in their major subject, may be recommended for the special distinction of highest honors.
4. The Committee on Honors will consider departmental recommendations and will confer with the several departments about doubtful cases. The Committee is empowered at its discretion to recommend to the Committee on Graduation Matters that honors be not granted to any student who has failed to attain a B average in the major, or in the upper division, or in all undergraduate work.
5. The list of students to whom honors or highest honors in the various departments have been awarded is published in the COMMENCEMENT PROGRAMME.

**PREPARATION FOR VARIOUS PROFESSIONAL CURRICULA**

Certain courses given at the University of California at Los Angeles may be used as preparatory to admission to the professional colleges and schools of the University in Berkeley and in San Francisco.

**PRE-CHEMISTRY**

In addition to the major in chemistry in the College of Letters and Science, the first two years of the curriculum of the College of Chemistry, leading to the B.S. degree, are offered at Los Angeles. To complete this curriculum, the student must transfer to the Berkeley departments of the University of California at the end of his second year. Before entering upon this program, he should consult the pre-chemistry adviser; ordinarily the student in chemistry finds more freedom in his program by enrolling in the College of Letters and Science.

*Preparation.* Students who propose to enter the College of Chemistry should include in their high school programs physics (1 unit), chemistry (1 unit), mathematics, including trigonometry (3 units), German or French (2 units), and geometrical drawing (1 unit). Without this preparation it will be difficult or impossible to complete the required curriculum within four years.

A satisfactory reading knowledge of scientific German before the junior year is essential. A reading knowledge of French will also be of advantage.

**PRELIMINARY CURRICULA**

The College of Dentistry offers three curricula: the first and second lead to the degree of Bachelor of Sciences and Doctor of Dental Surgery, with a major in restorative dentistry or preventive dentistry, and the third (limited to women students) provides training in dental hygiene and leads to the Bachelor of Science degree.

The academic (undergraduate) and professional curriculum leading to the degrees of B.S., D.D.S., covers six years. The degree of Bachelor of Science is awarded at the end of five years—two years in the College of Letters and Science at Berkeley or Los Angeles, followed by three years of the four-year professional curriculum in the College of Dentistry at San Francisco—and the degree of Doctor of Dental Surgery is awarded after one additional year (the fourth year of the professional curriculum) in San Francisco.

For the training of dental hygienists a two-year professional curriculum is offered. Beginning in August, 1938, every applicant for admission to this two-year professional curriculum in dental hygiene will be required to present credentials covering two years of academic instruction comparable in all respects to the first two years of instruction in the six-year dental curricula. On completion of the curriculum for dental hygienists, the degree of Bachelor of Science will be awarded. The ANNOUNCEMENT OF THE COLLEGE OF DENTISTRY contains detailed information about the curriculum in dental hygiene.

**PROGRAM OF FIRST AND SECOND YEARS**

(At Los Angeles)

The program given hereunder comprises the first two years of the six-year curricula and leads to the Junior Certificate in the College of Letters and Science which must be obtained before entrance upon the third year.

The student seeking admission to one of the six-year curricula is advised to take the following subjects in high school: English, 3 units; history, 1 unit; mathematics, 3 units (algebra, plane geometry, and trigonometry); chemistry, 1 unit; physics, 1 unit; foreign language, 3 units. The language begun in high school should be continued in the University. The Junior Certificate requirements will be more easily met if foreign language has been pursued four years in high school.

## Undergraduate Curricula

	Units first semester	Units second semester
<i>First Year</i>		
Subject A (examination in English composition).....	..	..
Physical Education .....	$\frac{1}{2}$	$\frac{1}{2}$
Military or Naval Science.....	$1\frac{1}{2}$	$1\frac{1}{2}$
Chemistry 1A-1B.....	5	5
*Physics 2A-2B.....	4	4
†English .....	3	3
Electives as necessary to make up units.....	2	2
	16	16
<i>Second Year</i>		
Military or Naval Science.....	$1\frac{1}{2}$	$1\frac{1}{2}$
Physical Education .....	$\frac{1}{2}$	$\frac{1}{2}$
Chemistry 8 .....	3	..
Foreign Language .....	3	3
†Year Course.....	3	3
†Year Course.....	3	3
‡Electives (foreign language if necessary to complete 15 units for Junior Certificate).....	1	4
	15	15

Information concerning the third, fourth, fifth, and sixth years in the curricula leading to the degree of Bachelor of Science and Doctor of Dental Surgery in this college, will be found in the ANNOUNCEMENT OF THE COLLEGE OF DENTISTRY. Address the Dean of the College of Dentistry, University of California, Medical Center, San Francisco.

## PRE-ENGINEERING CURRICULA

## CIVIL ENGINEERING

	Units first semester	Units second semester
<i>Freshman</i>		
Subject A (if required).....	..	..
§Military Science 1A-1B .....	$1\frac{1}{2}$	$1\frac{1}{2}$
Physical Education.....	$\frac{1}{2}$	$\frac{1}{2}$
Mathematics 8-8A.....	3	3
Physics 1A-1B.....	3	3
Chemistry 1A-1B.....	5	5
Civil Engineering 11A-11B.....	2	2
Civil Engineering 11FA-11FB.....	1	1
Civil Engineering 3 (s.s.).....	..	(3)
	16	16

\* Zoölogy 1A, 1B, or Physiology 1A, 10 will be accepted as substitutes for Physics 2A-2B.

† Note requirement (e) for the Junior Certificate and the lists of courses accepted as satisfying this requirement (see page 62).

‡ Suggested electives: Foreign language; Bacteriology 1, 2, or 8; Anthropology 1A, determined by the student's interest and the adviser's recommendation.

§ Students in the Naval Unit will substitute Naval Science 1A-1B (freshman year), 2A-2B (sophomore year),  $1\frac{1}{2}$  units per semester. Such students must also complete Astronomy 9, 2 units, and 10, 2 units, during the freshman and sophomore years. For these students Astronomy 10 replaces Astronomy 3. See page 128.

*Sophomore*

	Units first semester	Units second semester
§ Military Science 2A-2B.....	1½	1½
Mathematics 3C-4B.....	6	3
Physical Education.....	½	½
Mechanical Engineering 2.....	..	3
Astronomy 3.....	..	1
Civil Engineering 8.....	..	2
Physics 1C-1D.....	3	3
Geology 1A.....	3	..
† Mechanical Engineering 1.....	3	..
† Chemistry 8.....	3	..
Elective.....	..	..
	—	—
	*	*

## MECHANICAL, ELECTRICAL, AND † AGRICULTURAL ENGINEERING

*Freshman*

Subject A (if required).....	..	..
Military Science 1A-1B or Naval Science 1A-1B.....	1½	1½
Physical Education.....	½	½
Mathematics, 8, 3AB.....	3	6
Physics 1A-1B.....	3	3
Chemistry 1A-1B.....	5	5
Civil Engineering 1LA.....	2	..
Civil Engineering 1FA.....	1	..
	—	—
	16	16

*Sophomore*

Military Science 2A-2B or Naval Science 2A-2B.....	1½	1½
Physical Education.....	½	½
Mathematics 4A-4B.....	3	3
Mathematics 10A-10B.....	2	2
Physics 1C-1D.....	3	3
Civil Engineering 8.....	2	..
Mechanical Engineering 10B.....	..	2
Mechanical Engineering 2, 6.....	3	3
Electives.....	..	..
	—	—
	*	*

§ Students in the Naval Unit will substitute Naval Science 1A-1B (freshman year), 2A-2B (sophomore year), 1½ units per semester. Such students must also complete Astronomy 9, 2 units, and 10, 2 units, during the freshman and sophomore years. For these students Astronomy 10 replaces Astronomy 8. See page 128.

† Mechanical Engineering 1 is required only in the Transportation and Irrigation Engineering groups; Chemistry 8 is required only in the Sanitary and Municipal Engineering group.

\* Normal total, 16 units.

‡ Students intending to major in Agricultural Engineering should omit Civil Engineering 8 and Mechanical Engineering 10B, and adjust their programs so as to include Economics 1A-1B and Geology 1A.

**PRELEGAL CURRICULUM**

Professional instruction in law in the University of California is given in the School of Jurisprudence in Berkeley and in the Hastings College of the Law in San Francisco.

Admission to the School of Jurisprudence in candidacy for the degree of Bachelor of Laws in the three-year curriculum is limited to students holding an approved bachelor's degree in arts or science, which may be obtained in the College of Letters and Science of the University of California at Los Angeles. The School of Jurisprudence also offers a graduate curriculum of one year leading to the degree of Doctor of Science of Law (J.S.D.), open only to applicants who hold both an academic bachelor's degree and an approved professional degree in law.

The Hastings College of the Law offers a curriculum of three years leading to the degree of Bachelor of Laws; admission to this college is limited to holders of the Junior Certificate or its equivalent. The College of Letters and Science of the University of California at Los Angeles grants this Junior Certificate upon completion of the requirements stated on page 60.

**PREMEDICAL CURRICULUM: THREE YEARS**

It is assumed that as preparation for this curriculum the student will have completed in the high school the following subjects: English, 3 units; history, 1 unit; mathematics, 2 units (elementary algebra and plane geometry); chemistry, 1 unit; physics, 1 unit; foreign language (preferably French or German), 2 units. The Junior Certificate requirements will be met more easily if the foreign language has been pursued four years in the high school. It is also desirable that a course in freehand drawing be taken in high school.

It is important for students to bear in mind that the class entering the Medical School is limited, the basis of selection being scholarship during the premedical years; in the past there have been a great many more applicants than could be admitted. Premedical students who, upon the conclusion of their third (junior) year, find themselves thus excluded from the Medical School, will be unable to obtain the bachelor's degree in the College of Letters and Science at the end of the fourth year, unless they plan their program with this contingency in mind. They should, therefore, either enter a departmental major at the beginning of the junior year, at the same time meeting all premedical requirements, or include in their premedical program a sufficient number of appropriate courses in some major department. Provision for the completion of such a major does not prejudice the student's eligibility for admission to the Medical School.

For matriculation in the Medical School—the five-year professional curriculum leading to the degree of Doctor of Medicine—the student must have attained senior standing in the premedical curriculum in the College of Letters and Science (see page 84).

All applicants for admission to the Medical School are required to take the Medical Aptitude Test of the Association of American Medical Colleges. This examination will be given in December, 1938, for students applying for admission to a medical school in 1939; information concerning the place and date may be obtained from the Registrar.

Applications for admission to the Medical School for any academic year must be filed with the Registrar, University of California, Berkeley, not later than March 1 prior to the opening of the fall session. Later applications presented by resident students of the University are subject to a special fee. Applications received after April 1 will not be considered in making up the list of matriculants for the ensuing academic year.

The number of students who may be admitted to each first-year class from institutions outside the State of California is limited to five, and of these five not more than one will be selected from institutions of any one state.

Owing to the limitation of enrollment in the classes of the Medical School, candidates are selected on the basis of their academic standing in subjects of the premedical curriculum, particular emphasis being placed on the required subjects.

The Committee on Admissions to the Medical School is authorized to refuse admission to students who have low academic records and to those of obvious physical, mental, or moral disability.

An applicant for admission to the Medical School who in any year is unsuccessful in gaining admission to the School on account of an inferior scholarship record may at once present a second application for admission. With this application he should submit a detailed statement of the studies and other employments, if any, with which he intends to further prepare for the work of the Medical School. Obviously, this statement should be submitted to the Committee on Admissions before the additional preparatory work is undertaken. If his plan receives the Committee's approval, his name will then be listed with the names of other applicants for admission to the Medical School at the beginning of the next succeeding academic year, and his success in gaining admission will depend upon his scholarship rank as a member of that group.

An accepted applicant who is unable to begin his work in the Medical School in August, or who actually enters but finds it necessary to withdraw in his first year, loses his place and, if he desires to begin work in a later year, is required to reapply with the group of applicants for that year. Successful candidates must pass a satisfactory medical examination before registering in the School. Students in attendance in San Francisco are examined annually.

The State law governing the practice of medicine in California prescribes that every person, before practicing medicine or surgery, must produce satisfactory testimonials of good moral character and a diploma issued by some legally chartered medical school, whose requirements meet in every respect the Medical Practice Act of California as attested by the last annual approval of

the California State Board of Medical Examiners. The requirements for admission to the University of California Medical School meet and exceed those set by the Association of American Medical Colleges.

For further information see the annual ANNOUNCEMENT OF THE MEDICAL SCHOOL, to be obtained from the Dean's office, University of California Medical School, Medical Center, Third and Parnassus avenues, San Francisco.

The following tabulated curriculum represents a satisfactory arrangement of work to meet the entrance requirements for the Medical School:

### PREMEDICAL PROGRAM

A. For students who have completed *two years* of foreign language in high school.

	Units first semester	Units second semester
<i>First Year</i>		
Subject A (examination or course in Subject A).....	..	..
Military or Naval Science (for men).....	1½	1½
Physical Education.....	½	½
Chemistry 1A-1B.....	5	5
*English 1A-1B.....	3	3
†Foreign language.....	5	3 or 5
Electives as necessary to make up units.....	..	..
	—	—
	16	16
<i>Second Year</i>		
Military or Naval Science (for men).....	1½	1½
Physical Education.....	½	½
Zoölogy 1A-1B.....	5	5
Year course (Requirement "e" for the Junior Certificate)..	3	3
Year course (Requirement "e" for the Junior Certificate)..	3	3
Chemistry 8.....	3	..
Chemistry 6A.....	..	3
	—	—
	16	16
<i>Third Year</i>		
American Institutions 101.....	2	..
Physics 2A-2B.....	4	4
Electives.....	10	12
	—	—
	16	16

\* English 1A-1B. If the student fails to pass the examination in Subject A it will be necessary to postpone English 1A-1B until he has completed the course in Subject A, for which no units are allowed.

† Foreign Language. The Medical School requirement is 10 units of credit in either French or German, and the Junior Certificate requirement is 15 units of foreign language in not more than two languages. These may be satisfied partly in the high school. The student's program should be made to satisfy these requirements.

B. For students who have completed *four years* of foreign language in high school.

	Units first semester	Units second semester
<i>First Year</i>		
Subject A (examination or course in Subject A) .....	..	..
Military or Naval Science (for men).....	1½	1½
Physical Education.....	½	½
Chemistry 1A-1B.....	5	5
*English 1A-1B.....	3	3
Year course (Requirement "e" for the Junior Certificate)..	3	3
Year course (Requirement "e" for the Junior Certificate)..	3	3
	—	—
	16	16
<i>Second Year</i>		
Military or Naval Science (for men).....	1½	1½
Physical Education.....	½	½
Zoölogy 1A-1B.....	5	5
Chemistry 8.....	3	..
Chemistry 6A.....	..	3
Electives (Foreign language if necessary to complete 15 units for Junior Certificate).....	6	6
	—	—
	16	16
<i>Third Year</i>		
American Institutions 101.....	2	..
Physics 2A-2B.....	4	4
Electives.....	10	12
	—	—
	16	16

#### PRE-MINING

Students in the College of Mining may elect one of four curricula: (1) Mining Engineering; (2) Metallurgy; (3) Economic Geology; and (4) Petroleum Engineering. Each is a four-year curriculum and leads to the degree of Bachelor of Science in Mining with the completion of 139 units of work.

These four curricula have a common requirement for the first year, after which the student is expected to elect the one in which he wishes to specialize. In the second year the courses listed at the beginning of the column are common requirements for all students in the College of Mining. In addition to these, each student is required to take the courses listed under his particular option.

\* English 1A-1B. If the student fails to pass the examination in Subject A it will be necessary to postpone English 1A-1B until he has completed the course in Subject A, for which no units are allowed.

## Undergraduate Curricula

<i>Freshman</i>	Units first semester	Units second semester
Subject A (if required).....	..	..
§Military Science 1A-1B.....	1½	1½
Physical Education.....	½	½
Mathematics 8-3A.....	3	3
Chemistry 1A-1B.....	5	5
Civil Engineering 1LA-1LB.....	2	2
Civil Engineering 1FA-1FB.....	1	1
*Mining 5A-5B.....	(1)	(1)
Physics 1A-1B.....	3	3
Civil Engineering 3 (s.s.).....	..	(3)
	16	16
<i>Sophomore</i>		
§Military Science 2A-2B.....	1½	1½
Physical Education.....	½	½
Mathematics 3C-4B.....	6	3
Physics 1C-1D.....	3	3
Mineralogy 3A-3B.....	3	3
Geology 1A.....	3	..
Courses listed in one of the options below.....	..	..
	‡	‡
MINING		
†Metallurgy 2.....	..	(3)
†Mining 1A-1B.....	(3)	..
Mechanical Engineering 1.....	3	..
METALLURGY		
Chemistry 6A-6B.....	3	3
Mechanical Engineering 1.....	3	..
ECONOMIC GEOLOGY		
Chemistry 6A-6B.....	3	3
Paleontology 1.....	2	..
PETROLEUM ENGINEERING		
Chemistry 5.....	3	..
Mechanical Engineering 1.....	3	..
Mechanical Engineering 2.....	..	3

## CURRICULA FOR NURSES

## COMBINED COLLEGE AND NURSING CURRICULUM

The University offers through the Colleges of Letters and Science (Los Angeles or Berkeley) and the Training School for Nurses and the University Hospital

§ For military science, students in the Naval Unit will substitute Naval Science 1A-1B (freshman year), 2A-2B (sophomore year), 1½ units per semester. These students must also complete Astronomy 9, 2 units, and 10, 2 units, during the freshman and sophomore years. See page 128.

\* Mechanical Engineering D is the nearest substitute for Mining 5A-5B offered at the University of California at Los Angeles.

‡ Normal total, 17 to 18 units.

† Mining 1A-1B and Metallurgy 2 are not offered at the University of California at Los Angeles. It is suggested that Chemistry 6A or 6A-6B be taken.

in San Francisco, a curriculum leading to the degree of Bachelor of Science and a Certificate in Nursing. Normally the work of the first two years is taken in the College of Letters and Science, and the final years in the University of California Training School for Nurses in San Francisco. For further information concerning the curriculum, see the ANNOUNCEMENT OF THE CURRICULA IN NURSING which may be obtained from the Director of the Training School for Nurses, University of California Hospital, San Francisco, California.

Registered nurses, who have graduated from approved schools of nursing prior to January 1, 1936, and who meet the University matriculation requirements may receive the degree Bachelor of Science in three years upon completing with an average grade of not lower than C, the work for the Junior Certificate in the College of Letters and Science at Los Angeles or Berkeley, and a third year of specialization in nursing. In this year the student is offered a choice of electives: public health nursing (which may be taken at Los Angeles or Berkeley), and nursing education (at Berkeley and San Francisco). A Certificate in Public Health Nursing (see below) or in Nursing Education may be obtained with an additional semester of field work.

A suggested program for the two years of academic work at Los Angeles is given below; additional information concerning the Junior Certificate will be found on pages 60-62. The program for the year of specialization for students who elect public health nursing is that given on page 88.

*First Academic Year*

	Units first semester	Units second semester
Subject A (if required).....	..	..
Physical Education.....	$\frac{1}{2}$	$\frac{1}{2}$
Foreign language.....	3-5	3-5
English 1A-1B (or Public Speaking 1A-1B).....	3	3
Economics 1A-1B.....	3	3
*Natural Science.....	3	3
Electives.....	..	..
Normal total.....	16-16 $\frac{1}{2}$	16-16 $\frac{1}{2}$

*Second Academic Year*

Physical Education.....	$\frac{1}{2}$	$\frac{1}{2}$
Psychology 1A-1B.....	3	3
Physiology 1, 2.....	5	..
Zoology 35 (Anatomy).....	..	3
Bacteriology 1.....	..	4
Year course.....	3	3
†Electives.....	..	..
Normal total.....	16-16 $\frac{1}{2}$	16-16 $\frac{1}{2}$

\* Chemistry 1A (5 units) or Chemistry 2A-2B (4-4 units) is recommended.

† Inclusion of Sociology 30A-30B is recommended.

**CURRICULUM IN PUBLIC HEALTH NURSING***Los Angeles*

The Curriculum in Public Health Nursing is open to students meeting the matriculation requirements for freshman standing in the University, who possess the credential of Registered Nurse in California, and who have completed courses Economics 1A-1B and Psychology 1A-1B, or equivalent courses. To such students the Certificate in Public Health Nursing will be awarded upon satisfaction of the following requirements:

(a) Completion of a total of not less than 36 units with a scholarship average of C, or higher, including

Sociology, 5 units

Educational Psychology, 3 units

Growth and Development of the Child, 3 units

Public Health and Preventive Medicine (Public Health 101A-101B), 6 units

Principles and Practice in Public Health Nursing (Public Health Nursing 418), 3 units

Administration and Organization in Public Health Nursing (Public Health Nursing 419), 3 units

(b) American Institutions (course or examination).

(c) Continuous field service in public health nursing for a period of sixteen weeks. Six units of credit is given for this work.

Both the program of courses and the plan of field work must be approved by the Committee on Nursing Curricula.

The following program is suggested for the year of study on the Los Angeles campus:

**YEAR OF SPECIALIZATION IN PUBLIC HEALTH NURSING**

(For Registered Nurses)

	Units first semester	Units second semester
American Institutions .....	2	..
Sociology 120, 181.....	3	2
Psychology 110 .....	3	..
Education 100 .....	..	3
Public Health 101A-101B.....	3	3
Public Health Nursing 418, 419.....	3	3
Public Health Nursing (Social Case Work).....	2	or 2
Home Economics 32.....	2	..
Electives.....	..	..
Total .....	16	16

For one semester of the following year there will be given Field Work in Public Health Nursing, to carry 6 units of credit.

Satisfactory completion of the year program by a registered nurse, who has

graduated from an approved school of nursing prior to January 1, 1936, and who in addition has met the requirements for the Junior Certificate in the College of Letters and Science will lead to the bachelor's degree. It should be noted in connection with lower division work that the University accords no credit for "semiprofessional" or "terminal" courses.

## PRE-OPTOMETRY

The University offers a four-year program with a major in physics-optometry, leading to the degree of Bachelor of Arts and the Certificate in Optometry. The first two years may be taken at Los Angeles; the last two must be taken at Berkeley. The following curriculum outline should be followed, with such choice of electives as will meet the requirement for the Junior Certificate in the College of Letters and Science (see page 60).

	<i>First Year</i>	Units first semester	Units second semester
Subject A (see page 36).			
Military Science or Naval Science (men).....		1½	1½
Physical Education.....		½	½
Chemistry 1A-1B.....		5	5
Public Speaking 1A-1B.....		3	3
Physics 2A-2B.....		4	4
Electives.....		..	..
		—	—
Normal total.....		16	16
	<i>Second Year</i>		
Military Science or Naval Science (men).....		1½	1½
Physical Education.....		½	½
Mathematics 3A.....		3	..
Psychology 1A.....		..	3
Physiology 1, 2.....		3	2
Foreign Language.....		5	5
Electives.....		..	..
		—	—
Normal total.....		16	16

## PRE-PHARMACY CURRICULUM

The College of Pharmacy offers a four-year curriculum leading to the degree of Bachelor of Science in Pharmacy. In conformity with the State law no new students have been accepted in the three-year curriculum since August, 1937.\* Students who are already enrolled in the three-year curriculum must complete the requirements for the Certificate of Graduation before September 1, 1940.

The first year of the four-year curriculum may be taken in the University at Berkeley, Davis, or Los Angeles, or in another institution of approved standing. The courses of the final three years are given in the College of

\* Students are no longer admitted to this curriculum, which will be discontinued in September, 1940.

Pharmacy in San Francisco (with one exception—Physics 3A-3B is taken in Berkeley). Students who plan to take the first year's work in an institution other than the University of California, should consult the ANNOUNCEMENT OF THE COLLEGE OF PHARMACY in order to make certain that the requirements will be fulfilled.

*Matriculation requirements.* The requirements for admission to the four-year curriculum are the same as the requirements for admission to the academic departments of the University as stated on pages 23-27. The minimum age at which applicants will be admitted to this College is sixteen years. It is recommended that applicants present credit in Subject A (English Composition); English, 3 units; history, 1 unit; mathematics (algebra and plane geometry), 2 or 2½ units; chemistry, 1 unit; physics, 1 unit, or mathematics (including trigonometry), 3 units; German or French, 2 units; Latin, 2 units; biology, 1 unit. In addition a year of freehand drawing is recommended.

*Graduation.* The degree of Bachelor of Science in Pharmacy is granted upon completion of four years of residence and 129 units of credit. The student must also have obtained as many grade points as there are units of credit in all courses undertaken. For other requirements, see the ANNOUNCEMENT OF THE COLLEGE OF PHARMACY, which may be had by addressing the Dean's Office, University of California College of Pharmacy, Medical Center, San Francisco, California.

*Program of First Year*  
(At Los Angeles)

	Units first semester	Units second semester
Subject A (if required).....	..	..
Physical Education.....	½	½
Military Science (for men).....	1½	1½
Chemistry 1A-1B.....	5	5
Botany 1A-1B.....	4	4
Mathematics 8, C†.....	3	2†
‡English 1A-1B or Public Speaking 1A-1B.....	3	3
Electives.....	..	..
Normal total .....	16	16-18

**PROFESSIONAL CURRICULA IN OTHER DIVISIONS OF THE  
UNIVERSITY**

*Architecture.* The School of Architecture in Berkeley offers a curriculum of two years subsequent to the bachelor's degree, leading to the degree of Graduate in Architecture. The College of Letters and Science in Berkeley also offers an undergraduate four-year program leading to the degree of Bachelor of Arts. Only the academic courses in this program may be taken in the College of

† Required only of students who do not offer trigonometry for matriculation.

‡ German A-B may be substituted for English 1A-1B or Public Speaking 1A-1B provided German has not been taken in high school. Students are advised to take two years of German in high school when possible.

Letters and Science at Los Angeles; consequently, the student desiring a major in architecture is advised to enroll at Berkeley in order to complete the curriculum in four years.

*Librarianship.* The School of Librarianship in Berkeley offers a curriculum of two years subsequent to the bachelor's degree, leading at the end of the first year to the Certificate in Librarianship, and at the end of the second year to the degree of Master of Arts. The bachelor's degree may be obtained in the College of Letters and Science of the University of California at Los Angeles.

*Public Health.* The University offers a professional curriculum in public health, based on matriculation in the Medical School, leading to the degree of Doctor of Medicine at the end of five years, and to the degree of Doctor of Public Health in two additional years. Students of medicine in the University of California may present one year of the specific Public Health program in fulfillment of the fifth year in the Medical School, thereby reducing by one year the time required for the degree of Doctor of Public Health.

*Nursing Education.* The professional curriculum in Nursing Education is open to regular students who have received the junior certificate in the College of Letters and Science (Berkeley or Los Angeles) and who have been graduated by schools of nursing approved by the University of California; also to candidates for the B.S. degree who have completed the first four years of the five-year curriculum in nursing. The curriculum requires one year with an additional four months of field practice and leads to the Certificate in Nursing Education. For further information, consult the ANNOUNCEMENT OF THE CURRICULA IN NURSING.

*Social Service.* The Graduate Council at Berkeley has authorized a professional curriculum of one year subsequent to the bachelor's degree, leading to the Certificate in Social Service; on completion of a third semester the student may qualify for the Certificate in Medical Social Service. The bachelor's degree may be obtained in the College of Letters and Science of the University of California at Los Angeles. Students intending to enter the curriculum should communicate with the Committee on the Curriculum in Social Service, Department of Economics, University of California, Berkeley, at an early period in the undergraduate program for assistance and advice in planning their undergraduate preparation.

#### JOURNALISM

The University of California at Los Angeles does not have a curriculum in journalism; a student who desires to prepare himself in this field should enroll in the College of Letters and Science and with the assistance of his adviser, arrange a program containing fundamental courses in English, economics, history, political science, modern languages, and science.

## THE COLLEGE OF BUSINESS ADMINISTRATION

COURSES WHICH CONSTITUTE the curricula of the College of Business Administration are designed to give students who choose to work toward the Bachelor of Science degree a well-balanced introduction to professional careers in business. Certain fundamental courses are included in the requirements for the completion of the Junior Certificate which should give the student the proper background for more technical offerings when the upper division is reached. At the beginning of the junior year the student selects a major field in which advanced work will be completed in the more specialized professional fields of accounting, banking and finance, marketing, or management and industry. With the approval of the Dean this major may be changed not later than the beginning of the senior year. While the greatest value of such specialization is largely dependent upon a wise choice in one of those basic fields, students who desire to obtain a more general business training may work toward that end by taking the general business major. Details covering all phases of the work offered in the College are set forth below, under Lower Division and Upper Division Requirements.

Every student, upon his matriculation in the University, is assigned to an adviser who will gladly assist him in the selection and arrangement of his course of study, and to whom he may go when problems of a social or a scholastic nature arise. While the student may occasionally be summoned to confer with his adviser, it is his privilege at all times to seek an interview during the hours designated on the adviser's door card.

*Summer Session courses.* Students who wish to satisfy the specific subject requirements in the summer sessions, may use only those courses which are the equivalent of courses offered in the fall or spring sessions listed as acceptable in meeting requirements and which are designated by the same numbers with the prefix "S."

*University Extension.* Students who desire to satisfy the specific subject requirements in the University of California Extension Division may use only those courses which are the equivalents of courses offered in the fall or spring sessions listed as acceptable in meeting the requirements.

### LOWER DIVISION

#### *Junior Certificate Requirements*

The Junior Certificate of the College of Business Administration is required for admission to the upper division of the College. It is granted to students who have completed 64 units of college work, with a grade-point average in all work done in the University of not lower than 1.00 (a C average), and who have satisfied requirements (a) to (d) below. While some of these requirements may be satisfied by work in the high school, work done prior to graduation from high school will not be counted as part of the 64 units.

A student who is not restricted in his study list and who is not on probation may present a study list aggregating 12 to 18 units a semester without special permission with respect to quantity of work, save that in his first semester of residence the maximum must not exceed 16 units. A student who is not under the supervision of the Committee on Reinstatement but has a deficiency in the work of the previous semester is limited to 16 units. All courses in Military Science and Physical Education and repeated courses are to be counted in the totals.

(a) *General University requirements:*

Subject A.

Military Science and Tactics, 6 units (men).

Physical Education, 2 units.

(b) *Either:*

*Foreign Language.* At least 16 units in one foreign language. Each year of high school work in this language, not duplicated by college courses taken by the student, will count as 3 units in satisfaction of this requirement, but will not reduce the total number of units for the Junior Certificate or the degree.

Or:

*Natural Science.* At least 14 units chosen from the following list, including not less than 4 units of college courses with laboratory work. (Courses marked with an asterisk (\*) meet the laboratory requirement.) Each year of chemistry or physics completed in the high school will count as 3 units in satisfaction of the natural science requirement, but will not reduce the total number of units for the Junior Certificate or the degree.

High school chemistry.

High school physics.

Chemistry 2A-2B, 8 units.\*

Physics 2A-2B, 8 units.\*

Zoölogy 1A, 5 units.\*

Botany 1A, 4 units.\*

Astronomy 1A, 3 units.

Biology 1, 3 units.

Geology 1C, 3 units.

(c) *Social Science.* At least 6 units in social science chosen from the following list:

Political Science 3A-3B, 6 units.

History 4A-4B, 6 units; 8A-8B, 6 units; 46, 3 units.

Psychology 1A-1B, 6 units.

(d) *Required courses:*

Business Administration 1A-1B, 6 units.

Economics 1A-1B, 6 units.

English 1A, 3 units.

Geography 5A-5B, 6 units.

Mathematics 8, 3 units.

Mathematics 2, 3 units.

Public Speaking 1A, 3 units.

*Approved courses for electives in the College.* All undergraduate courses in the Letters and Science List (see page 64), will be accepted for credit toward the B.S. degree. A maximum of 6 units of electives aside from the preceding will be accepted for credit toward the degree.

#### UPPER DIVISION

The Junior Certificate is required as a prerequisite to registration in the upper division, except for students who have been granted 64 or more units of advanced standing; such students may complete the remaining lower division requirements while registered in the upper division. The student must complete at least 50 units of credit after qualifying for the Junior Certificate, of which a minimum of 36 units must consist of upper division courses.

(a) *University requirement:* American Institutions 101, or its equivalent, is required of all candidates for the degree of Bachelor of Science (see page 37).

(b) *General requirements:*

Junior required courses: Business Administration 18A-18B, 120, 140, 160A, 180.

Economics 135.

Senior required course: Business Administration 100.

(c) *Three units from the following:*

Business Administration 145.

Economics 131A-131B, 132, 150, 171, 173.

(d) *At least nine upper division units in one of the five following majors:*

The major must be started not later than the beginning of the second semester prior to the date of graduation.

(1) *Accounting:* Business Administration 160B, 161, 162, 163.

(2) *Banking and Finance:* Business Administration 131, 132, 133, 139.

(3) *Marketing:* Business Administration 184, 185, 186; Economics 195.

(4) *Management and Industry:* Business Administration 121A-121B, 125, 144, 153.

(5) *General Business:* Business Administration 125, 131, 160B, 184.

(e) All candidates for the B.S. degree are required to take at least 12 units of electives outside the Department of Business Administration, chosen from the Letters and Science List of Courses (see page 64). These electives may consist of either lower or upper division courses.

(f) The student must obtain an average grade of not less than C (one grade point for each unit of credit) in the major [(a) above], as well as an average grade of not less than C (one grade point for each unit of credit) in all upper division courses taken in the Department of Business Administration.

**SUMMARY—UNITS AND GRADE-POINT REQUIREMENTS  
BACHELOR OF SCIENCE DEGREE**

Junior Certificate requirements..... 64 units with 64 grade points

Upper division requirements:

General requirements ..... 27 units  
Major requirement ..... 9 units  
University requirement ..... 2 units  
Electives ..... 18 units

—  
Total ..... 56 units

—  
Total minimum requirements for B.S.  
degree.....120 units with 120 grade points

**HONORS**

The Executive Committee of the College will recommend for Honors or Highest Honors such students as it may judge worthy of that distinction.

## THE TEACHERS COLLEGE

THE TEACHERS COLLEGE is organized on the basis of four years of combined academic and professional work leading to the degree of Bachelor of Education and one or more of the following teaching credentials:

1. The Kindergarten-Primary Credential, valid in the kindergarten and grades one, two, and three of the elementary school.
2. The Elementary Credential, valid in the eight grades of the elementary school.
3. The Junior High School Credential, valid in the junior high school.
4. The Special Secondary Credential of the following types: Art, Commerce, Home Making, Industrial Arts Education, Music, and Physical Education. These credentials are valid in the high school, junior high school, and elementary school.

Certificates of Completion leading to the General Secondary and Junior College Credentials are granted to students enrolled for graduate study who complete the requirements as given on pages 111-116.

### Special Secondary Credential in Vocational Arts

A two-year curriculum leading to the special secondary teaching credential in vocational arts is maintained under the provisions of the Smith-Hughes Act. This course is open to experienced journeymen workmen who are high school graduates. All applications must be approved by the Supervisor of Trade and Industrial Teacher Training of the Division of Vocational Education. A statement of the requirements of the Limited Credential in Industrial Arts Education will be found in Bulletin No. 12 published by the State Board of Education, July 15, 1935.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF EDUCATION

- I. Completion of 120 units of credit with a corresponding number of grade points.
- II. Presentation of a certificate of physical fitness from the Medical Examiners of the University of California at Los Angeles.
- III. Recommendation of the major department and of the Department of Education.
- IV. Satisfactory completion of the following program:
  1. *Lower Division.*

The work of the freshman and sophomore years leading to the Junior Certificate of the Teachers College ordinarily comprises 64 units of university credit. The Junior Certificate, however, is awarded on completion of a minimum of 60 units of university credit, with a grade-point average of 1.00 (a C average) or higher, including the requirements listed on the following page.

- (a) General University requirements:  
 Subject A.  
 Military Science and Tactics, 6 units (men).  
 Physical Education, 2 units.
- (b) Foreign Language. At least 15 units in not more than two languages. Two years or more of high school work in a single foreign language will be counted in satisfaction of this requirement at the rate of three units a year unless the student duplicates the work in the University.
- (c) Matriculation Mathematics: elementary algebra and geometry. Instruction in these subjects is not given in the fall or spring sessions of the University.
- (d) Natural Science. Twelve units chosen from the following list, including either high school physics or chemistry, or a university course with at least two units of laboratory work. (Courses marked with an asterisk have laboratory work.) Physics and chemistry taken in the high school will each count in satisfaction of 3 units of this requirement but will not reduce the number of units for the Junior Certificate or the degree.
- High School Physics.\*
  - High School Chemistry.\*
  - Astronomy 1A, 1B, 2, 10.
  - Bacteriology 1,\* 6.
  - Biology 1, 12.
  - Botany 1A,\* 1B.\*
  - Chemistry 1A,\* 1B,\* 2A,\* 2B,\* 6A,\* 6B,\* 8.
  - Geology 1A, 1B, 1C, 2C.
  - Geography 3.
  - Paleontology 1.
  - Physics 1A,\* 1B,\* 1C,\* 1D,\* 2A,\* 2B,\* 4A, 4B.
  - Physiology 1,\* 2.\*
  - Zoölogy 1A,\* 1B.\*
- (e<sub>1</sub>) English 1A-1B or Public Speaking 1A-1B or 2A-2B.
- (e<sub>2</sub>) Psychology 1A-1B.
- (e<sub>3</sub>) A year course chosen from the following:
- Economics 1A-1B.
  - Geography 1A-1B.
  - History 4A-4B, or 5A-5B, or 8A-8B.
  - Political Science 3A-3B.
  - Philosophy 1A-1B, 2A-2B, 3A-3B.
  - Mathematics—Six units chosen from the following: C, F, 2, 3A, 3B, 4A, 6, 8. High school plane trigonometry and plane analytic geometry will be accepted in partial satisfaction of this requirement, each to count 2 units. This will not reduce the number of units required for the Junior Certificate or the degree.

**2. Upper Division.**

- (a) The Junior Certificate is required as a prerequisite to registration in the upper division, except for students who have been granted 60 or more units of advanced standing.
- (b) The student must complete at least 50 units of credit after qualifying for the Junior Certificate, of which a minimum of 36 units must consist of upper division courses.
- (c) The final year of residence,\* including at least 24 units of credit must be completed in the Teachers College. Courses in the summer sessions may be offered in satisfaction of 12 units of this requirement†.
- (d) The course in American Institutions 101, or its equivalent, is required of all candidates for the degree of Bachelor of Education.
- (e) A major, consisting of from 18 to 30 units of approved upper division courses, must be completed in one of the following fields:

Art, Commerce, Education, Home Economics, Mechanic Arts, Music, Physical Education.

The major in education is designed primarily to prepare students for teaching in the elementary schools of the State with specialization for either the kindergarten and primary grades, or for the upper grades and the junior high school. Ordinarily the student pursuing a major in education may so plan his program as to qualify for either the elementary and kindergarten-primary credentials or the elementary and junior high credentials.

Majors in art, commerce, home economics, mechanic arts, music, and physical education prepare the student to teach these subjects in the secondary schools, and lead to the special secondary credential. By careful planning it is possible for major students in these fields to qualify for the general junior high school credential. Requirements for both special secondary and general elementary credentials cannot ordinarily be met within the limits of the four-year course.

The student must attain an average scholarship of C grade or better for all courses comprising the major.

- (f) In addition to the major, two minors are required. A minor is defined as from 12 to 18 units of coördinated courses in any University department. Students majoring in art, commerce, home economics, mechanic arts, music, and physical education must complete as one minor 18 units of approved courses in education.

---

\* If the candidate for a teaching credential holds a bachelor's degree he must complete at least one semester of not less than 15 units in resident instruction in the Teachers College. Ordinarily credentials are not obtainable from this institution on the basis of summer sessions alone.

† Until October 1, 1943, students who have received teaching credentials from the Los Angeles State Normal School, the Southern Branch of the University of California or the University of California at Los Angeles may complete the requirement of senior residence (the last 24 units) for the degree of Bachelor of Education by attendance at summer sessions of the University of California.

## MAJORS IN THE TEACHERS COLLEGE

## ART

*Preparation for the Major.* Art 1A, 2A-2B, 4A-4B, 9, 12, 21, 32, 48.

*The Major, leading to the Special Secondary Teaching Credential in Art.* Twenty-seven units of upper division courses; this program may be taken in one of three specified lines, and must be arranged with a departmental adviser.

*The Minor in Education.* Education 103, 170; Directed Teaching, 6-10 units; Art 160A-160B, 180.

## COMMERCE

*Preparation for the Major.* Business Administration 1A-1B, 2A or 2B, 18A or 18B; Commerce 16, 17, 18A-18B; Economics 1A-1B; Geography 1A-1B, or 5A-5B, or any combination of the group; and History 46.

*The Major, leading to the Special Secondary Credential in Commerce.*—Twenty-four units of advanced work approved by the Department of Business Administration. At least twelve units should be selected from the following courses in Business Administration: 100, 120, 131, 132, 140, 153, 160A-160B, 161, 162, 180. The remaining units should be selected from upper division courses in economics or some other social science which is approved by the Department of Business Administration.

*The Minor in Education.* Education 103, 170; Directed Teaching, 8 units; Commerce 197, 198.

## EDUCATION

*Preparation for the Major.* Biology 1, 12; Geography 1A-1B; Psychology 1A-1B.

*The Major.* Eighteen units of upper division courses, including:

Education 100 or Psychology 112

Education 101 or Psychology 119

Education 102 or Psychology 107A

Education 103 or 120 or 123A-123B or 150

Education 104 or 105\* or 136

Electives in education to total 18 units (Psychology 110 may be offered as an elective in education).

NOTE: Requirements for teaching credentials will be found on page 101.

## HOME ECONOMICS

*Preparation for the Major.* Home Economics 1A-1B, 11A-11B, 43; Art 2A, 21; Chemistry 2A-2B, 10; Physiology 1; Sociology 30A-30B.

*The Major, leading to the Special Secondary Credential in Home Making.*—Courses 108, 118A, 120, 162A-162B, 164A-164B, 168, and 8 units of advanced home economics approved by the department.

\* Required for the Kindergarten-Primary Credential.

*The Minor in Education.* Education 103, 170; Directed Teaching, 6-10 units; Home Economics 390. Three units to be chosen from Education 112, 120, or Psychology 110.

#### MECHANIC ARTS

*Preparation for the Major.* Mechanical Engineering D; Mechanic Arts 11, 14, 15A-15B, 16, 17A, 18A, 21; recommended, mathematics and physics.

*The Major, leading to the Special Secondary Credential in Industrial Arts Education.* Thirty units of work approved by the department; of this twenty-four units must be in upper division courses.

*The Minor in Education.* Education 103, 160, 164, 170; Directed Teaching, 6-10 units; Mechanic Arts 190.

#### MUSIC

*Preparation for the Major.* Music 1A-1B, 2A-2B, 7A-7B, 14A-14B, 35A-35B.

*The Major, leading to the Special Secondary Credential in Music.*—Courses 104A-104B, 105A-105B, 108A-108B, 109A-109B; either 114A-114B or 115A-115B; four or six units chosen from 111A-111B, 124, 125. The remainder of the 24 required upper division units may be selected from courses 122A-122B, 123A-123B, 126, 127, 128, 199A-199B.

*The Minor in Education.* Education 103, 170; Directed Teaching, 6-10 units; Music 112A-112B.

#### PHYSICAL EDUCATION FOR MEN

*Preparation for the Major.* Chemistry 2A-2B or Chemistry 1A; Physiology 1; Biology 1 (or Zoölogy 1A); Zoölogy 35; Physical Education 1, 3 (2 units), 5, 40.

*The Major, leading to the Special Secondary Credential in Physical Education.* Courses †120, 131, 140, 149, 156A-156B, 182, †190, †192A-192B.

*The Minor in Education.* Education 103, 112, 170; Directed Teaching, 6-10 units; Physical Education 154, 155A-155B.

#### PHYSICAL EDUCATION FOR WOMEN

*Preparation for the Major.* Physical Education 5, 30, 32A-32B, 33A-33B, 35, 42A-42B, 43A-43B, and Chemistry 2A-2B or 1A, Biology 1, Zoölogy 35, Physiology 1, Home Economics 32.

*The Major, leading to the Special Secondary Credential in Physical Education.* Physical Education 114A, 120, 131, 140, 149, 180B, 181A-181B, 182, 183, 190, 192A-192B.

*The Minor in Education.* Education 103, 170; Directed Teaching, 6-10 units; Physical Education 121A-121B, 121C-121D.

† Courses so marked are listed with the Department of Physical Education for Women.

**HONORS**

Honorable mention with the Junior Certificate and honors with the degree of Bachelor of Education are awarded on the same basis as in the College of Letters and Science. (See page 77.)

**REQUIREMENTS FOR TEACHING CREDENTIALS**

**1. The Elementary Credential—**

- (a) The degree of Bachelor of Education with a major in education.
- (b) Completion of Art 330A-330B; Mathematics 19; Music 360A-360B; Physical Education 111A-111B. History 39 is recommended but not required.
- (c) Education 390 and Supervised Teaching E190A-E190B.

**2. The Kindergarten-Primary Credential—**

- (a) The degree of Bachelor of Education with a major in education.
- (b) Completion of Art 330A-330B; Education 105; Music 360A-360B; Physical Education 111A-111B.
- (c) Examination in piano.\*
- (d) Education 390 and Supervised Teaching K190A-K190B.

**3. The Junior High School Credential—**

This credential is awarded only in conjunction with the Elementary or Special Secondary credentials. The requirements are the completion of a major and a minor, or two minors, in fields taught in the junior high school, and eighteen units in education including Education 170 and supervised teaching at the junior high school level in one of the general subject fields.†

**4. The Special Secondary Credentials—**

These credentials are awarded upon the completion of all requirements for the degree of Bachelor of Education with majors in art, commerce, home economics, mechanic arts, music, or physical education, provided that the minor in education is satisfactorily completed.

The courses comprising these majors are listed on pages 99-100.

**5. The General Secondary and Junior College Credentials—**

The requirements for the Certificates of Completion leading to these credentials are to be found on pages 111-116.

\* Candidates for the Kindergarten-Primary Credential must pass an examination in piano before the Junior Certificate is awarded. (The student must show capacity to play such music as "Songs for the Little Child" by Kohlsaas and Baker, and music for rhythmic interpretation of the type in Robinson's "School Rhythms.")

† Teaching for special type credentials is not accepted for this requirement.

## THE COLLEGE OF AGRICULTURE

THE COLLEGE OF AGRICULTURE of the University of California offers at Los Angeles the Plant Science curriculum and the major in Subtropical Horticulture leading to the Bachelor of Science degree, and graduate work in this field leading to the degree Master of Science. Students electing other majors in this curriculum may spend the freshman and sophomore years at Los Angeles and then transfer to the campus where their major work is offered.

Students electing other curricula in the College of Agriculture—Animal Science, Agricultural Economics, Entomology and Parasitology, Forestry, Soil Science, Home Economics, and Agricultural Education—and those electing the curriculum in Agricultural Engineering may spend the first two years at Los Angeles and then transfer to Berkeley or Davis without serious loss of time. Students who plan to major in Landscape Design are advised to transfer to Berkeley at the beginning of the sophomore year. Students who register at Los Angeles with the intention of later transferring to Berkeley or Davis to pursue other curricula or to obtain majors in the Plant Science curriculum other than Subtropical Horticulture are requested to consult the PROSPECTUS OF THE COLLEGE OF AGRICULTURE and the adviser in Agriculture at Los Angeles.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE

#### PLANT SCIENCE CURRICULUM, MAJOR IN SUBTROPICAL HORTICULTURE

The candidate for the degree of Bachelor of Science in the College of Agriculture must complete the following requirements:

(1) Four years of university residence. The senior year must be spent in the College of Agriculture at this University.

The student should note that in order to complete the work in agriculture within the normal four-year period, prerequisites must be systematically met and the proper sequence of courses followed. Unnecessary delay will thereby be avoided. It is advisable, therefore, for the student who wishes to receive his bachelor's degree in agriculture at the University of California to take as much of his undergraduate program as possible in the University.

(2) One hundred and twenty-four semester units of university work, with at least an equal number of grade points, in addition to matriculation units and Subject A. (The Subject A examination in English composition is required of every undergraduate student at the time of his first registration in the University.) Further regulations concerning Subject A are given on page 36.

(3) Thirty-six of the 124 units must be in upper division courses (courses numbered 100-199). Not more than 4 units may be in lower division physical education courses.

(4) Nine units of mathematics, including trigonometry. Matriculation work may be offered toward this requirement, with each year of high school work valued at 3 units. The student normally satisfies this requirement before the end of his sophomore year.

(5) American Institutions. The student may meet this requirement by passing an examination for which no credit is given, or by completing one of the following courses: American Institutions 101, History 171A-171B, History 172A-172B, Political Science 3A-3B, or the equivalents of these courses given in University Extension.

(6) In addition to requirement (4) above, every student must complete the requirements as listed under the following curriculum:

**PLANT SCIENCE CURRICULUM**

(a) Students must complete the following:	Units
Chemistry .....	16
Botany and Plant Physiology .....	12
Physics .....	6
Bacteriology .....	4
Economics .....	6
Geology .....	3
Genetics .....	4
Plant Pathology.....	4
Plant Nutrition (Soil Science 110).....	4
Entomology .....	4
Zoölogy .....	4
Military and Physical Education.....	8
	<hr style="width: 10%; margin-left: auto; margin-right: 0;"/> 75

(b) Students also must take a major with the minimum of 12 units of upper division work in subtropical horticulture.

(c) A summer practice course also may be prescribed as a major requirement.

**FRESHMAN AND SOPHOMORE YEARS**

During the freshman and sophomore years the following schedule will normally be followed. For examples of programs in other curricula of the College of Agriculture students should consult the PROSPECTUS OF THE COLLEGE OF AGRICULTURE and the adviser for agricultural students at Los Angeles.

The College of Agriculture requirements for graduation are the same whether the student registers at Berkeley, Davis, or Los Angeles.

## EXAMPLE OF PROGRAM—PLANT SCIENCE CURRICULUM

	<i>Freshman Year</i>	
	Units first semester	Units second semester
Military or Naval Science.....	1½	1½
Physical Education.....	½	½
Botany 1A-1B.....	4	4
Chemistry 1A-1B.....	5	5
Physics 2A-2B or 4A-4B.....	4 or 3	4 or 3
Economics 1A.....	..	3
Geology 1A.....	3	..
	18 or 17	18 or 17

*Sophomore Year*

Military or Naval Science.....	1½	1½
Physical Education.....	½	½
Botany 6, 7.....	3	4
Chemistry 6A, 8.....	3	3
Zoölogy 1A.....	5	..
Bacteriology 1.....	..	4
Business Administration 1A.....	..	3
Subtropical Horticulture 2.....	3	..
Subtropical Horticulture 3.....	1	..
	17	16

There is no Junior Certificate in the College of Agriculture. Consequently students who are unable to meet the above-outlined program of study during the first two years may take some of the requirements in their junior or senior years. It should be noted, however, that any great departure from the above program may delay graduation beyond the normal four-year period.

## JUNIOR AND SENIOR YEARS

The additional required courses—Entomology 134, Zoölogy 100A (Genetics), Soil Science 110, Plant Pathology 120, and American Institutions 101—together with such electives in any department as may be approved by the major adviser will be taken during the junior and senior years. Entomology 1, normally taken in the sophomore year, may be substituted for course 134. For elective courses in other departments the latter pages of this Catalogue should be consulted.

Students should consult the major adviser concerning the 12 units required for the major in Subtropical Horticulture. Certain courses are required—100, 101, and 102—while others are optional.

### OTHER CURRICULA

The requirements in the other curricula offered by the College of Agriculture will be found in the PROSPECTUS OF THE COLLEGE OF AGRICULTURE. Programs suitable for the conditions at Los Angeles may be had from the adviser in Agriculture, who should be consulted.

### HONORS

Students who become candidates for the bachelor's degree in the College of Agriculture may be recommended for honors on the basis of the quality of the work done in the regular curriculum.

I. *Honorable mention with Junior Standing* (that is, students who have completed 64 units in their freshman and sophomore years).

- (1) Honorable mention is granted with junior standing to students who attain at least an average of two grade points for each unit of credit undertaken. Such students will remain in honors status unless their average for all work at the end of any semester falls below two grade points for each unit undertaken.
- (2) The list of students who receive Honorable Mention is sent to the chairman or study-list officer of the College before the beginning of the next semester. The list of those in honors status is published in the CATALOGUE OF OFFICERS AND STUDENTS.

II. *Honors with the Bachelor's Degree.*

- (1) Honors are granted at graduation only to students in honors status who have completed the major with distinction, and who have a general record satisfactory to the Committee on Honors.
- (2) Students who, in the judgment of the Committee on Honors, show marked superiority in their major subject may be recommended for the special distinction of Highest Honors.
- (3) A list of students to whom Honors or Highest Honors in the College have been awarded is published in the COMMENCEMENT PROGRAMME.

## GRADUATE STUDY

### REQUIREMENTS FOR THE MASTER'S DEGREE

*Preliminary preparation.* The preliminary training of the candidate for the degree of Master of Arts or of Master of Science should be substantially the equivalent of that represented by the corresponding bachelor's degree of the University of California. A bachelor's degree in the University of California represents eight years of systematic high school and collegiate work distributed according to the requirements of the University for the particular college or course in which the student takes his degree. If the candidate's undergraduate preparation is found to be seriously deficient in breadth or fundamental training, or if it fails to provide a proper foundation for advanced work in the department or departments of the candidate's choice, it may be necessary for him to give some time to completing specified undergraduate courses before his application for admission to graduate status can receive favorable consideration.

*The degree.* The degree Master of Arts is awarded to students meeting the prescribed requirements in any of the major subjects of graduate study at the University of California at Los Angeles with the exception of agriculture and applied physics; in these fields the degree of Master of Science is awarded. However, students in mathematics or science who, in addition to requirements for the master's degree, have completed those of the degree of Bachelor of Science, may be awarded the degree of Master of Science.

*Major fields.* The major fields for graduate study are:

Agriculture (Subtropical Horticulture)	History
Applied Physics	*Home Economics
Botany	Latin
Chemistry	Mathematics
Economics	Microbiology
Education	Philosophy
English	Physical Education
French	Physics
Geography	Political Science
Geology	Psychology
German	Spanish
	Zoölogy

*Residence.* The minimum period of academic residence required is one year, of which at least one semester must be in regular session at Los Angeles. It may be met in part by residence in summer sessions of the University (each to count as one-fourth of a year) or in the Graduate Division at Berkeley. A stu-

\* For 1938-39 graduate work is offered leading to the General Secondary Credential, but not to the master's degree.

dent is not regarded as in residence unless he is actually attending, in a regular session, regularly authorized university exercises amounting to at least 4 units of upper division or graduate level, or at least 2 units of similar work during a summer session. Irrespective of the total credit obtained in summer sessions, not less than 4 units of the required graduate courses must be earned in a regular semester at Los Angeles. While ordinarily all of the work for the master's degree is expected to be done in residence, graduates of this University or other approved candidates may complete a part of their work in absence, subject to the approval of the Graduate Council and the regulations relating to study in absence, and subject to the minimum residence requirement of one year.

*Extension and Correspondence courses.* Courses taken in the Extension Division or by correspondence are not accepted in satisfaction of unit requirements for a higher degree or for the general secondary or junior college teaching credentials, although upon special approval they may be used to satisfy subject requirements for the credentials.

*Application for advancement to candidacy.* Advancement to candidacy must take place not later than one semester prior to the date of completion of requirements for the degree. Attention of students is directed to the fact that admission to candidacy is not automatic. It requires a formal application distinct from registration. A date, one week after the filing of study lists, is set in each semester as the final date for application for candidacy by persons hoping to qualify for the degree at the close of that semester.

*Amount and distribution of work.* A student will pursue one of the following plans for the fulfillment of the requirements for the master's degree, at the option of the department of his major field. All requirements for the degree under either plan must be completed not later than one calendar year from the completion of the unit requirement.

*Plan I: Thesis Plan.* Under this plan the student must complete 20 semester units and in addition he must write a thesis. The courses must be graduate courses or upper division undergraduate courses. At least 8 of the 20 units must be strictly graduate work in the major subject; no unit credit is allowed for the thesis. It is expected that the work of the graduate course, or courses, together with the thesis ordinarily will amount to not less than half of the entire work presented for the degree. Provided the foregoing general and the special departmental requirements are met, the work may be distributed among any courses in the 100 or 200 series. The student is subject to guidance by the major department respecting the distribution of his work among the departments. The major department may also require such examinations as may be considered necessary to test the candidate's knowledge in the field of his work.

*Plan II: Comprehensive Examination Plan.* Under this plan 24 units of upper division and graduate courses are required, of which at least 12 units

must be in strictly graduate courses in the major subject. The student is subject to guidance by the major department respecting the distribution of his work among the departments.

A comprehensive final examination in the major subject, to be of such nature and to be conducted in such manner as may be determined by the department concerned, is required of every candidate.

*Grade requirements.* Only courses in which the student is assigned grades A, B, or C may be counted in satisfaction of the requirements for the master's degree. Furthermore, the student must maintain an average of B (2 grade points for each unit of work undertaken) in these courses and also in all courses elected at the University subsequent to the bachelor's degree. Three points a unit are assigned to grade A; two points to grade B; one point to grade C; none to grade D; minus one point to grades E and F.

*Foreign Language.* A reading knowledge of a modern foreign language (other than that of the major subject, if the major is a foreign language) is required of all candidates for the master's degree. The department of the candidate's major must approve the language selected. In specific instances the Dean of Graduate Study may authorize the substitution of Latin for a modern language upon the recommendation of the department of the student's major. The examination is to be conducted by the language department in question and certification by the language department of the successful completion of this examination must be attached to the student's application for advancement to candidacy for the M.A. or M.S. degrees.

*Acceptance of work completed in graduate status elsewhere.* The following regulation governs the acceptance of work completed in graduate status at other institutions: The entire program for the master's degree must be completed in residence at this University. In exceptional cases, a limited amount of credit obtained in regular sessions of institutions of high standard may be accepted toward fulfilling the minimum unit requirements for the master's degree. In no instances, however, will more than 4 units be allowed, and then only to students of superior scholarship. Where such allowance is made it cannot be used to reduce the minimum residence requirement or the minimum requirement in strictly graduate (200) courses.

*Summer Session work for the master's degree.* Students who plan to offer Summer Session courses in partial fulfillment of the requirements for the master's degree should be careful to select only courses especially designated as acceptable for this purpose. Not all upper division courses given in the Summer Session may be offered in satisfaction of the requirements for the master's degree. A list of acceptable courses is published annually for the use of students in the Summer Session. The maximum study list of graduate work permitted in the Summer Session is 4 units. The complete requirement of graduate courses can not be met in summer sessions alone; at least one regular semester is necessary.

In planning a program for a higher degree it must be borne in mind that the members of the regular staff are not all on duty in the summer months. Admission to candidacy does not constitute a claim upon the vacation time of members of the faculty for direction of thesis work.

*Theses.* Specific requirements concerning theses will be found in the ANNOUNCEMENT OF GRADUATE STUDY at the University of California at Los Angeles.

## **REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY**

Students desiring to become candidates for the doctor's degree should note at the outset that the degree of Doctor of Philosophy is granted by the University of California not alone for the fulfillment of technical requirements, such as residence and the completion of fundamental courses within a given field which is chosen as the field of study, but rather upon the following: the student's general grasp of the subject matter of a large field of study, his distinguished attainments in that field, his critical ability and power to analyze problems, as well as to coördinate and correlate the data from a number of allied fields in such fashion as to serve the progress of ideas in those fields. In addition to all of these things, the student must show the power to make an original contribution to the knowledge of his chosen field of study through his dissertation, and, throughout his career as a graduate student, to give evidence of his ability to work independently.

*Fields of study for 1938-39.* The fields of study for 1938-39 open to candidates for the degree of Doctor of Philosophy are: English, history, mathematics, philosophy, physics, political science, psychology, and zoölogy. Other fields and departments will be added to this list in 1939-40 or subsequently, as circumstances warrant.

*Preliminary preparation.* A prospective candidate for the degree of Doctor of Philosophy must hold a bachelor's degree from one of the colleges of this University, based upon a curriculum that shall have included the requirements for full graduate status in the department of his major subject, or must have pursued successfully a course of study elsewhere equivalent to that represented by such a degree.

*Residence (attendance) required.* The minimum residence requirement for the doctor's degree is two years, one (ordinarily the second) of which must be spent in continuous residence at the University of California at Los Angeles. (See also *Program of study*, below.)

*Foreign language requirement.* A reading knowledge of French and German is required of all candidates for the Ph.D. degree and this requirement must be satisfied before advancement to candidacy. In special cases, with the consent of the department of the candidate's major and the Dean of Graduate Study, another language may be substituted for either French or German, provided.

the language selected has a clear bearing on the candidate's field of research. The examination is to be conducted by the language department in question and certification by the language department of the successful completion of this examination must be attached to the student's application for advancement to candidacy for the Ph.D. degree. For additional information concerning the examination the ANNOUNCEMENT OF GRADUATE STUDY should be consulted.

*Program of study.* Recommendation for the degree is based upon the attainments of the candidate rather than upon the length of time of study; ordinarily not less than three full years will be found necessary. A program of study must be approved by the Graduate Council embracing a field of investigation previously approved by the department or group of departments concerned, and extending over the full time of study.

*Notice of intended candidacy.* Notice of intention to proceed to candidacy for the Ph.D. degree should be given as early as possible in a graduate student's career, preferably at the end of the first semester of graduate study. Such notice should be given to the department or group of departments which represent the field of study selected by the student, and to the Dean of Graduate Study.

Upon receipt of notice a doctoral committee will be appointed to assist the student in making out his program of study and in preparing for the qualifying examinations.

*Qualifying examinations.* Before admission to candidacy a student must have passed a series of qualifying examinations (both written and oral, including tests of a reading knowledge of the required foreign languages) before his doctoral committee.

*Advancement to candidacy.* Applicants for admission to candidacy for the degree of Doctor of Philosophy must report in person to the Dean of Graduate Study, who determines whether all formal requirements have been met.

The candidate must file his application, properly approved by the committee conducting the qualifying examinations.

A minimum period of resident study approximately equivalent to two semesters must intervene between the date of formal advancement to candidacy and the date of the final examination.

*Dissertation.* A dissertation on a subject chosen by the candidate, bearing on the principal subject of study and of such character as to show power to prosecute independent investigation, is required of every candidate for the degree. In its preparation the candidate will be guided by a committee, ordinarily his doctoral committee, which will also pass upon the merits of the completed dissertation; the approval of the committee, as well as that of the Graduate Council, is required before the award of the degree is recommended. Special emphasis will be laid upon the dissertation requirement, and the de-

gree will under no circumstance be given merely for the completion of a course of study, however extensive.

The dissertation must be typewritten or printed: specific instruction concerning the form may be had upon application to the Registrar. Two copies of the approved dissertation (if typewritten, the original and the first carbon) must be filed with the Registrar two weeks before the proposed date of the final examination, for subsequent deposition in the University Library. However in special cases the Graduate Council may authorize the final examination to be taken before the dissertation is accepted.

*Final examination.* The final examination of the candidate will be conducted by his doctoral committee: it will be oral, and will deal primarily with questions arising out of the relations of the dissertation to the general field of study in which the dissertation lies. Admission to the final examination may be restricted to members of the committee, members of the Academic Senate, and guests of equivalent rank at other institutions.

#### DEFINITION OF ACADEMIC RESIDENCE FOR GRADUATE STUDENTS

Every graduate student must register for, attend, and complete upper division courses (courses in the 100 series) or graduate courses (courses in the 200 series) amounting to at least 4 units a week for each semester, in order to satisfy the minimum residence requirement in candidacy for any higher degree or certificate issued by the University.

### REQUIREMENTS FOR HIGHER TEACHING CREDENTIALS

#### General Requirements for Certificates of Completion

(1) *Constitution of the United States.* This requirement may be satisfied by passing an authorized examination (for which unit credit will not be assigned); or by completing one of the following courses or combination of courses in the University of California at Los Angeles: American Institutions 101, Political Science 3A-3B, History 171A-171B, History 172A-172B; or by completing an approved course of not less than two units in another California teacher-training institution that has been approved by the California State Board of Education.

(2) *Certificate of physical and mental fitness.* A satisfactory certificate of health is required, certified to by the medical authorities of the University of California at Los Angeles.

(3) *Oral English.* Evidence of a satisfactory command of spoken English is required, certified by the department of the applicant's major.

(4) *Citizenship.* Each applicant for a credential is required by the State Board of Education to be a citizen of the United States. Noncitizens who have filed first papers are eligible to apply for short-term credentials. Failure to complete the naturalization process within six months of the date of eligibility

will result in revocation of the credential. After a foreign student has become naturalized he may apply for a long-term credential.

(5) *Recommendation for the credential* by the department of the applicant's major.

#### *The General Secondary Credential*

The Certificate of Completion leading to the General Secondary Credential is awarded to students who qualify for admission to graduate study, under the following conditions:

(1) to (5) Satisfaction of all general requirements listed above.

(6) Completion of a full year (of at least 24 units) of advanced (upper division or graduate) resident study subsequent to the receipt of the bachelor's degree; residence of at least one regular semester, and the completion of not less than 10 units of advanced work at the University of California at Los Angeles are required. The Certificate of Completion can not be obtained solely on the basis of summer session work, or of advanced standing.

(7) Completion of 18 units\* of courses in education, including

(a) Education 170.

(b) Six units chosen from Education 103, 112, 120, 123A, 123B, 150, Psychology 110.

(c) Teacher Training 320A, Supervised Teaching 320B (or 323 as assigned by department). These courses are restricted to graduate students.

(d) Electives to total 18 units. Upper division courses in education, or departmental courses for secondary teachers in the 300 series.

(8) Completion of a teaching major approved by the department of not less than 24 units of upper division and graduate courses in one of the following fields:

Agriculture	Geology	Physical Sciences
Botany (F)	German	Physics (F)
Chemistry (F)	History (F)	Political Science (F)
Economics (F)	Home Economics	†Psychology
English (F)	Latin	Social Sciences
English and Speech	Life Sciences	Spanish
French	Mathematics	Zoölogy (F)
Geography (F)	Physical Education	

Credentials in the subjects marked (F) will not be issued after June 30, 1940, when the requirements for field majors stated below have become fully effective.

(9) Completion of a scholarship average not lower than C of a teaching minor (not less than 18 units, of which from 9 to 12 units must be upper divi-

\* Not less than 6 units must be completed subsequent to the receipt of the bachelor's degree.

† A teaching major in psychology must be accompanied by minors in *two* additional fields taught in the high schools of the State.

sion or graduate courses) in any of the foregoing fields (except psychology), or in art, astronomy, Greek, mechanic arts, music, public speaking. A minor in a modern foreign language must include 12 units of upper division courses.

(10) A scholastic average of 1.75 or higher must be maintained in all work undertaken after receipt of the bachelor's degree; the same requirement holds for the courses comprising the teaching major, including the upper division courses taken before receipt of the bachelor's degree. A grade of C or higher must be presented in Teacher Training 320A and in Supervised Teaching 320B or 323.

(11) At least 6 units of graduate courses (200 series) must be completed in the fields of the teaching major and (or) minor.

*Requirements for Field Majors for the General Secondary Teaching Credential*

**FIELD MAJOR IN ENGLISH AND SPEECH**

(1) Required lower division courses:

(a) English 1A-1B, 36A-36B.

(b) Six units chosen from Public Speaking 1A, 2A, 2B.

(2) Upper division program:

(a) English 31 or 106, 117J, 130A-130B, 153.

(b) Six units chosen from English 114A-114B, 125C-125D, 125G-125H, 122A-122B.

(c) Six units chosen from English 156, 157, 167, 177, 187.

(d) Six units chosen from Public Speaking 111A-111B, 111C-111D, 165.

(3) Graduate program:

Six units of graduate courses (200 series) in English.

(4) Students completing a field major in English and speech may not offer a minor in public speaking.

**FIELD MAJOR IN SOCIAL STUDIES**

(1) Required lower division courses:

(a) History 4A-4B or 5A-5B or 8A-8B.

(b) Six units each in two of the following fields: economics (or sociology), geography, political science, anthropology.

(2) Upper division program:

(a) Twelve units chosen from History 111A-111B, 121A-121B, 142A-142B-142C-142D, 153A-153B, 162A-162B, 171A-171B.

(b) Six units of upper division courses chosen from the fields of economics (or sociology), geography, political science, anthropology.

(c) Completion of a departmental major in geography, history or political science.

- (3) Graduate program:  
Six units of graduate courses (200 series) in the field of the departmental major.
- (4) Students completing a field major in social studies may not offer a minor in economics (or sociology), geography, political science, or anthropology.

**FIELD MAJOR IN THE PHYSICAL SCIENCES**

- (1) Required lower division courses:
  - (a) Chemistry 1A-1B, 8.
  - (b) Mathematics C, 3A-3B, 4A.
  - (c) Physics 1A-1B-1C-1D or 2A-2B.
  - (d) Geology 1A or 1C.
- (2) Upper division program:
  - (a) Astronomy 103A.
  - (b) A major in either physics or chemistry (which must include Chemistry 110A).
- (3) Graduate program:  
Six units of graduate courses (200 series) in physics or chemistry.
- (4) Students completing a field major in the physical sciences may not offer a minor in physics or chemistry.

**FIELD MAJOR IN THE LIFE SCIENCES**

- (1) Required lower division courses:
  - (a) Bacteriology 1.
  - (b) Botany 1A-1B.
  - (c) Chemistry 1A-1B.
  - (d) Zoölogy 1A-1B.
- (2) Upper division program:
  - (a) Completion of a departmental major in bacteriology, botany, or zoölogy, which must include not less than six units of upper division courses in botany and six units of upper division courses in zoölogy approved by the major department.
- (3) Graduate program:  
Six units of graduate courses (200 series) in botany, microbiology, or zoölogy.
- (4) Students completing a field major in the life sciences may not offer a minor in bacteriology, botany or zoölogy.

*The Junior College Credential*

The Certificate of Completion leading to the Junior College Credential is awarded to students who qualify for admission to graduate study, under the following conditions:

(1) to (5) Satisfaction of all general requirements listed on page 000.

(6) A master's (or doctor's) degree granted by an institution approved for graduate work by the State Board of Education. The applicant may meet the requirements for the degree and the credential simultaneously, but the Certificate of Completion may not be issued until the degree has been conferred.

(7) Residence for at least one regular semester and the completion of at least 10 units of advanced work in the University of California at Los Angeles. The Certificate of Completion can not be obtained solely upon the basis of summer session work, or of advanced standing.

(8) Completion of 10 units in education approved by the Department of Education, of which at least 6 units must be completed subsequent to the receipt of the bachelor's degree. Education 179 or 170, Teacher Training 320A, and Supervised Teaching 320B, 323, or 324 (as assigned by the department) are required. Supervised Teaching 320A, 320B, 323, 324 are restricted to graduate students.

(9) Completion of a graduate major (not less than 12 units of graduate courses or not less than 8 units of graduate courses with a thesis) in a field represented in the junior college. Majors may be offered at the University of California at Los Angeles in the following fields:

Agriculture	Geology	Physical Education
Botany	German	Physics
Chemistry	History	Political Science
Economics	Latin	Psychology
English	Mathematics	Spanish
French	Microbiology	Zoölogy
Geography	Philosophy	

(10) Completion with a scholarship average not lower than C of a teaching minor (not less than 18 units, of which from 9 to 12 units must be upper division or graduate courses) in any of the foregoing fields, or in art, astronomy, Greek, home economics, mechanic arts, music, public speaking. A minor in a modern foreign language must include 12 units of upper division courses.

(11) A scholastic average of 1.75 or higher must be maintained in all work undertaken after the bachelor's degree. A grade of C or higher must be presented in Teacher Training 320A and in Supervised Teaching 320B, 323, or 324.

## PROCEDURE REQUIRED OF CANDIDATES FOR CREDENTIALS

(1) Candidates for higher teaching credentials must apply to the Graduate Council for formal advancement to candidacy. Application forms may be secured at the office of the Registrar, and must be approved by the department of the candidate's major. The final date for filing such applications is published in the *University Calendar*, the *Schedule of Classes* and the *Daily Bruin*.

(2) All candidates for supervised teaching must make formal application at the office of the Director of the Training Department about the middle of the semester preceding that in which such teaching is to be done. For dates of application without late fee, see the *University Calendar* and the *Schedule of Classes*. Upon filing the formal application for supervised teaching, the candidate should report to the University physician, since teaching courses will not be assigned without the approval of the medical authorities of the University.

(3) *State Credential Fee.* A credential fee of \$3 is required by the State of all applicants who have resided in California for twelve months immediately preceding date of application. All other applicants must pay a fee of \$5. This fee must be submitted for each credential sought, in the form of a postal money order, made payable to the "California State Department of Education."

(4) *Oath of Allegiance.* An oath of allegiance is required by the State Department of Education of each candidate for a credential, on a form supplied by the Department and which may be obtained in the office of the Registrar.

Changes in this - effective 1938-39

## ANNOUNCEMENT OF COURSES FOR THE ACADEMIC YEAR, 1938-39

### CLASSIFICATION AND NUMBERING

Courses are classified and numbered as follows:

*Undergraduate courses.* These are of two kinds, lower division and upper division.

A lower division course (numbered 1-49, or sometimes indicated by a letter if the subject is one usually given in high school) is open to freshmen and sophomores, and does not count as upper division work in any department.

An upper division course (numbered 100-199) is advanced study in a field which has been pursued in the lower division, or elementary work in a subject of sufficient difficulty to require the maturity of upper division students.

*Graduate courses* (numbered 200-299) are open only to students accepted in graduate status. As a condition for enrollment in a graduate course the student must submit to the instructor in charge of the course evidence of satisfactory preparation for the work proposed; adequate preparation will consist normally of the completion of at least 12 units of upper division work basic to the subject of the graduate course, irrespective of the department in which such basic work may have been completed. Students in unclassified status are not admitted to graduate courses.

*Professional courses* (numbered 300-399). The designation 300-399 denotes highly specialized courses dealing with methods of teaching specific subjects. Such courses may not be offered in partial fulfillment of the requirements for the major in education, but are acceptable toward academic degrees within the limitations prescribed by the various colleges.

### ABBREVIATIONS

In the following list of courses, the credit value of each course in semester units is indicated by a number in parentheses after the title. A unit of registration is one hour of the student's time at the University, weekly, during one semester, in lecture or recitation, together with the time necessary in preparation therefor; or a longer time in laboratory or other exercises not requiring preparation. The session in which the course is given is shown by the Roman numerals I for the first semester, or II for the second semester. A course given throughout the year is designated "Yr." The assignment of hours is made in the SCHEDULED CLASSES to be obtained at the time of registration.

*Year courses.* A course given throughout the year is designated by a number. Economics 1A-1B is an example. Each half of the course constitutes a semester's work. The first half is prerequisite to the second unless there is an explicit statement to the contrary. The instructor makes a final report on student's work at the end of each semester. Unless otherwise noted, the student may take the first half only and receive final credit for it.

All 194 cases to be 1-4 in each course

## AGRICULTURE

WILLIAM H. CHANDLER, Ph.D., Professor of Horticulture and Assistant Dean of the College of Agriculture.

ROBERT W. HODGSON, M.S., Professor of Subtropical Horticulture.

RALPH H. SMITH, Ph.D., Professor of Entomology.

MARTIN R. HUBERTY, Engr., Associate Professor of Irrigation Investigations and Practice.

SIDNEY H. CAMERON, Ph.D., Associate Professor of Subtropical Horticulture.

FREDERICK F. HALMA, Ph.D., Assistant Professor of Subtropical Horticulture.

PIERRE A. MILLER, M.S., Assistant Professor of Plant Pathology.

DAVID APPELMAN, Ph.D., Instructor in Plant Nutrition.

ELMER R. EGGERS, B.S., Associate in Subtropical Horticulture.

JACOB B. BIALE, Ph.D., Associate in Subtropical Horticulture.

RICHARD M. BOHART, Ph.D., Associate in Entomology.

*Letters and Science List.*—Entomology 1, 134, Soil Science 110, Plant Pathology 120. For regulations governing this list, see page 64.

*Upper Division Courses.*—All upper division courses announced by this department presuppose at least junior standing in the College of Agriculture. Juniors and seniors in other colleges may elect such courses in the Department of Agriculture as they are qualified to pursue.

*Preparation for the Major in Subtropical Horticulture.*—Course 2 or the equivalent, and the requirements in the Plant Science Curriculum (see pages 100, 101 of this Catalogue, or the Prospectus of the College of Agriculture).

*The Major in Subtropical Horticulture.*—Twelve units of upper division courses. Inclusion of 100, 101, and 102 is recommended.

*Preparation for Other Majors in the Plant Science Curriculum.*—See the Prospectus of the College of Agriculture and consult the adviser for students in Agriculture.

*Laboratory Fees.*—Plant Pathology 120, 130, \$2; Soil Science 109, \$5; Subtropical Horticulture 100, \$3; 101, \$2.

## ENTOMOLOGY

## LOWER DIVISION COURSE

General Entomology. (4) II.

Mr. Smith

Lectures, three hours; laboratory, three hours.

Recommended: Zoölogy 1A.

A general course designed to provide the student with a well-rounded knowledge of entomology, including the fundamental facts and principles of life and control.

## UPPER DIVISION COURSE

- 134. Insects Affecting Subtropical Fruit Plants.** (4) II. Mr. Smith  
Lectures, two hours; laboratory, six hours.  
Prerequisite: Zoölogy 1A; Entomology 1 or 124 (Berkeley or Davis) recommended.  
Specialized study of the biology, nature of injury, and control of the more important insects affecting citrus and other subtropical fruit plants.

## IRRIGATION INVESTIGATIONS AND PRACTICE

## UPPER DIVISION COURSE

- 110. Development and Use of Farm Irrigation Water Supplies.** (4) I. Mr. Huberty  
Lectures, three hours; laboratory, three hours.  
Prerequisite: Physics 2A-2B or the equivalent; Soil Science 109 recommended.  
Irrigation as a factor in agriculture; principles of irrigation practice; development of the farm irrigation water supply; preparation of land for irrigation; design of farm irrigation systems; water requirement of crops.  
Designed for students whose major is not engineering.

## SOIL SCIENCE

## UPPER DIVISION COURSES

- 109. Soil Physics and Chemistry.** (3) II. Mr. Huberty, Mr. Appleman  
Lecture, one hour; laboratory, six hours. Fee, \$5.  
Prerequisite: Chemistry 1A-1B, 6A, Physics 2A-2B or equivalent. Should be taken concurrently with course 110.  
Origin, evolution, characteristics and classification of soils; the physical properties of soils and their relation to management practices; soil and plant interrelations; culture solution studies; current theory of soil solution; phenomenon of base exchange.  
Designed for students whose major is not Soil Science.
- 110. The Soil as a Medium for Plant Growth.** (4) II. Mr. Appleman  
Lectures, three hours; a conference period.  
Prerequisite: Chemistry 1A-1B, 8.  
Composition and properties of soils; factors determining productivity; the causes and effects of the soil reaction, with particular reference to acid and alkali soils; the nature of fertilizers and some of their effects upon soil and plant; the nature of the soil solution.

## PLANT PATHOLOGY

## UPPER DIVISION COURSES

- 120. Plant Diseases.** (4) I. Mr. Miller  
Lectures, two hours; laboratory, six hours.  
Prerequisite: Botany 1A-1B or the equivalent, and Bacteriology 1. Fee, \$2.  
A general fundamental course treating of the nature, cause, and control of plant diseases.

130. **Diseases of Subtropical Fruit Plants.** (4) I. Mr. Miller  
Lectures, three hours; laboratory, three hours.  
Prerequisite: Botany 1A-1B or the equivalent, and Bacteriology 1. Course 120 is recommended. Fee, \$2.  
The pathology of citrus and other subtropical fruit plants. The distribution, economic importance, nature, cause, and control of the principal diseases.

## SUBTROPICAL HORTICULTURE

## LOWER DIVISION COURSES

2. **Elements of Fruit Production.** (3) I. Mr. Hodgson  
Lectures, three hours.  
Prerequisite: Botany 1A-1B or equivalent.  
This course is equivalent to Pomology 2A, given at Berkeley and at Davis.  
The principles and practices of fruit growing, with special reference to subtropical regions. The climatic, soil, and moisture requirements and adaptations of fruit trees; selection of site, propagation, planting, orchard management practices, harvesting, and preparation for market. Survey of the industry in the United States.
3. **Orchard Practices.** (1) I, II. Mr. Eggers  
Laboratory, three hours.  
Prerequisite: course 2 or the equivalent.  
A laboratory course in orchard practice: propagation, planting, training, pruning, fruit-thinning, and other orchard operations. Designed to supplement course 2.

## UPPER DIVISION COURSES

100. **Systematic Subtropical Pomology.** (4) I. Mr. Halma  
Lectures, two hours; laboratory, six hours.  
Prerequisite: Subtropical Horticulture 2, or equivalent. Fee, \$3.  
The botanical classification and relationships of the principal fruits; horticultural races and groups; growth and bearing habits; bud and fruit morphology; varietal characters.
101. **Citriculture.** (4) II. Mr. Hodgson, Mr. Cameron  
Lectures, three hours; laboratory, three hours; four Saturday field trips.  
Prerequisite: Chemistry 1A-1B, Subtropical Horticulture 2 and 100, or equivalent. Fee, \$2.  
The characteristics of the citrus fruits and their responses to environmental influences and cultural practice; the economics of the citrus fruit industry.
102. **Major Subtropical Fruits Other Than Citrus.** (3) I. Mr. Hodgson, Mr. Cameron  
Lectures, three hours; three Saturday field trips.  
Prerequisite: Subtropical Horticulture 2 or equivalent, and 100 (concurrently).  
A survey of the knowledge concerning the requirements and responses of the major subtropical fruit plants other than *Citrus*; the economics of their industries. The fruits considered will include the walnut, pecan, almond, fig, olive, avocado, date, and oriental persimmon.

- 103. Proseminar. (2) I.** The Staff (Mr. Hodgson in charge)  
Open only to senior students majoring in subtropical horticulture.  
A critical review and discussion of reading assignments.
- 104. Advanced Subtropical Horticulture. (3) II.** Mr. Cameron  
Lectures, three hours.  
Prerequisite: Subtropical Horticulture 2, or equivalent, Botany 7 or equivalent, and Subtropical Horticulture 100 and 102.  
An analysis of the knowledge concerning the responses of fruit trees to environmental and cultural influences, with special reference to subtropical regions.
- 107. Minor Subtropicals and Hardy Tropicals. (2) II.** Mr. Hodgson, Mr. Halma  
Lectures, two hours; one Saturday field exercise.  
Prerequisite: Subtropical Horticulture 2 or equivalent; course 100 recommended.  
A survey of the knowledge concerning the requirements and responses of the minor subtropical fruit plants and the hardy tropicals. The fruits considered will include the pomegranate, tuna or prickly pear, passion fruit or granadilla, loquat, cherimoya, guava, jujube, white sapote, feijoa, pistachio, macadamia, carob, litchi, mango, and papaya.
- 199A-199B. Special Study for Advanced Undergraduates. (2-4; 2-4) Yr.**  
Prerequisite: senior standing and consent of the instructor. The Staff

## GRADUATE COURSES

- \*200. Research Methods in Horticulture. (4) I.** Mr. Cameron  
Lectures, two hours; laboratory, six hours.  
Prerequisite: consent of the instructor.  
Methods and techniques employed in the planning and conduct of horticultural research and in the analysis of the resulting data.
- 255A-255B. Seminar in Subtropical Horticulture. (1-1) Yr.** Mr. Chandler in charge
- 281A-281B. Research in Subtropical Horticulture. (1-6; 1-6) Yr.** Mr. Cameron, Mr. Halma

---

\* Not to be given 1938-39.

## ART

- GEORGE JAMES COX, R.C.A., Professor of Art.  
 NELLIE HUNTINGTON GERE, Associate Professor of Fine Arts, Emeritus.  
 LOUISE PINKNEY SOOY, Associate Professor of Fine Arts.  
 BESSIE E. HAZEN, Ed.B., Assistant Professor of Fine Arts, Emeritus.  
 HELEN CLARK CHANDLER, Assistant Professor of Fine Arts.  
 HELMUT HUNGERLAND, Ph.D., Assistant Professor of Fine Arts.  
 WARREN CHENEY, A.B., Instructor in Fine Arts.  
 BELLE H. WHITICE, Associate in Fine Arts.  
 HELEN M. HOWELL, Ed.B., Associate in Fine Arts and Supervisor of Art Training.  
 CLARA BARTRAM HUMPHREYS, M.A., Associate in Fine Arts.  
 ANNITA DELANO, Associate in Fine Arts.  
 LAURA F. ANDRESON, Ed.B., Associate in Fine Arts.  
 ANNIE C. B. MCPHAIL, Ed.B., Associate in Fine Arts.  
 JOHN W. LOVE, M.A., Associate in Fine Arts.  
 VIRGINIA VAN NORDEN WOODBRIDGE, M.S., Associate in Fine Arts.  
 JOHN OLSEN, M.A., Associate in Fine Arts.  
 ROBERT TYLER LEE, Assistant in Art and Assistant in Dance.  
 DOREEN MARY BAVERSTOCK, A.B., Assistant in Art.

- 
- ADRIAN D. KELLER, B.S., in E.E., Associate in Mechanic Arts.  
 NATALIE WHITE, M.A., Supervisor of Training, Art.

*Appreciation and History of Art:* Courses 1A-1B, 21, 101, 121A-121B, 131A-131B, 161.

*Art Education:* Courses 160A-160B, 180, 330A-330B.

*Costume:* Course 183A-183B.

*Crafts:* Courses 9, 119A-119B, 129A-129B, 139A-139B, 179.

*Design:* Courses 2A-2B, 12, 32, 132A-132B, 172A-172B.

*Drawing and Painting:* Courses 4A-4B, 137A-137B, 144A-144B, 164A-164B.

*House Design and Decoration:* Courses 156A-156B, 186A-186B.

*Illustration:* Courses 135, 165A-165B.

*Sculpture:* Course 191A-191B.

*Theater:* Courses 48, 168.

*Special Study for Advanced Students:* Course 199A-199B.

<sup>1</sup> In residence first semester only, 1988-89.

### The Teachers College

*Preparation for the Major.*—Courses 1A, 2A-2B, 4A-4B, 9, 12, 21, 32, 48. Entering freshmen are required to take a comprehensive examination covering the elementary theory and technique of drawing and painting. Those failing must take course A, without credit.

*The Major.*—Twenty-seven units of upper division courses. This program may be taken in one of three specified fields, and must be arranged with a department adviser.

*The Minor in Education.*—Education 103, 170, Directed Teaching, six to ten units; Art 160A-160B, 180.

For students with major or minor in art, courses 1A and 2A are prerequisite to all other courses in the department except certain courses which may be taken concurrently with them.

### The College of Letters and Science

*Letters and Science List.*—Courses 1A-1B, 2A-2B, 4A-4B, 21, 32, 121A-121B, 131A-131B, 137A-137B, 144A-144B, 161, 164A-164B, and 172A-172B are included in the Letters and Science List of Courses. For regulations governing this list, see page 64. A major in art is not offered in the College of Letters and Science.

*Laboratory Fees.*—Courses 119A, 119B, 139A, 191A, 191B, 330A, 330B, \$2; 164A, 164B, \$4.

### LOWER DIVISION COURSES

**1A. Elementary Drawing—Introductory Course.** (No credit) I, II. Mr. Cox  
Required of students with major in art who do not pass the freshman entrance test in art.

**1A-1B. Aesthetics.** (2-2) Yr. Mr. Cox, ———  
Review of the great epochs. The origin and function of the arts and their practical relation to contemporary civilizations.

**2A-2B. Art Structure.** (2-2) Beginning each semester.  
Miss McPhail, Mr. Olsen

2A. Fundamental course in creative design.

2B. The development of appreciation for, and power to create with, unified relations of line, space, and color in the imaginative interpretation of subject matter.

**4A-4B. Drawing and Painting.** (2-2) Beginning each semester.  
Mr. Oheney, Mr. Olsen

4A. Training in drawing, freehand and mechanical perspective; introduction to the study of form and space in painting.

4B. Observation of the visual facts of form, light, color, and space as a basis for creative painting; the study of water color techniques.

**9. Elementary Crafts.** (2) I, II. Miss Anderson, ———  
Prerequisite: courses 1A, 2A.  
The fundamental processes of the major crafts.

† Although Art A gives no credit, it is counted on a student's allowable program as two units.

- 12. Typographic Composition.** (2) I, II. Miss McPhail and the Staff  
Prerequisite: courses 1A, 2A.  
Emphasis upon lucidity, directness, and beauty of lettering. The nature of the project as a determining factor in the selection of typographical forms. The composition of hand-lettered surfaces.
- 21. Art Appreciation: Costume and House Furnishing.** (2) I, II.  
Prerequisite: course 1A or 2A. Mrs. Sooy and the Staff  
Study of the structural harmony of modern dress; its relation to the figure, its suitability and expressiveness. Principles underlying the use of the materials of the home: harmony of color, proportion, texture, arrangement. The emotional significance of line, color, and form in dress and interiors.
- 32. Art Structure.** (2) I, II. Miss Delano  
Prerequisite: courses 1A, 2A-2B, 4B.  
The development of the ability to create imaginatively with line, space, and color in unified relations.
- 48. Art of the Theater.** (2) I, II. Mrs. Sooy, Mr. Lee, Miss Baverstock  
The visual art of the theater; skill in the use of materials and equipment of the modern stage.

## UPPER DIVISION COURSES

- 101. History and Appreciation of Costume and Furniture.** (2) I. Mrs. Sooy and the Staff
- 119A-119B. Ceramics.** (2-2) Yr. Miss Andreson  
Prerequisite: courses 1A, 2A-2B. Fee, \$2 a semester.  
Pottery, related to art and industry.
- 121A-121B. History of Art.** (2-2) Yr. Mr. Hungerland  
Prerequisite: course 1A.  
Required of all majors in art.  
Occidental architecture and allied arts from paleolithic times to the present. Oriental paintings.
- 129A-129B. Art of the Book.** (2-2) Yr. Miss Whitice  
Prerequisite: courses 1A, 2A-2B, 9A.  
129A. Study of the book from historical and aesthetic standpoints. Practical work to gain knowledge of types of construction and skill in handling binding materials.  
129B. Study of the work of noted binders and famous presses. Fine or extra binding. Finishing, including the decoration of books forwarded in leather in course 129A.
- 131A-131B. History of Sculpture and Painting.** (2-2) Yr. Mr. Hungerland  
Prerequisite: course 1A.  
European, American, and contemporary sculpture and painting.
- 132A-132B. Industrial Design.** (2-2) Yr. Miss Delano  
Prerequisite: courses 2A-2B, 4A.  
Study of materials, processes, and functions of the art industries leading to original design.

- 135. Book Illustration. (2) I.** Mr. Cox, ———  
Prerequisite: courses 32A, 144A.  
Pen and ink, wood engraving, color.
- 137A-137B. Landscape Painting. (2-2) Yr.** Miss Delano  
Prerequisite: course 32A.  
The development of personal vision and individual expression as applied to landscape painting. Survey of modern and traditional schools.
- 139A-139B. Weaving. (2-2) Yr.** Miss Whitice  
Prerequisite: courses 1A, 2A-2B. Fee for 139A, \$2.  
History and development of weaving. Experience in technique and processes.
- 144A-144B. Advanced Painting. (2-2) Yr.** Miss Chandler  
Prerequisite: courses 2A-2B, 4A-4B.  
The study of the qualities of form, light, color, and space as a basis for the interpretation of observed facts. The development of techniques and creative expression.
- 156A-156B. House Planning and Decoration. (2-2) Yr.** Mrs. Woodbridge  
Prerequisite: course 21.  
156A. A general cultural course, considering the home as a unit. The arrangement of garden, house, floor plan, and furniture are studied as functional and decorative problems. Laboratory, lectures, and demonstration.  
156B. The study of architectural forms and design applied to interior decoration. General research into the essentials of the historic periods. Emphasis upon original adaptation and creation.
- 160A-160B. Principles of Art Education. (2-2) Yr.** Miss Howell  
Prerequisite: junior standing.  
160A. A study of objectives, child growth and development, and principles of education as related to art education.  
160B. A study of method and the curriculum in art education.
- 161. History of Mohammedan and Oriental Art. (2)** Mr. Hungerland  
Prerequisite: course 1A.  
Architecture and allied arts: Mohammedan, Indian, Chinese, Korean, and Japanese. Comparison of oriental and occidental art.
- 164A-164B. Life Class. (2-2) Yr.** Mr. Cox  
Fee, \$4 a semester.  
Objective drawing and expressive interpretation of the figure; its use in original composition.
- 165A-165B. Advertising Illustration. (2-2) Yr.** Miss McPhail  
Prerequisite: course 32.  
The creative employment of modern advertising techniques and mechanical processes directed toward the development of versatility and power in conception and expression.
- 168A-168B. Stage Directing. (2-2) Yr.** Mrs. Sooy  
Prerequisite: courses 8A-8B and senior standing.  
Duties of staff and crew; conduct of rehearsals. Emphasis on unity of visual elements of the theater.

- 172A-172B. Advanced Composition.** (2-2) Yr. Miss Chandler, Miss Delano  
Prerequisite: course 134A.
- 179. Metal Craft.** (2) II. Miss Whitice  
Prerequisite: course 132A.  
Original work in copper, brass, and silver.
- 180. Theory and Philosophy of Art Education.** (2) I. Mrs. Sooy  
Prerequisite: course 160A-160B.  
Economic and social significance of aesthetic development. Comparative study of existing theories and practices.
- 183A-183B. Costume Design.** (2-2) Yr. Mrs. Sooy, ——  
Prerequisite: courses 8A-8B, 32.  
183A. Costume of the theater. 183B. Modern costume.
- 186A-186B. Advanced Interior Decoration.** (2-2) Yr. Mrs. Sooy, ——  
Prerequisite: course 156A-156B.  
186A. Study of the cultivation of style in interior design. Original creation is emphasized through a study of unusual color harmonies and form arrangements. The influence of fashion in interior decoration is demonstrated.  
186B. The technique of interior decoration. Shop practice through actual problems in interior design in stores and home.
- 191A-191B. Introduction to Sculpture.** (2-2) Yr. Mr. Cheney  
Prerequisite: upper division standing. Fee, \$2 each semester.  
Problems in creative expression; modeling of figures in terra cotta; portraiture.
- 199A-199B. Special Studies for Advanced Students.** (2-2) Yr.  
Mr. Cox, Mrs. Sooy, Miss Chandler  
Prerequisite: senior standing. Students registering in this course must secure the consent of the instructor, and be prepared to show examples of their work.  
Advanced individual work upon specific problems connected with art and education.

#### PROFESSIONAL COURSE

- 330A-330B. Fine and Industrial Art Education.** (3-3) Beginning each semester. Mrs. Humphreys, Miss White, Miss Andreson, Miss Howell, Mr. Keller  
Fee, \$2 a semester.

## ASTRONOMY

FREDERICK C. LEONARD, Ph.D., Associate Professor of Astronomy.

SAMUEL HERRICK, JR., Ph.D., Instructor in Astronomy.

JOSEPH KAPLAN, Ph.D., Associate Professor of Physics.

GEORGE C. MILLER, Lieutenant Commander, U. S. Navy; Graduate U. S. Naval Academy; Graduate U. S. War College; Associate Professor of Naval Science and Tactics.

GEORGE G. CRISSMAN, Lieutenant, U. S. Navy; Graduate U. S. Naval Academy; Graduate U. S. Naval Postgraduate School; Assistant Professor of Naval Science and Tactics.

*Letters and Science List.*—All undergraduate courses in astronomy are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Required: general physics (Physics 1A-1B-1C-1D, or, in exceptional cases, Physics 2A-2B, or their equivalents); plane and spherical trigonometry, plane analytic geometry, and differential and integral calculus (Mathematics C, F, 3A, 3B, 4A, or their equivalents). Recommended: a reading knowledge of French and German.

*The Major.*—At least eighteen upper division units of astronomy, including courses 103A-103B and 117A-117B, and, preferably, 104A-104B; and as many more upper division units as are required to total twenty-four, chosen from courses in astronomy, physics, or mathematics, according to some definite plan approved by the Department of Astronomy.

## LOWER DIVISION COURSES

Courses 1A, 1B, and 2 are not open for credit to upper division students who have the prerequisites for Astronomy 103A.

## 1A. Elementary Astronomy: The Fundamentals. (3) I, II.

Mr. Leonard, Mr. Herrick

The general principles and the fundamental facts of astronomy, with particular emphasis on the solar system. Small sections for discussion and questions also are held.

## 1B. Elementary Astronomy: The Stellar System. (3) II. Mr. Leonard

Prerequisite: course 1A.

Results of recent researches in sidereal astronomy and astrophysics, and progress through the use of modern methods, especially the spectroscopic and the photographic. This course is a continuation of course 1A.

## 2. Practice in Observing. (1) I, II.

Mr. Herrick

Prerequisite or concurrent: course 1A.

Practical work for beginners, including constellation studies, telescopic observations of celestial objects, and laboratory exercises cognate to the material of course 1A. Regularly scheduled excursions to the neighboring observatories and planetarium constitute an integral part of the course.

**3. Practical Astronomy for Engineering Students. (1) II.** Mr. Herrick  
Prerequisite: advanced sophomore standing; Civil Engineering 1FA and credit or registration in Civil Engineering 1FB.

A course intended primarily for students of civil engineering; the principles of practical astronomy and spherical trigonometry as they relate to the needs of such students; solution of the fundamental problems of practical astronomy; use of the *Almanac*; computing.

**9. Introduction to Navigation and Nautical Astronomy. (2) I, II.**

Mr. Miller, Mr. Crissman

Prerequisite: Mathematics: Mathematics C. Prescribed for and limited to freshmen enrolled in the Naval Unit.

NOTE.—Courses 9, 10, 109, and 110 will include lectures, recitations and observatory work. Fundamental principles of astronomy underlying navigation of ships and aircraft; piloting; sailings; Great Circle sailing; use of sextant, chronometer, magnetic compass, gyro compass, nautical almanac, nautical tables; determination of latitude, time, longitude and azimuth.

**\*10. Introduction to Navigation and Nautical Astronomy. (2) I, II.**

Mr. Miller, Mr. Crissman

Prerequisite: course 9. Prescribed for and limited to sophomores enrolled in the Naval Unit.

(NOTE.—Course 10 is accepted in partial satisfaction of the prescribed science requirement for the junior certificate.)

#### UPPER DIVISION COURSES

A year of college physics and a course in plane analytic geometry are prerequisite to courses 103A-103B, 104A-104B, and 117A-117B. A working knowledge of differential and integral calculus is prerequisite to courses 107, 108, and 115. Lower division courses in astronomy are not necessarily prerequisite to any of the upper division courses except 109 and 110.

**103A-103B. General Astronomy. (3-3) Yr.**

Mr. Leonard

The general principles and the fundamental facts of astronomy in all of its branches, developed and discussed in detail.

For observational work in connection with this course, students may elect course 104A-104B, subject to the prerequisites announced.

**\*104A-104B. Practical Astronomy. (3-3) Yr.**

Mr. Herrick

An observing period, Monday, 7:15 to 10 p.m., may be substituted each week for any one of the regular class periods.

Prerequisite: course 2, 3, or 103A (103A may be taken concurrently with 104A), spherical trigonometry, and differential calculus.

The elements of practical astronomy, including the theory and the application of the equatorial telescope, the filar-position micrometer, the transit instrument, the astronomical clock, the chronometer, the sextant, and the surveyor's transit; the use of star maps, star catalogs, and the almanacs.

**107. The Reduction of Observations. (3) I.**

Mr. Leonard, Mr. Herrick

Analytical, arithmetical, and graphical methods employed in the handling of numerical and observational data, including the theory of errors and least squares and its application to the solution of astronomical, physical, chemical, and engineering problems.

\* Not to be given 1938-39.

**108. Interpolation. (3) II.**

Mr. Herrick

The more serviceable formulae of interpolation and their application in the use of astronomical, physical, chemical, and engineering tables; development of the formulae of numerical differentiation and integration and their employment in the construction of tables; practice in making extensive calculations, with special aim at accuracy and speed.

**\*109. Navigation and Nautical Astronomy. (2) I, II.**

Prerequisite: course 10. Prescribed for and limited to juniors enrolled in the Naval Unit.

**\*110. Navigation and Nautical Astronomy. (2) I, II.**

Prerequisite: course 109. Prescribed for and limited to seniors enrolled in the Naval Unit.

**115. The Determination of Orbits. (3) I.**

Mr. Herrick

The theory and calculation of the orbits and ephemerides of comets and minor planets.

**117A-117B. Astrophysics. (3-3) Yr.**

Mr. Kaplan

A laboratory period will occasionally be substituted, by appointment, for one of the regular class periods.

A general review of spectroscopy and astronomical physics, open to upper division students whose major subject is astronomy, some other physical science, or mathematics.

**118. Meteoritics. (3) I.**

Mr. Leonard

The science of meteorites and meteors. Open to upper division students whose major subject is some physical science, particularly astronomy, geology, or chemistry.

**\*125. The History of Astronomy. (3) I.**

Mr. Leonard

Prerequisite: course 1B, or credit or registration in the second half of any upper division year course in astronomy.

**199A-199B. Special Studies in Astronomy or Astrophysics. (2-2) Yr.**

The Staff (Mr. Leonard in charge)

Prerequisite: the consent of the instructor.

Investigation of special problems, or presentation of selected topics, chosen in accordance with the preparation and the requirements of the individual student.

\* Not to be given 1938-39.

## BACTERIOLOGY

THEODORE D. BECKWITH, Ph.D., Professor of Bacteriology.

ELINOR L. BEEBE, Ph.D., Assistant Professor of Public Health Nursing.

†CLAUDE E. ZOBELL, Ph.D., Assistant Professor of Marine Microbiology.

MERIDIAN R. GREENE, Sc.D., Instructor in Bacteriology.

ORREN LLOYD-JONES, M.D., Lecturer in Public Health Nursing.

MERLE DRAPER, M.Soc.Sc., Lecturer in Medical Social Case Work.

*Letters and Science List.*—All undergraduate courses in bacteriology and public health are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Bacteriology 1, Chemistry 1A-1B, Zoölogy 1A-1B, Botany 1A, Physics 2A-2B, French or German. Recommended: Chemistry 6A, 8, 9; Zoölogy 4.

*The Major.*—Bacteriology 103 (4 units) and Bacteriology 199A-199B (4 units) together with 16 units of upper division work in related subjects, these to be selected from the following series: Bacteriology 104; Public Health 101A, 101B; Botany 105A, 119, 120; Zoölogy 101, 105, 106, 107, 107C, 111, 111C; Chemistry 107A, 107B, 110A, 195; Home Economics 159; Soil Science 110, Plant Pathology 120. Courses are to be chosen with the approval of the department.

*Curriculum for Medical Technicians.*—For details, see page 73.

*Laboratory Fees.*—Course 1, \$12.50; 103, \$15; 199A, 199B, \$8.

## LOWER DIVISION COURSES

## 1. Fundamental Bacteriology. (4) I, II.

Miss Greene

Prerequisite: Chemistry 1A. Fee, \$12.50.

Early history of bacteriology; effects of physical and chemical agencies upon bacteria; biochemical activities of bacteria; the bacteriology of the air, water, soil, milk and dairy products, other foods; industrial applications. The laboratory exercises include an introduction to bacteriological technique.

Students who have credit for Bacteriology 6 will receive only three units for course 1.

## 6. General Bacteriology. (2) II.

Mr. Beckwith

A cultural course for nontechnical students.

Students who have credit for Bacteriology 1 will receive only one unit for course 6.

## UPPER DIVISION COURSES

## 103. Advanced Bacteriology. (4) I.

Mr. Beckwith

Prerequisite: course 1. Fee, \$15.

The more advanced principles of the life activities, growth, and morphology of bacteria. The etiology of disease.

† Member of the staff of Scripps Institution of Oceanography, La Jolla.

**\*104. Soil Bacteriology. (2) II.**

Mr. ZoBell

The microscopic flora of soil: the morphology, function, and metabolism of soil bacteria.

**199A-199B. Problems in Bacteriology. (2-2) Yr.**

Mr. Beckwith, Miss Greene

Open to qualified students by special arrangement. Fee, \$8 a semester.

**MICROBIOLOGY**

**GRADUATE COURSES**

**251A-251B. Seminar in Microbiology. (2-2) Yr.**

Mr. Beckwith, Mr. Ball, Mr. Plunkett

**273A-273B. Research in Microbiology. (2-5; 2-5) Yr.**

Mr. Beckwith, Mr. Ball, Mr. Plunkett

**PUBLIC HEALTH**

**UPPER DIVISION COURSE**

**101A-101B. Public Health and Preventive Medicine. (3-3) Yr.**

Mr. Lloyd-Jones

101A, lectures, three hours; 101B, lectures, two hours, and laboratory, three hours.

Prerequisite: Bacteriology 1 or Zoölogy 1A; or, for students in the Public Health Nursing Curriculum, the consent of the instructor.

**PUBLIC HEALTH NURSING**

**PROFESSIONAL COURSES**

**402. Social Case Work as Related to Public Health Nursing. (2) II.**

Miss Draper

This course is planned to familiarize the public health nurse with the processes of social case work as carried on by social agencies, the approach to problems of family and community relationship, and the application of social case work methods in the public health nursing field. Class work, field and observation study.

**418. Principles and Practice in Public Health Nursing. (3) I.** Miss Beebe

A general view of public health nursing as illustrated by its present scope and methods. A study of the objectives of public health nursing, applied to all phases of the services, including maternity, infancy, preschool, school, and industrial.

**419. Administration and Organization of Public Health Nursing. (3) II.**

Miss Beebe

The history and development of public health nursing to meet individual, family, and community health needs. The policies and trends in the organization of national, state, local, municipal, and rural public health nursing services; application of these policies to official and nonofficial agencies.

\* Not to be given, 1988-89.

## BOTANY

OLENUS L. SPONSLER, Ph.D., Professor of Botany.

CARL C. EPLING, Ph.D., Associate Professor of Botany and Curator of the Herbarium.

ARTHUR W. HAUPT, Ph.D., Associate Professor of Botany.

ARTHUR M. JOHNSON, Ph.D., Associate Professor of Botany and Director of the Botanical Garden.

ORDA A. PLUNKETT, Ph.D., Assistant Professor of Botany.

FLOEA MURRAY SCOTT, Ph.D., Assistant Professor of Botany.

*Letters and Science List.*—All undergraduate courses in this department are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Botany 1A-1B, 6 and 7, Chemistry 1A-1B or 2A-2B, German A, B. In addition to these courses, certain phases of botanical work require Geology 1A-1B, Physics 2A-2B, Bacteriology 1, and Zoölogy 1A.

*The Major.*—Seventeen units of upper division botany, including courses 105A-105B and 106A-106B; and in addition, seven units in botany or related courses—bacteriology, chemistry, geology, paleontology, and zoölogy—to be chosen with the approval of the department.

*Laboratory Fees.*—Courses 7, 10, \$3; 6, 111, 113, 120, \$2.

## LOWER DIVISION COURSES

1A-1B. General Botany. (4-4) Beginning each semester.

Mr. Haupt, Mr. Johnson, Mr. Plunkett

Lectures, two hours; laboratory, four hours.

1A. A general course on the structure and functions, growth and reproduction, interrelationships, life habits, and economic relations of the seed plants.

1B. The evolution of the plant kingdom, dealing with the comparative morphology of all of the great plant groups.

6. Plant Anatomy. (3) I.

Miss Scott

Lecture, one hour; laboratory, six hours.

Recommended: course 10. Fee, \$2.

The microscopic structure of the higher plants with particular reference to the development and differentiation of vegetative tissues.

7. Plant Physiology. (4) II.

Mr. Sponsler

Lecture, two hours; laboratory, six hours.

Prerequisite: Botany 6, and chemistry. Fee, \$3.

Experimental work designed to demonstrate various activities of the plant.

\*10. Botanical Microtechnique. (3) I.

Mr. Haupt

Lecture, one hour; laboratory, six hours.

Prerequisite: course 1A-1B. Fee, \$3.

\* Not to be given 1988-89.

**36. Forest Botany. (3) II.**

Mr. Epling

Lecture, one hour; laboratory, six hours, or equivalent field work.

Identification and distribution of the dominant woody species of California. For forestry majors and others interested in conservation, flood control, and soil erosion.

## UPPER DIVISION COURSES

*General Prerequisite.*—Botany 1A–1B is prerequisite to all upper division courses.

**103. Botany of Economic Plants. (2) I.**

Mr. Johnson

Lectures, two hours.

Designed for students of economics, geography, agriculture, and botany. The general morphology, classification, ecology and geographic distribution, origin, and uses of economic plants.

**105A. Algae and Bryophytes. (4) I.**

Mr. Plunkett

Lectures, two hours; laboratory, six hours.

A study of the structure, development, and phylogenetic relationships of the principal orders of fresh water and marine algae, and of liverworts and mosses.

**105B. Pteridophytes and Gymnosperms. (4) II.**

Mr. Haupt

Lecture, two hours; laboratory, six hours.

Structure, development, and phylogenetic relationships of the principal orders of ferns and gymnosperms.

**106A–106B. Angiosperms. (3–3) Yr.**

Mr. Epling

Lecture, one hour; laboratory, six hours, and additional field work to be arranged.

A survey of the chief orders and families of the flowering plants involving a study of their structure, phylogenetic classification, and geographical distribution. Designed for botany majors, teachers of nature study, and students in the College of Agriculture

**111. Plant Cytology. (3) I.**

Mr. Haupt

Lecture, one hour; laboratory, six hours.

Prerequisite: courses 6, 10, and 105A or 105B. Fee, \$2.

Structure and physiology of the cell.

**113. Physiological Plant Anatomy. (3) II.**

Miss Scott

Lecture, one hour; laboratory, six hours.

Prerequisite: courses 6 and 7. Fee, \$2.

A study of the tissues of the higher plant in relation to function; a survey of the visible structural and reserve materials of the plant body.

**\*114. Advanced Plant Physiology. (3) I.**

Mr. Sponsler

Conferences and laboratory.

Prerequisite: courses 6 and 7, chemistry, and physics.

Experimental work on certain functions of the plant.

- 119. Mycology. (3) I.** Mr. Plunkett  
Lecture, one hour; laboratory, six hours.  
Structure, development, and classifications of the important genera and species of fungi. For students in botany, bacteriology, agriculture, and forestry.
- 120. Phytopathology. (3) II.** Mr. Plunkett  
Lecture, one hour; laboratory, six hours. Fee, \$2.  
Prerequisite: course 119.  
A study of bacterial and fungous diseases of plants.
- 152. Plant Ecology. (3) II.** Mr. Johnson  
Lecture, one hour; laboratory and field, six hours.  
Prerequisite: course 106A-106B.  
Field and laboratory studies of plant communities and their relation to the environment.
- 153A-153B. Advanced Systematic Botany. (2-2) Yr.** Mr. Epling  
Lectures, two hours.  
A systematic survey of the flowering plants by a comparison of the two principal schemes of relationship; origin of the group and concept of speciation.
- 190. Research Methods in Morphology. (2) I.** Mr. Haupt  
Laboratory and conferences.  
For students of senior and graduate standing.
- 191A-191B. Molecular Structure of Biological Materials. (2-2) Yr.** Mr. Sponsler  
Open to seniors and graduate students; others by permission.  
Prerequisite: Physics 2A-2B, Chemistry 8, and Botany 1A-1B or Zoölogy 1A-1B, and in addition advanced courses in biological fields.  
An adaptation of our knowledge of atomic and molecular structure to our biological conceptions of protoplasm and cell parts.
- \*195. Special Topics. (2) I, II.** The Staff (Mr. Sponsler in charge)  
Open only to qualified seniors and graduate students.
- 199A-199B. Problems in Botany. (2-2) Yr.**  
Prerequisite: senior standing. The Staff (Mr. Sponsler in charge)

## GRADUATE COURSES

- 252A-252B. Seminar in Principles and Theories of Botany. (2-2) Yr.**  
Mr. Sponsler, Mr. Epling, Mr. Haupt, Mr. Johnson
- 253A-253B. Seminar in Special Fields of Botany. (1-1) Yr.**  
Mr. Sponsler, Mr. Epling, Mr. Haupt, Mr. Johnson
- 278A-278B. Research in Botany. (2-5; 2-5) Yr.** Mr. Sponsler in charge

\* Not to be given 1988-89.

**BUSINESS ADMINISTRATION**

HOWARD SCOTT NOBLE, M.B.A., C.P.A., Professor of Accounting and Dean of the College of Business Administration.

—————, Visiting Professor of Management and Industry.

IRA N. FRISBEE, M.B.A., C.P.A., Associate Professor of Accounting.

FLOYD F. BURTCHETT, Ph.D., Assistant Professor of Banking and Finance.

GEORGE W. ROBBINS, M.B.A., Assistant Professor of Marketing.

RALPH CASSADY, Ph.D., Assistant Professor of Marketing.

WILBERT E. KARRENBROCK, Ph.D., Assistant Professor of Accounting.

JOHN C. CLENDENIN, Ph.D., Assistant Professor of Banking and Finance.

TERRIS MOORE, Dr. Com. Sci., Instructor in Banking and Finance.

EVA M. ALLEN, Associate in Commercial Practice.

ESTELLA B. PLOUGH, Associate in Commercial Practice.

ELSTON K. HERRALD, M.A., Associate in Accounting.

—————

WILLIAM F. BROWN, M.A., Lecturer in Marketing.

ARNOLD G. EGER, LL.B., Lecturer in Business Law.

HARRY SIMONS, M.A., C.P.A., Lecturer in Accounting.

**The College of Business Administration**

*Preparation for the Major.*—Business Administration 1A-1B, Economics 1A-1B, English 1A, Public Speaking 1A, Mathematics 8 and 2; either 14 units of natural science (chosen from the accepted list) or 16 units in one foreign language; Geography 5A-5B; 6 units chosen from the following: Political Science 3A-3B, History 4A-4B, 8A-8B, 46, Psychology 1A-1B.

In the natural science option, a minimum of 4 units shall be university courses with laboratory. The following courses are accepted toward the requirement: high school physics (3), high school chemistry (3), Chemistry 2A-2B (8), Physics 2A-2B (8), Geology 1C (3), Biology 1 (3), Zoölogy 1A (5), Botany 1A (4), Astronomy 1A (3).

In the foreign language option, each year of the elected language taken in high school not duplicated by college courses taken by the student, shall count as 3 units.

*The Major.*

1. (a) Required during the junior year, Business Administration 18A-18B, 120, 140, 160A, 180; Economics 135; (b) required during the senior year, Business Administration 100.

2. Three units chosen from the following: Business Administration 145; Economics 131A-131B, 132, 150, 171, 173.

3. Nine upper division units in one of the following five majors: Accounting, Banking and Finance, Management and Industry, Marketing, General Business. (For courses offered in the various majors, see page 94.)

*Electives.*—All undergraduate courses in the Letters and Science List (see page 64) will be accepted for credit toward the B.S. degree.

**The College of Letters and Science**

*Letters and Science List.*—Courses 1A-1B, 131, 132, 136, 140, 145, 153, and 180. For regulations governing this list, see page 64.

**The Teachers College**

The Junior Certificate requirements are as listed on page 97.

*Preparation for the Major.*—Business Administration 1A-1B, 2A or 2B, 18A; Commerce 16, 17, 18A-18B; Economics 1A-1B; Geography 1A-1B, or 5A-5B; and History 46.

*The Major, leading to the Special Secondary Credential in Commerce.*—Twenty-four units of advanced work approved by the Department of Business Administration. At least twelve units should be selected from the following courses in Business Administration: 100, 120, 131, 132, 140, 153, 160A-160B, 161, 162, 180. The remaining units should be selected from upper division courses in economics or some other social science which is approved by the Department of Business Administration.

*The Minor in Education.*—Education 103, 170; Directed Teaching, 8 units; Commerce 197, 198.

*Fees.*—Business Administration 140, \$3; Commerce A, \$6; Commerce B, \$10; Commerce 16, \$2.50.

**LOWER DIVISION COURSES**

**1A-1B. Principles of Accounting.** (3-3) Beginning each semester.

Two hours lecture, and two hours laboratory. Mr. Noble and the Staff

**2A-2B. Accounting Laboratory.** (1-1) Beginning each semester.

Should be taken concurrently with course 1A-1B. Mrs. Allen

**18A-18B. Business Law.** (3-3) Yr.

Mr. Eger

Prerequisite: junior standing.

Law in its relationship to business. Essentials of the law of contracts, agency, sales, negotiable instruments, partnerships, and private corporations.

**UPPER DIVISION COURSES**

Business Administration 1A-1B and Economics 1A-1B are prerequisite to all upper division courses.

†100. **Theory of Business.** (2) I, II.

Mr. Cassady, Mr. Clendenin

Prerequisite: senior standing.

Influence of certain fundamental laws in economics upon the practical processes of production, distribution, the price system, profits, and wages. The coordination of business activities under imperfect competition. The nature of social and economic forces which modify and direct business policies.

† Open only to students registered in College of Business Administration and to graduate students who have had the necessary preliminary preparation.

110 Real Estate Principles (3) II

**120. Business Organization. (3) I, II.**

Mr. Cassady

A study of the business unit and its functions from the point of view of management. The coordination of production, finance, marketing, personnel and accounting in a going business. The relation of the enterprise to the industry in general, to the business cycle, to law and government, and to the public.

**†121A. Industrial Management. (3) I.**

Prerequisite: course 120.

This course duplicates Business Administration 121 given prior to September, 1938.

Field of industrial management and its present application in modern industry. Problems and principles of plant location and construction, layout of machinery, storing of materials, routing of production orders, and output and production standards.

**†121B. Industrial Management. (3) II.**

Prerequisite: course 121A.

Essentially a field course during which numerous visits to representative factories are made involving the study of manufacturing operations and practical industrial management problems. Regularly scheduled meetings of class will be carried on concurrently with the field work, leading toward the development of present day principles of scientific management.

**†125. Organization and Management Problems. (3) II.**

Prerequisite: senior standing.

A case method study of the practical problems involved in the organization and management of business enterprises. Emphasis is placed upon the correlation of functions and activities in the organization of operating departments.

**†131. Corporation Finance. (3) I, II.**

Mr. Burtchett, Mr. Clendenin

Prerequisite: course 132, Economics 135.

A study of the financial structures and financial problems of business corporations. The instruments and methods of financing a corporation will be considered in their social, legal, and economic effects as well as in their effects on the corporation and the shareholders.

**132. Investments. (3) I, II.**

Mr. Burtchett, Mr. Moore

Prerequisite: Economics 135.

The principles underlying investment analysis and investment policy; the chief characteristics of civil and corporate obligations and stocks. Investment trusts and institutional investors, forms, problems, and policies. Relation of money markets and business cycles to investment practice.

**†133. Investment and Financial Analysis. (3) II.**

Mr. Clendenin

Prerequisite: course 131; Economics 135.

Examination of specific securities and projects from an investment point of view; sources of information on investment matters; the writing of investment analyses and reports. Examples of financial practices involved in mergers, reorganizations, recapitalization plans, etc. Reading assignments and class discussions will be devoted mainly to actual recent cases.

† Open only to students registered in College of Business Administration and to graduate students who have had the necessary preliminary preparation.

## †139. Applied Business Finance. (3) I.

Mr. Moore

Prerequisite: Economics 135

An intensive study of the financial operations of business; work of the credit department, the comptroller's or treasurer's office; preparation of financial reports for stockholders and for public authorities; credit analysis; credit bureaus and their services; consumer installment contracts and financing; bank relations in general. This course emphasizes the short-term financial problems and practices of all types of business enterprise.

## 140. Business Statistics. (4) I, II.

Mr. Frisbee

Recommended for the first half of the junior year. Fee, \$3.

Sources of statistical data; construction of tables, charts, and graphs; study of statistical methods; averages, measures of deviation, index numbers, secular trend, seasonal variation, correlation; study of business cycles; practical application of statistical methods in business problems.

## †144. Business and Statistical Research. (2) I.

Prerequisite: senior standing.

Exhaustive study of some representative problems, such as the effects of technological improvements upon production costs, influence of foreign competition upon home marketing, and the changes in labor costs brought about by the N.I.R.A. codes. These studies will be made possible by close co-operation with various industrial organizations in southern California.

## 145. Principles of Insurance. (3) I, II.

Mr. Clendenin

Description of the major types of insurance: life, property, casualty, etc.; interpretation of the contracts under which such insurance is written; regulation and control of insurance companies; general principles of mortality and premium calculation; basic legal principles of property and equity law as involved in the transfer of risks; distribution system of underwriting; organization of the insurance carrier companies.

## 153. Personnel Management. (3) II.

Mr. Dodd

A study of the administration of human relations in industry; the development of employment relations; problems and methods of selecting and placing personnel; problems and methods of labor maintenance; the joint control of industry; the criteria of effective personnel management.

## 160A-160B. Advanced Accounting. (3-3) Beginning each semester.

Mr. Noble, Mr. Frisbee, Mr. Karrenbrock

Continuation of corporation and of partnership accounting; insolvency and receivership accounts; specialized financial statements; estate accounting; consolidated balance sheets; actuarial accounting; advanced theory problems.

## †161. Cost Accounting. (3) I.

Mr. Karrenbrock

Accounting in manufacturing enterprises. Cost systems; accounting for material, labor, and overhead. Expense distribution, differential costs, by-products, joint-products, standard costs, and burden analyses.

## †162. Auditing. (3) II.

Mr. Frisbee

Prerequisite: course 160A-160B.

Accounting investigations, balance sheet audits, and detailed audits performed by public accountants. Valuation, audit procedure, working papers, and audit reports.

† Open only to students registered in College of Business Administration and to graduate students who have had the necessary preliminary preparation.

## †163. Federal Tax Accounting. (3) I.

Mr. Frisbee

Prerequisite: course 160A-160B.

A study of the current federal revenue acts as relating to income taxation, excess profits taxes, estate taxes, capital stock taxes, and gift taxes.

## 180. Elements of Marketing. (3) I, II.

Mr. Robbins, Mr. Cassady

A survey designed to give a basic understanding of the major marketing methods, institutions, and practices. The problems of retailing, wholesaling, choosing channels of distribution, advertising, coöperative marketing, pricing, market analysis, and marketing costs are defined from the standpoint of the consumer, the middleman, and the manufacturer.

## †184. Sales Management. (3) I.

Mr. Robbins

Prerequisite: course 180.

An intensive study of sales methods from the point of view of the sales manager. Includes the study of merchandising policy, choice of channels of distribution, market research and analysis, prices and credit terms, sales methods and campaigns; organization of sales department, management of sales force, and budgetary control of sales.

## †185. Advertising Principles. (3) I, II.

Mr. Brown

Prerequisite: course 180.

A study of the history and development of modern advertising; its objectives and its institutions; its economic implications, and its place in the sales plan. Study and practice in retail and general advertising, in organizing the campaign, in selection of media, in the mechanics and methods of testing and research.

## †186. Retail Store Management. (3) II.

Mr. Cassady

A study of retailing methods from the standpoint of the owner and manager. Includes the study of purchasing, planning stocks, inventory methods, arithmetic of markup, accounting for stock control, pricing, style merchandising, store layout, and store location.

## †199A-199B. Special Problems in Business Administration. (2-2) Yr.

The Staff

Prerequisite: senior standing, six units of upper division courses in business administration and the consent of the instructor.

## COMMERCE

## Teachers College

## †A. Typing. (No credit) I, II.

Mrs. Allen

Fee, \$6.

A study of the principles involved in learning to use the typewriter.

## †B. Shorthand. (No credit) I, II.

Mrs. Allen

Fee, \$10.

A study of the beginning principles of Gregg shorthand. Sight reading, penmanship drills, dictation.

† Open only to students registered in College of Business Administration and to graduate students who have had the necessary preliminary preparation.

‡ Although Commerce B gives no credit, it is counted on a student's allowable program as two units. Commerce A may be added to the allowable program.

**16. Advanced Typing. (2) I, II.**

Mrs. Allen

Prerequisite: Commerce A or the equivalent. Fee, \$2.50.

A study of the principles and practice of teaching typing. Business letters, outlines, legal papers, filing, tabulation. Technique emphasized.

**17. Shorthand. (3) I, II.**

Mrs. Allen

Prerequisite: Commerce B or the equivalent.

A study of the principles and practice of teaching shorthand. The completion of the Gregg Manual. Advanced reading, dictation, transcription.

**18A-18B. Penmanship. (2-2) Beginning each semester.**

Mrs. Plough

18A. A study of the principles of business handwriting; a survey of the methods of teaching penmanship in the elementary schools.

18B. Advanced study and practice in handwriting; a survey of the methods of teaching penmanship in the secondary schools.

**197. Methods of Teaching Commercial Subjects. (2) I.**

Mrs. Allen

A study of the principles and problems of teaching commercial subjects in the secondary schools.

**198. Commercial Education. (2) II.**

Mrs. Allen

Educational institutions offering training in commerce. These include the secondary school, the university, the business school, the correspondence school and many others. Emphasis is placed on the secondary school.

## CHEMISTRY

WILLIAM CONGER MORGAN, Ph.D., Professor of Chemistry.

—————, Professor of Chemistry.

MAX S. DUNN, Ph.D., Associate Professor of Chemistry.

WILLIAM R. CROWELL, Ph.D., Associate Professor of Analytical Chemistry.

G. ROSS ROBERTSON, Ph.D., Associate Professor of Organic Chemistry.

JAMES B. RAMSEY, Ph.D., Associate Professor of Chemistry.

WILLIAM G. YOUNG, Ph.D., Associate Professor of Chemistry.

<sup>1</sup>HOSMER W. STONE, Ph.D., Assistant Professor of Chemistry.

FRANCIS E. BLACET, Ph.D., Assistant Professor of Chemistry.

JAMES D. McCULLOUGH, Ph.D., Instructor in Chemistry.

CHARLES D. CORYELL, Ph.D., Instructor in Chemistry.

C. ERNST REDEMANN, A.B., Associate in Chemistry.

*Letters and Science List.*—All undergraduate courses in chemistry except 10 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Required: Chemistry 1A-1B, which must be passed with a grade of C or better before any further work in chemistry is taken; Physics 1A-1C; trigonometry, Mathematics 8, 3A-3B, 4A, and a reading knowledge of German. Recommended: a second course in chemistry, Physics 1D, Mathematics 4B.

*The Major.*—All units in chemistry in excess of fourteen are counted as upper division units when taken by a student in the upper division. The minimum requirement for the major is: Chemistry 6A-6B (6), 8 and 9 (6), 110A-110B (6), 111A-111B (4). The remainder of the twenty-four required upper division units may be taken in chemistry or allied subjects in accordance with some definite plan approved by the department. A student whose work in the major subject does not average C or better will be required to withdraw from the department.

*Curriculum for Medical Technicians.*—For details see page 73.

*Pre-Chemistry.*—The University of California at Los Angeles offers only the first two years of the curriculum of the College of Chemistry. Students intending to pursue their studies in this college should consult the lower division departmental adviser before making out their programs.

*Laboratory Fees.*—These fees cover the cost of material and equipment used by the average careful student. Any excess over this amount will be charged to the individual responsible. The fees are as follows: Courses 1A, 1B, \$14; 2A, 2B, \$10; 6A, 6B, \$17; 9, \$27; 10, \$10; 101, \$27; 107A, 107B, \$15; 111A, 111B, \$12; 120, \$17; 103, 199, \$15.

## LOWER DIVISION COURSES

Students who have not had high school chemistry may take course 2A in preparation for course 1A. However, in any combination of 2A-2B with 1A-1B, the total amount of credit will not exceed the normal credit for 1A (5 units) or for 1A-1B (10 units).

<sup>1</sup> In residence first semester only, 1988-89.

**1A-1B. General Chemistry. (5-5) Beginning each semester.**

Lectures, three hours; laboratory, six hours. Mr. Morgan and the Staff

Prerequisite: high school chemistry, or physics and trigonometry. Fee, \$14 a semester.

Required in the Colleges of Engineering, Chemistry, Agriculture, and of premedical and pre dental students and of majors in chemistry, bacteriology, and household science.

**2A-2B. General Chemistry. (4-4) Yr.**

Mr. Dunn

Lectures, three hours; laboratory, three hours.

No prerequisite; high school chemistry is recommended. Fee, \$10 a semester.

This course (or 1A-1B) is required of all home economics and physical education majors, and should be elected by students desiring chemistry as a part of a liberal education.

**6A. Quantitative Analysis. (3) I, II.**

Mr. Crowell

Lectures, two hours; laboratory, six hours.

Prerequisite: course 1A-1B. Fee, \$17.

A course in the principles of gravimetric and volumetric analysis. Required of chemistry majors, economic geologists, petroleum engineers, sanitary and municipal engineers, and of premedical, College of Chemistry, metallurgy, and some agriculture students.

**6B. Quantitative Analysis. (3) II.**

Mr. Crowell

Lectures, two hours; laboratory, six hours.

Prerequisite: course 6A. Fee, \$17.

Continuation of course 6A. Required of chemistry majors, economic geologists, and College of Chemistry students.

**8. Elementary Organic Chemistry. (3) I, II. Mr. Morgan, Mr. Robertson**

Prerequisite: course 1A-1B; concurrent enrollment in course 9 is advisable.

This course is required of premedical and pre dental students, sanitary and municipal engineers, petroleum engineers, chemistry, household science, and some agriculture majors, and College of Chemistry students.

**9. Methods of Organic Chemistry. (3) I, II. Mr. Robertson, Mr. Young**

Lectures and quizzes on principles of laboratory manipulation, two hours; laboratory, six hours.

Prerequisite or concurrent: course 8. Fee, \$27.

Required of petroleum engineers, premedical and pre dental students, chemistry majors, and College of Chemistry students.

**10. Organic and Food Chemistry. (4) I.**

Mr. Robertson

Lectures, three hours; laboratory, three hours.

Prerequisite: course 1A-1B or 2A-2B. Fee, \$10.

Required of home economics majors.

## UPPER DIVISION COURSES

**101. Advanced Organic Laboratory. (3) II.**

Mr. Robertson

Laboratory, nine hours.

Prerequisite: courses 8 and 9 and the ability to read scientific German. Fee, \$27.

Introduction to research methods, analytic and synthetic.

- 102. Advanced Organic Lectures.** (3) II. Mr. Morgan  
Prerequisite: course 8.  
Recommended for premedical students and majors in chemistry.
- 103. Qualitative Organic Analysis.** (3) I. Mr. Young  
Lecture, one hour; laboratory, six hours.  
Prerequisite: courses 6A-6B, 8, and 9. Fee, \$15.  
A laboratory course dealing with classification, reactions, and identification of organic compounds.
- 107A-107B. Biological Chemistry.** (4-4) Yr. Mr. Dunn  
Lectures, two hours; laboratory, six hours.  
Prerequisite: courses 6A, 8, and 9. Fee, \$15 each semester.
- 110A. Physical Chemistry.** (3) I. Mr. Ramsey  
Lectures, three hours.  
Prerequisite: course 6B; Physics 1A, 1C; Mathematics 3B.  
Required of chemistry majors and College of Chemistry students. Prerequisite to all later work in physical chemistry.  
Lectures and problems.
- 110B. Advanced Physical Chemistry.** (3) II. Mr. Ramsey  
Lectures, three hours.  
Prerequisite: course 110A and Mathematics 4A.  
Required of chemistry majors.  
Lectures and problems. A continuation of course 110A.
- 111A-111B. Physical Chemistry Laboratory.** (2-2) Yr. Mr. Ramsey  
Laboratory, six hours.  
Prerequisite or concurrent: course 110A-110B and calculus. Fee, \$12 a semester.  
Physicochemical problems and measurements.
- 120. Advanced Inorganic Chemistry.** (3) I. Mr. Stone  
Lecture, one hour; laboratory, six hours.  
Prerequisite: courses 6A-6B. Fee, \$17.  
Preparation and experimental study of substances. Designed primarily to illustrate the factors which influence equilibrium and the speed of chemical reactions. Correlation of material by means of the periodic system.
- 195. Special Topics.** (1) I, II. The Staff  
Open to properly qualified juniors and seniors who receive the approval of the instructors in charge.
- 199. Problems in Chemistry.** (3) I, II. The Staff  
Prerequisite: junior standing with such special preparation as the problem may demand. Fee, \$15.

## GRADUATE COURSES

- 203. Thermodynamics from the Standpoint of Chemistry.** (3) II. Mr. Ramsey
- 251. Seminar in Organic Chemistry.** (3) I. Mr. Robertson, Mr. Young
- 280A-280B. Selected Problems in Chemistry.** (3-6; 3-6) Yr. Mr. Blacet in charge

130 Photochemistry, X-ray spectroscopy, and other topics (5) II

## CLASSICS

ARTHUR PATCH MCKINLAY, Ph.D., Professor of Latin.

FREDERICK MASON CAREY, Ph.D., Associate Professor of Latin and Greek.

DOROTHEA CLINTON WOODWORTH, Ph.D., Assistant Professor of Latin and Greek.

HERBERT BENNO HOFFLEIT, Ph.D., Assistant Professor of Latin and Greek.

DOROTHY C. MERIGOLD, Ph.D., Lecturer in Classical Languages and Supervisor of Training.

*Letters and Science List.*—All undergraduate courses in classical languages are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

The student may take the major in classical languages either in Latin or in Greek.

*Preparation for the Major.*

A. *Latin.*—Required: four years of high school Latin, or two years of high school Latin and courses C and D; courses 3A–3B, 5A–5B. Recommended: Greek, French, German, Italian, Spanish.

B. *Greek.*—Required: either course 1A–1B or two years of high school Greek; and 5A or 5B, or 100A–100B (which may be taken concurrently with courses 101 and 102); and History 111A–111B. Recommended: Latin, French, German, Italian, Spanish.

*The Major.*

A. *Latin.*—Courses 102, 104A–B–C–D (any two units), 106, 115, 117, 120, 191, plus four units of upper division courses in Latin, English, French, German, Greek, Italian, Spanish, philosophy, ancient or medieval history, to be chosen with the approval of the department.

B. *Greek.*—Courses 101, 102, 103, 104, 105, 114, plus six units of upper division courses in Latin, English, French, German, Spanish, philosophy, ancient or medieval history, to be chosen with the approval of the department.

*Requirements for Admission to Graduate Courses.*

A candidate for admission to graduate courses in Latin must meet, in addition to the general University requirements, the minimum requirements for an undergraduate major in this department. If the candidate is deficient in this prerequisite he must fulfill it by undergraduate work which is not counted toward his graduate residence.

*Requirements for Admission to Candidacy.*

1. A reading knowledge of Greek, and of French or German.
2. Completion of course 199A, Sec. 1.
3. An elementary comprehensive examination in Latin literature, Roman history, and Latin composition. The composition requirement may be met by passing Latin 104A–B–C–D.

*Requirement for Master's Degree.*

For the general requirements see p. 106. The department favors the Comprehensive Plan.

The following courses in the department do not require a knowledge of Greek or Latin:

Latin 40, 109A-109B, 110A-110B, 140A-140B, 150.

Greek 40, 109A-109B, 140A-140B.

## LATIN

## LOWER DIVISION COURSES

- A. Beginning Latin.** (3) I. Mrs. Woodworth, \_\_\_\_\_
- B. Latin Readings.** (3) II. Mrs. Woodworth, \_\_\_\_\_  
Prerequisite: course A or one year of high school Latin.
- GA-GB. Latin Prose Composition.** (1-1) Yr. \_\_\_\_\_  
Prerequisite: two years of high school Latin or Latin B.
- 1. Review of Grammar; Ovid.** (3) I. Mrs. Woodworth  
Prerequisite: at least two years of high school Latin, or course B.  
This course duplicates course C, given prior to September, 1938.
- 2. Vergil.** (3) II. Mrs. Woodworth  
Prerequisite: course 1 (or C), or B with special permission of the instructor.  
Designed for students who have not studied Vergil in the high school.  
This course duplicates course D, given prior to September, 1938.
- 3A-3B. Latin Prose Composition.** (2-2) Yr. \_\_\_\_\_  
Prerequisite: three years of high school Latin or Latin 1 (or C).
- 5A. A Survey of Latin Literature.** (3) I, II. Mr. McKinlay, Mrs. Woodworth  
Prerequisite: four years of high school Latin or Latin 2 (or D).
- 5B. A Survey of Latin Literature.** (3) II. Mr. McKinlay  
Prerequisite: course 5A.
- 40. Latin Roots.** (1) I, II. Mr. McKinlay, Mr. Hoffleit  
For students who are interested in the many groups of English words which are derived from the Latin. Knowledge of Latin not required.

## UPPER DIVISION COURSES

Courses 102 and 106 are prerequisite to 115, 117, 120, and 191.

- 102. Silver Latin.** (3) I. Mrs. Woodworth  
Prerequisite: course 5A-5B.
- 104A-104B. Latin Composition.** (1-1) Yr. Mr. Carey  
Prerequisite: course 3A-3B.  
Ciceronian prose.

- \*104C-104D. **Latin Composition.** (1-1) Yr. Mr. Carey  
Prerequisite: course 3A-3B.  
Ciceronian prose.
106. **Tacitus: Annals.** (3) II. Mrs. Woodworth  
Prerequisite: course 102.
- †109A-109B. **A Survey of Latin Literature in English.** (3-3) Yr. Mr. Carey  
A study of the literature of Rome from Ennius to Apuleius with reading in English; does not count on the major in Latin.
- †110A-110B. **A Survey of Medieval Latin Literature in English.** (2-2) Yr. Mr. Carey  
An outline of classical culture from St. Augustine to the Renaissance with reading in English. Does not count on the major in Latin.
115. **Ovid: Carmina Amatoria and Metamorphoses.** (3) I. Mr. Carey  
Prerequisite: courses 102, 106.  
This course duplicates course 140 as offered prior to September, 1938.
117. **Lucretius: Selections; Vergil: Eclogues and Georgics.** (3) II. Mr. Hoffleit  
Prerequisite: 102, 107.
120. **Roman Satire.** (3) II. Mr. Carey  
Prerequisite: courses 102, 106.
- 140A-140B. **Roman Civilization.** (2-2) Yr. Mr. McKinlay  
This course will undertake to appraise the accomplishments of Rome and acquaint the student with her significant personalities.  
Knowledge of Latin not required.
150. **Introduction to General Language.** (1) I. Mrs. Woodworth  
The interrelation of ancient and modern languages, especially those of common Indo-European origin; introduction to principles of linguistic study.
191. **Cicero: Life and Letters.** (3) I. Mr. McKinlay  
Prerequisite: courses 102, 106.
- 196A-196B. **Readings in Medieval Latin.** (2-2) Yr. Mr. McKinlay  
Prerequisite: two years of high school Latin.  
Designed as a preparation for students interested in medieval history, Old English, French, Spanish, and Latin. Open to properly qualified students in the lower division.
- 199A-199B. **Special Studies in Latin.** (2-2) Yr.  
Prerequisite: senior standing and at least twelve units of upper division Latin.  
Section 1: The history of classical scholarship. Required of candidates for teaching credentials and for the master's degree. Mr. Hoffleit  
Section 2: Problems in classical philology. Mr. McKinlay and the Staff

\* Not to be given, 1938-39. Courses 104A and 104B are given in alternation with 104C and 104D. Courses 104C and 104D will be offered in 1939-40. Two units required of Latin majors.

† Not to be given, 1938-39. Courses 109A and 109B are ordinarily given in alternation with Greek 109A and 109B respectively. Latin 109A and 109B will be offered in 1939-40. Courses 110A and 110B will be given at intervals when there is sufficient demand.

## GRADUATE COURSES

- \*202. Cicero's Philosophical Works. (3) I. Mr. McKinlay
- \*203. Roman Historians. (3) II. Mr. McKinlay
204. Roman Prose Writers. (3) I. Mr. McKinlay  
Cicero's moral and political essays.
205. Roman Prose Writers. (3) I. Mrs. Woodworth  
Latin prose fiction.
252. Seminar in Latin Studies. (3) I. Mrs. Woodworth  
Linguistics.
- \* 253. Seminar in Latin Studies. (3) II. Mr. Carey  
Textual criticism.
254. Seminar in Latin Studies. (3) I. Mr. Carey  
Latin comedy.
255. Seminar in Latin Studies. (3) II. Mr. Carey  
Roman elegy.

## PROFESSIONAL COURSE

390. The Teaching of Latin. (3) I. Mrs. Merigold  
Prerequisite: a foreign language minor.

## GREEK

## LOWER DIVISION COURSES

- 1A-1B. Greek for Beginners, Attic Prose. (3-3) Yr. Mr. Hoffleit
- 5A-5B. Readings in Greek. (2-2) Yr. Mr. Carey, Mr. Hoffleit
40. Greek Roots. (1) I, II. Mr. Hoffleit, Mr. McKinlay  
For scientific majors and others interested in an understanding of the terms they meet. Knowledge of Greek not required.

## UPPER DIVISION COURSES

Courses 101 and 102 are prerequisite to 103, 104, 105, and 114.

- 100A-100B. Prose Composition. (1-1) Yr. Mr. Hoffleit  
Prerequisite: course 1A-1B.
101. Homer: *Odyssey*; *Herodotus*. (3) I. Mr. Hoffleit  
Prerequisite: course 1A-1B.
102. Plato: *Apology* and *Crito*; Lyric Poets. (3) II. Mr. Hoffleit  
Prerequisite: course 101.
103. Greek Drama: *Euripides* and *Aristophanes*. (3) II. Mr. Carey  
Prerequisite: courses 101, 102.

\* Not to be given 1988-89.

- †104. **Historical Prose: Herodotus and Thucydides.** (3) I. Mr. Carey  
Prerequisite: courses 101, 102.
- †105. **Greek Drama: Aeschylus and Sophocles.** (3) II. Mr. Carey  
Prerequisite: courses 101, 102.
- 109A-109B. **A Survey of Greek Literature in English.** (3-3) Yr. Mr. Carey  
A study of the literature of Greece from Homer to Lucian with reading in English. Does not count on the major in Greek.
114. **Plato: Republic.** (3) I. Mr. Carey  
Prerequisite: courses 101, 102.
- 117A-117B. **Greek New Testament.** (1-1) Yr. Mr. Hoffleit
- \*140A-140B. **Greek Civilization.** (2-2) Yr. Mr. Carey  
A study of the development of Greek culture and its influence upon the modern world. Does not count on the major in Greek.
- 199A-199B. **Problems in Classical Philology.** (2-2) Yr. Mr. Carey and Mr. Hoffleit  
Prerequisite: senior standing and at least twelve units of upper division Greek.

## COURSE IN ANOTHER DEPARTMENT

**History 111A-111B. Ancient History.** (3-3) Yr. Mr. Howard

† Not to be given, 1938-39. Courses 103 and 114 are ordinarily given in alternation with 104 and 105 respectively. Courses 104 and 105 will be offered in 1939-40.

\* Not to be offered, 1938-39. Greek 140A and 140B are ordinarily given in alternation with Latin 140A and 140B respectively. Greek 140A-140B will be offered in 1939-40.

## ECONOMICS

GORDON S. WATKINS, Ph.D., Professor of Economics and Dean of the College of Letters and Science.

EARL JOYCE MILLER, Ph.D., Professor of Economics and Dean of Undergraduates.

<sup>1</sup>HENRY W. SCHULTZ, Ph.D., Visiting Professor of Economics.

†LEWIS A. MAVERICK, Ed.D., Ph.D., Associate Professor of Economics.

DUDLEY F. PEGRUM, Ph.D., Associate Professor of Economics.

MARVEL M. STOCKWELL, Ph.D., Associate Professor of Economics.

CONSTANTINE PANUNZIO, Ph.D., Assistant Professor of Economics.

HURFORD E. STONE, Ph.D., Assistant Professor of Economics and Assistant Dean of Undergraduates.

PAUL A. DODD, Ph.D., Assistant Professor of Economics.

MELVILLE H. WALKER, M.A., Lecturer in Economics.

GEORGE W. ROBBINS, M.B.A., Assistant Professor of Marketing.

FLOYD F. BURTCHETT, Ph.D., Assistant Professor of Banking and Finance.

*Letters and Science List.*—All undergraduate courses in economics and sociology are included in the Letters and Science List of courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Required: Economics 1A–1B, Business Administration 1A–1B, and a year course in philosophy or in a social science other than economics.

*The Major.*—Twenty-four upper division units including Economics 100 and Business Administration 140 (or Economics 142). Six units may be offered toward the major from the following list of courses: Business Administration 132, 136, 145, 153, 160A–160B, 180, or History 112A–112B (the six units must be entirely in one of these two departments).

Not more than a total of 30 upper division units in economics and business administration may be counted toward the degree of Bachelor of Arts.

Students planning to undertake graduate work in economic theory will do well to study mathematics. For those who have not the background or the time for more extended work, Mathematics 7 is recommended.

*Curriculum in Sociology.*—Students specializing in sociology are referred to page 75 of this Catalogue.

## LOWER DIVISION COURSE

**1A–1B. Principles of Economics.** (3–3) Beginning each semester.

Lectures, two hours; quiz, one hour. Mr. Miller, Mr. Stockwell

† Absent on leave, 1938–39.

<sup>1</sup> In residence first semester only, 1938–39.

## UPPER DIVISION COURSES

Course 1A-1B is a prerequisite to all upper division courses in economics.

- 100. Economic Theory.** (2) I, II. Mr. Walker, ———  
Value, production, distribution, money, dynamic economics; an introduction to research in economic theory.
- \*101. History of Economic Thought.** (2) II. Mr. Maverick  
Contributions to economics from ancient and medieval writers; economics as a systematic body of thought since the eighteenth century.
- 106. Economic Reformers.** (2) I. Mr. Watkins  
A study of the development of theories of social readjustment.
- 107. Comparative Economic Systems.** (2) II. Mr. Watkins  
The concepts and agencies of economic and social progress; an analysis of the theories and programs of modern reform movements.
- 131A-131B. Public Finance.** (2-2) Yr. Mr. Stockwell  
The principles underlying the raising and spending of public money. Property, income, corporation, inheritance, sales taxes, and other sources of revenue. Public borrowing. Budgetary procedure. Economic and social significance of the fiscal structure and policies.
- 132. Economics of Industrial Control.** (3) II. Mr. Pegrum  
Prerequisite: senior standing.  
The economic functions of business organizations; the economics of industrial production and pricing; the control of competitive enterprise; combinations and monopolies and their control; governmental regulation.
- 135. Money and Banking.** (3) I, II. Mr. Clendenin, Mr. Burtchett  
The development and functions of money and of credit institutions; the nature of the banking business and its significance in the financial organization of society.
- 137. International Finance.** (3) I. Mr. Walker  
A study of foreign exchange fluctuations and movements of capital, money, credit, and gold between countries. Problems arising from financial relations between countries on different monetary standards: gold, silver, bimetallic, and managed currency standards.
- 138. Business Cycles.** (3) I. Mr. Schultz  
Prerequisite: senior standing.  
A study of fluctuations in business, as in prices, production, wages, and profits; whether there is a common or general fluctuation; theories of causation; feasibility of forecasting; adjustment of business management to the cycles; possibility of controlling the cycle or alleviating its social effects.
- 142. Economic Statistics.** (3) I. Mr. Schultz  
Prerequisite: differential calculus.
- 150. Labor Economics.** (3) I. Mr. Dodd  
The problems of labor; the rise of modern industrialism; the principal causes of industrial strife, and the basis of industrial peace.
- 152. Social Insurance.** (3) I. Mr. Dodd  
Basis of the Social Security program; unemployment insurance, workmen's compensation, old age pensions, insurance against sickness.

\* Not to be given 1938-39.

- 155. History of the Labor Movement. (2) II.** Mr. Dodd  
The development of the American labor movement; the structure of unionism; demands and accomplishments of labor. A theory of the labor movement.
- 171. Public Utilities. (3) I.** Mr. Pegrum  
The economics of public service corporations from both the public and private points of view; the legal and economic problems of regulation; problems of labor, finance, rate-making, and valuation; state, national, and international problems arising from the development of public utilities.
- 173. Economics of Transportation. (3) II.** \_\_\_\_\_  
A general historical and contemporaneous survey of transportation agencies in the United States; the functions of the different transportation agencies; rate structures; problems of state and federal regulation; coordination of facilities.
- 195. Principles of International Trade. (3) I.** Mr. Robbins  
International trade examined from the point of view of theory and of the recent trade histories of the major nations; questions of policy regarding tariffs, intergovernmental debts, foreign commercial investments, and commercial treaties. Brief introduction to methods and practices of exporting and importing.
- 196. Problems in International Economics. (3) II.** Mr. Walker  
Prerequisite: course 137 or the consent of the instructor.
- 199. Special Problems in Economics. (2) I, II.** Mr. Pegrum and the Staff  
Prerequisite: senior standing, six units of upper division economics, and the consent of the instructor.

## GRADUATE COURSES

- 201A-201B. History of Economic Doctrine. (3-3) Yr.** Mr. Watkins
- 235. Monetary Theory. (2) II.** \_\_\_\_\_
- \*238. Economic Fluctuations. (2) II.** \_\_\_\_\_
- 254A-254B. Seminar in Economic Theory. (3-3) Yr.** Mr. Pegrum  
254A. The basic principles of economic theory; the nature of economic science; consumption, production, value and price, distribution.  
254B. Production economics; competition; imperfect competition; monopoly; overhead costs; the control of enterprise.
- 258. Recent Developments in Economic Theory. Seminar. (2) I.** Mr. Schultz

## SOCIOLOGY

## LOWER DIVISION COURSE

- 30A-30B. Social Institutions. (3-3) Yr.** Mr. Panunzio  
This course or its equivalent is requisite for admission to upper division courses in sociology. Students presenting credit for another elementary course in sociology may, by special permission, take 30A-30B for credit also.  
The social institutions; their origin, development, structure, function, teleology; their relation to culture.

\* Not to be given, 1938-39.

## UPPER DIVISION COURSES

- 120. Social Pathology.** (3) I, II. Mr. Stone  
Prerequisite: course 30A-30B.  
Social disorganization, subnormal and abnormal groups and conditions; maladjustment, the agencies and methods of prevention, treatment, and control.
- 121. Social Processes.** (3) I, II. Mr. Panunzio  
A study of the origin and development of social institutions; of change, struggle, maladjustment, accommodation, persistence, and teleis.
- 181. Care of Dependents.** (2) II. Mr. Stone  
Prerequisite: course 120.  
Poverty as a social problem; historical and current methods of dealing with various classes of dependents; proposed agencies and methods of prevention, treatment, and control.
- 182. Crime and Delinquency.** (2) I. Mr. Stone  
Prerequisite: course 120.  
Crime and delinquency as social maladjustment; theories of crime and punishment; forms and causes of juvenile and adult crime; programs and methods of prevention, treatment, and control.
- 186. Population Problems.** (3) I. Mr. Panunzio  
Prerequisite: senior standing and course 30A-30B.  
History of population movements, with particular reference to modern times; problems of quantity, migration, concentration, and quality; contacts of races.
- 189. Culture and Race Relations.** (2) II. Mr. Panunzio  
A study of the contact of cultures and races in the modern Western world, with particular reference to the conflicts which that contact generally produces.
- 199. Special Problems in Sociology.** (2) II. Mr. Panunzio  
Prerequisite: senior standing, six units of upper division courses in the Curriculum in Sociology, and the consent of the instructor.

## EDUCATION

- ERNEST CARROLL MOORE, Ph.D., LL.D., Professor of Education and Philosophy.
- CHARLES WILKIN WADDELL, Ph.D., Professor of Education and Director of the Training Department.
- JUNIUS L. MERIAM, Ph.D., Professor of Education.
- MARVIN LLOYD DARSIE, Ph.D., Professor of Education and Dean of the Teachers College.
- MERTON E. HILL, Ed.D., Professor of Education and Director of Admissions.
- J. HAROLD WILLIAMS, Ph.D., Professor of Education and Dean of the Summer Session.
- KATHERINE L. McLAUGHLIN, Ph.D., Professor of Education.
- FREDERICK P. WOELLNER, Ph.D., Professor of Education.
- DAVID F. JACKY, Ph.D., Professor of Vocational Education and Supervisor of Trade and Industrial Teacher Training.
- HARVEY L. EBY, Ph.D., Associate Professor of Education.
- WILLIAM A. SMITH, Ph.D., Associate Professor of Education.
- CLARENCE HALL ROBISON, Ph.D., Associate Professor of Education.
- ETHEL I. SALISBURY, M.A., Associate Professor of Elementary Education and Supervisor of Training.
- JESSE A. BOND, Ed.D., Associate Professor of Education and Associate Director of Training.
- CORINNE A. SEEDS, M.A., Assistant Professor of Elementary Education and Principal of the University Elementary School.
- MAY V. SEAGOE, Ph.D., Assistant Professor of Education.

## The Teachers College

*Preparation for the Major.*—Biology 1, 12; Geography 1A-1B; Psychology 1A-1B.

*The major.*—Eighteen units of upper division courses, including

Education 100 or Psychology 112

Education 101 or Psychology 119

Education 102 or Psychology 107A

Education 103 or 120 or 123A or 123B or 150†

Education 104 or 105\* or 136

Electives in education to total 18 units (Psychology 110 may be offered as an elective in education).

## The College of Letters and Science

*Letters and Science List.* Courses 112, 120, 123A-123B, 150, 170 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64. A major in education is not offered in the College of Letters and Science.

† Education 121 or 122 are also acceptable.

\* Required for the Kindergarten-Primary Credential.

## UPPER DIVISION COURSES

- 100. Growth and Development of the Child.** (3) I, II. Miss McLaughlin  
Prerequisite: Psychology 1A-1B.  
A study of intellectual, emotional, and social development during childhood and adolescence. Particular attention is given to problems of mental hygiene during critical growth periods.
- 101. The Conditions of Learning.** (3) I, II. Miss Seagoe  
Prerequisite: Psychology 1A-1B.  
Speech, writing, number, literature, science considered as social institutions evolved through coöperative intellectual effort. Analysis of the conditions under which the child attains most effective mastery of these skills and knowledges.
- 102. Introduction of Educational Measurement.** (3) I, II. Miss Seagoe  
Prerequisite: Psychology 1A-1B.  
An introduction to the use of standardized tests and elementary statistical procedures in measuring the outcomes of teaching.
- 103. Social Foundations of Education.** (3) I, II. Mr. Woellner  
Education as a factor in social evolution. Analysis of current educational practices in the light of modern social needs.
- 104. The Curriculum.** (3) I, II. Mr. Meriam  
Prerequisite: course 101.  
An introduction to the problem of curriculum organization as exemplified in representative courses of study. Emphasis is laid on the planning of activity units appropriate to the varying maturity levels of children.
- 105A-105B. Kindergarten-Primary Education.** (3-3) Yr. Miss McLaughlin  
Prerequisite: courses 100, 101.  
Required for the kindergarten-primary teaching credential.  
105A. Reading and literature in the lower school, including aims, standards of attainment, materials and techniques of teaching.  
105B. Organization, curricula and procedures in the nursery school, kindergarten and primary grades.
- 112. Adolescence.** (3) I, II. Mr. Waddell  
Prerequisite: Psychology 1A-1B.  
The physical, mental, moral and social traits of adolescence with special reference to their bearing upon problems of instruction in junior and senior high schools.
- 120. The Principles of Education.** (3) I, II. Mr. Darsie  
A critical analysis of the assumptions underlying education in a democratic social order.
- 123A-123B. History and Philosophy of Education.** (3-3) Yr. Mr. Moore  
The story of instruction from its beginning in Greece; the account of Athens, the practices of the Athenians and the critical thinking of Socrates, Plato, and Aristotle; Roman education, Christianity and the teaching of the Church; the Renaissance and the Reformation.

133. **Educational Diagnosis.** (2) I. Mr. Williams  
Prerequisite: Education 102 or equivalent.  
The use of standard tests and elementary statistical techniques in solving problems of school, class, and individual diagnosis.
135. **Rural Society and Education.** (3) I, II. Mr. Eby  
A study of the social-economic problems and needs in rural communities as affecting rural education.
136. **Rural School Curriculum Adaptations.** (3) I, II. Mr. Eby  
The development and direction of the curriculum in a rural school situation; the availability and use of the educational resources in the local environment.
137. **Rural School Administration.** (3) I. Mr. Eby  
A consideration of the problems, principles, and methods involved in the administration of a rural school system.
138. **Problems in Rural Education.** (3) II. Mr. Eby  
Prerequisite: senior standing and consent of the instructor.  
A survey of rural school conditions, with an evaluation of the means for their improvement. Special problems. Field visits.
140. **The Teacher and Administration.** (2) I, II. Mr. Robison  
Principles of educational administration as applied to the duties and responsibilities of the classroom teacher.
142. **State and County School Administration.** (2) I. Mr. Robison  
The organization and administration of state school systems with special reference to the interrelation of federal, state, and county support and organization.
143. **Administration of Secondary Education.** (2) I. Mr. Hill  
Prerequisite: course 170.  
A study of modern practices in secondary school organization and administration. Particular attention is paid to the functions of administrative and executive officers. Each student is required to carry out a field study in some phase of administration.
148. **Legal Bases of Public Education in California.** (2) II. Mr. Robison  
Organization and administration of the California school system, as given in the school law of the state and as interpreted by the rulings of the State Superintendent of Public Instruction and the Attorney General.
150. **History of American Education.** (3) I. Mr. Robison  
The development of significant educational movements in the United States as a basis for analysis of present-day problems.
160. **Vocational Education.** (2) I. Mr. Jackey  
An attempt to develop an understanding and appreciation of the economic and social significance of vocational education in a democracy.
164. **Vocational Guidance.** (2) II. Mr. Jackey  
The need of vocational guidance in a changing industrial order. The technique of guidance, as exemplified in case studies.

170. **Secondary Education.** (3) I, II. Mr. Smith  
 Prerequisite: Psychology 1A-1B and senior standing.  
 A study of secondary education in the United States, with special refer-  
 ence to the needs of junior and senior high school teachers.
181. **Principles of Adult Education.** (2) I, II. Mr. Woellner  
 An analysis of the adult education movement to ascertain principles for  
 organizing and conducting special and evening classes for mature students.  
 Problems of citizenship, Americanization, and vocational and liberal edu-  
 cation will be considered.
- 198A-198B. **Advanced Curriculum Studies.** (2-2) Yr. Mr. Meriam
199. **Problems in Education.** (2) II, I Miss Seagoe  
 Open to senior and graduate students with the permission of the in-  
 structor.

## GRADUATE COURSES†

243. **Administration of Secondary Education.** (2) I. Mr. Hill
- 251A-251B. **Elementary Administration and Supervision. Seminar.** (2-2) Yr.  
 Mr. Waddell
- 253A-253B. **Early Childhood Education. Seminar.** (2-2) Yr.  
 Miss McLaughlin
- 254A-254B. **Experimental Education. Seminar.** (2-2) Yr. Mr. Williams
- 270A-270B. **Secondary Education. Seminar.** (2-2) Yr. Mr. Smith
- 276A-276B. **Research in Curriculum.** (1-4; 1-4) Yr. Mr. Meriam
279. **Problems in Junior College Administration.** (2) I. Mr. Hill

## SUPERVISED TEACHING

For courses in supervised teaching see Training Department (page 240).

† A thesis is required of all candidates for the master's degree.

## ENGLISH

- <sup>1</sup>FREDERIC THOMAS BLANCHARD, Ph.D., Professor of English.  
 LILY B. CAMPBELL, Ph.D., Professor of English.  
 SIGURD BERNHARD HUSTVEDT, Ph.D., Professor of English.  
 \_\_\_\_\_, Visiting Professor of English.  
 ALFRED E. LONGUEIL, Ph.D., Associate Professor of English.  
 HERBERT F. ALLEN, Ph.D., Associate Professor of English.  
<sup>2</sup>MARGARET SPRAGUE CARHART, Ph.D., Assistant Professor of English.  
 CARL SAWYER DOWNES, Ph.D., Assistant Professor of English.  
 GEORGE SHELTON HUBBELL, Ph.D., Assistant Professor of English.  
<sup>3</sup>HARRIET M. MACKENZIE, Ph.D., Assistant Professor of English.  
 LLEWELLYN MORGAN BUELL, Ph.D., Assistant Professor of English.  
 MAJL EWING, Ph.D., Assistant Professor of English.  
 FRANKLIN PRESCOTT ROLFE, Ph.D., Assistant Professor of English.  
 WESLEY LEWIS, Ph.D., Assistant Professor of Public Speaking.  
 EDWARD N. HOOKER, Ph.D., Assistant Professor of English.  
 ALICE O. HUNNEWELL, B.L.I., Instructor in English.  
 JAMES MURRAY, Ed.D., Instructor in Public Speaking.  
 BRADFORD A. BOOTH, Ph.D., Instructor in English.  
 HUGH GILCHRIST DICK, Ph.D., Instructor in English.  
 CLAUDE JONES, Ph.D., Instructor in English.  
 HUGH THOMAS SWEDENBERG, Ph.D., Instructor in English.  
 HARRISON M. KARR, Ph.D., Instructor in Public Speaking.
- 
- LEE S. HULTZÉN, Ph.D., Lecturer in Public Speaking.  
 LOUIS B. WRIGHT, Ph.D., Lecturer in English.  
 JOHN F. ROSS, Ph.D., Lecturer in English.  
 RALPH FREUD, Lecturer in Public Speaking.

Students must have passed Subject A (either examination or course) before taking any course in English or public speaking. Regulations concerning Subject A will be found on page 36 of this Catalogue.

*Letters and Science List.*—All undergraduate courses in English and public speaking are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Courses 1A-1B and 36A-36B or the equivalent, with an average grade of C; History 5A-5B or the equivalent.

Recommended: Ancient and modern foreign languages. A reading knowledge of French or German is required for the M.A. degree. For the Ph.D. degree a reading knowledge of both French and German is required; a reading knowledge of Latin is essential for work in some fields.

<sup>1</sup>In residence first semester only, 1988-89; <sup>2</sup>in residence second semester only, 1988-89.

*The Major.*—1. Students must present, in the first half of the junior year, a program to be examined and approved by the departmental adviser to upper division students. The program may be amended from time to time after consultation with the department representative.

2. The program must comprise 24 units of upper division courses, including (1) English 117J, to be taken in the junior year; (2) at least one of the type courses; (3) at least two of the period courses; (4) English 151L, to be taken in the senior year. Public Speaking 165 and 166 may be applied toward the English major.

3. The student must maintain an average grade of C in upper division English courses, and at the end of the senior year must pass a comprehensive final examination.

#### *A. Requirements for the General Secondary Credential.*

1. The completion of the following courses: English 153 (or 122A–122B), 130A–130B, 361, and either 31 or a section of 106.

2. The student must have passed the Senior Comprehensive Final Examination with a grade of C or better.

3. Students seeking a minor in English must complete the following courses: in the lower division English 1A–1B, 31, 36A–36B; in the upper division, English 117J, 153, and a minimum of three additional units chosen from 114A–114B, 125C–125D, 130A–130B, 190.

#### *B. Requirements for Admission to Graduate Courses.*

Ordinarily the undergraduate major in English or its equivalent. (No graduate student may take a graduate course in English who has to his credit fewer than twelve units in upper division major courses in English.) This requirement is prerequisite to the twenty-four units demanded for the master's degree. If the candidate is deficient in this prerequisite, he must fulfill it by work undertaken as a graduate student.

#### *C. Requirements for the Master's Degree.*

1. For the general requirements, see page 106. The department follows Plan II.

2. Departmental requirements: (a) Students are required to take the reading test in French or German at the beginning of the first semester of residence. (b) They must pass a preliminary general examination, set by the department toward the middle of each semester. Those who have passed the Senior English Comprehensive Examination with a grade of B will be excused from this examination. (c) They must complete English 200, Bibliography. This course is offered in the first semester only. (d) Students should choose the allowable 12 undergraduate units from the Age courses and Public Speaking 165, 166.

#### *D. Requirements for the Doctor's Degree.*

1. For the general requirements, see page 109.

2. Departmental requirements: (a) On entering the department, candidates will present to the chairman a written statement of their preparation in French, German, and Latin. They must take the reading test in one of the two required modern foreign languages (French and German) at the beginning of the first semester of residence, the test in the other not later than the beginning of the third semester of residence. For work in some fields a reading knowledge of Latin will be necessary. (b) Candidates must complete English

200, Bibliography, at the first opportunity. For other course requirements, consult the department.

3. The qualifying examination for advancement to candidacy will consist of two parts: (a) English language—a three hour written examination covering the history, structure, and literary use of the English language from the beginning to the present; this part of the examination should be taken at least three semesters before the date at which the student expects to receive the degree. (b) English literature—a general examination, written and oral, covering English literature in all its phases from the beginning to the present. The written section will be set in two parts of three hours each. The oral section will be one hour in length. This examination should be taken at least two semesters before the date at which the student expects to receive the degree.

#### LOWER DIVISION COURSES

##### *Freshman Courses*

**1A-1B. First-Year Reading and Composition.** (3-3) Beginning each semester.

Mr. Buell in charge

Open to all students who have received a passing grade in Subject A.

**\*4A-4B. World Literature.** (1-1) Yr.

Mr. Blanchard

**5A-5B. Great Books.** (1-1) Yr.

Mr. Longueil in charge

##### *Sophomore Courses*

English 1A-1B is prerequisite to all sophomore courses in English except course 40.

**31. Intermediate Composition.** (2) I, II.

Mr. Ewing in charge

**36A-36B. Survey of English Literature.** (3-3) Beginning each semester.

36A. 1500-1700. 36B. 1700-1900.

Mr. Rolfe in charge

**40. Introduction to English Literature.** (3) I, II. Mr. Ewing, Miss Carhart

Open, without prerequisite, to all students except those who have credit for course 36A-36B or 56A-56B.

#### UPPER DIVISION COURSES

Courses 1A-1B and 36A-36B are prerequisite to all upper division courses in English. Students who have not passed English 31 will be admitted to 106A, 106C, and 106F only upon a test given by the instructor.

A. *The Junior Course:* Course 117J. Required of juniors whose major or minor subject is English.

B. *The Type Courses:* Courses 114A-114B,\* 122A-122B, 125C-125D, and 125G-125H. It is understood that major students in English will take at least one of these courses.

C. *The Period Courses:* Courses 156, 157, 167, 177, and 187. It is understood that major students in English will take at least two of these courses. Graduate students should choose their nongraduate units from these courses.

D. *General Courses:* Courses 106A, 106C, 106F, 110, 130A-130B, 153, and 190.

E. *The Senior Course:* Course 151L. Required of seniors whose major subject is English.

\* Not to be given, 1938-39.

- 106A. **The Short Story.** (2) I, II. Mr. Hubbell
- 106C. **Critical Writing.** (2) I, II. Mr. Downes
- 106F. **Exposition.** (2) II. Miss Carhart, Mr. Rolfe
- \*110. **English Diction and Style.** (3) I, II. Mr. Hubbell
- 114A-114B. **English Drama from the Beginning to the Present.** (3-3) Yr.  
Miss Campbell, Miss Carhart
- 117J. **Shakespeare.** (3) I, II. Miss Campbell, Mr. Longueil, Mr. Buell  
A survey of from twelve to fifteen plays, with special emphasis on one chronicle, one comedy, and one tragedy.
- \*122A-122B. **English Poetry from the Beginning to the Present.** (3-3) Yr.  
Mr. Longueil
- 125C-125D. **The English Novel from the Beginning to the Present.** (3-3) Yr.  
Mr. Blanchard, Mr. Rolfe
- 125G-125H. **English Prose from the Beginning to the Present.** (3-3) Yr.  
Mr. Ewing
- 130A-130B. **American Literature.** (2-2) Yr. Mr. Downes, Mr. Hubbell
- 151L. **Chaucer.** (3) I, II. Mr. Hustvedt, Mr. Longueil
153. **Introduction to the Study of Poetry.** (3) I, II.  
Mr. Longueil, Mr. Allen, Miss MacKenzie
155. **Literary Criticism.** (3) I, II. Mr. Blanchard, Miss Campbell
156. **The Age of Elizabeth.** (3) I, II. Miss Campbell, Mr. Allen
157. **The Age of Milton.** (3) I, II. Mr. Hustvedt
167. **The Age of Pope and Johnson.** (3) I, II. Mr. Blanchard, Mr. Allen
177. **The Romantic Age: 1784-1832.** (3) I, II. Mr. Longueil, Mr. Allen
187. **The Victorian Age: 1832-1892.** (3) I, II. Mr. Allen, Mr. Rolfe
190. **Literature in English from 1900.** (2) I, II. Mr. Ewing

#### COMPREHENSIVE FINAL EXAMINATION

The Comprehensive Final Examination in the undergraduate major in English must be taken at the end of the senior year. It will consist of one two-hour paper and one three-hour paper. The examination will cover English literature from the beginning to 1900. The papers will be set by the examining committee of the department. The student's preparation for this examination will presumably extend throughout the entire college course.

This examination is not counted as part of the 24-unit major but is counted on the 36-unit upper division requirement and on the 120 units required for graduation. It does not affect study-list limits, and should at no time be entered by the student upon his study list. However, the student is advised to limit his program to 13 units during his last semester. Upon his passing the examination the grade assigned by the department will be recorded. Given each semester; credit, 3 units.

\* Not to be given, 1938-39.

## PROFESSIONAL COURSE

## 361. The Teaching of English. (3) I.

Miss MacKenzie

May be counted as part of the eighteen units in education required for the secondary credential. Required of candidates for the General Secondary Credential in English. This course will be given in 1938-39 in the first semester only.

## GRADUATE COURSES

## 200. Bibliography. (3) I.

Mr. Wright

## \*209. History of the English Language. (2) II.

\_\_\_\_\_

## 211A. Old English Literature. (3) I.

\_\_\_\_\_

## 211B. Beowulf. (3) II.

\_\_\_\_\_

## \*212. Middle English Literature. (2) II.

\_\_\_\_\_

## \*215. English Literature of the 17th Century. (3) I.

Mr. Hustvedt

## \*217A-217B. Shakespeare. (3-3) Yr.

Miss Campbell

## \*222. Shakespearean Tragedy: A Critical Study. (3) I.

Miss Campbell

## \*223. Shakespearean Comedy: A Critical Study. (3) II.

Miss Campbell

## 225A-\*225B. The Ballad. (3-3) Yr.

Mr. Hustvedt

## 226. Sir Walter Scott: The Ballads and Romances. (3) II.

Mr. Hustvedt

## \*227. Early English Metrical Romances. (3) I.

Mr. Hustvedt

## \*230A. American Literature to 1815. (3) II.

Mr. Wright

## 231. Marlowe. (3) II.

Miss Campbell

## \*239. Milton. (3) II.

Mr. Hustvedt

## \*242. Fielding. (3) I.

Mr. Blanchard

## 245. Spenser. (3) I.

Miss Campbell

## 247. Phases of Neo-Classicism. (3) I, II.

Mr. Hooker

## \*248A-248B. English Literary Criticism. (3-3) Yr.

Mr. Blanchard

248A. From 1650 to 1700; 248B. From 1700 to 1750.

## 250. The Theory of Fiction (1600-1700). (3) II.

Mr. Blanchard

## PUBLIC SPEAKING†

## LOWER DIVISION COURSES

## 1A-1B. Elements of Public Speaking. (3-3) Beginning each semester.

Mr. Karr, Mr. Lewis, Mr. Murray, Mr. Hultzén

## 2A-2B. The Fundamentals of Expression and Interpretation. (3-3) Beginning each semester.

Mrs. Hunnewell, Mr. Freud

## 5A-5B. Principles of Argumentation. (3-3) Yr.

Mr. Lewis

Prerequisite: course 1A-1B and the consent of the instructor.

\* Not to be given 1938-39.

† The University of California at Los Angeles does not offer a major in public speaking. Students wishing to satisfy the requirement for a major in public speaking are referred to the *General Catalogue* of the Departments at Berkeley.

## UPPER DIVISION COURSES

- 110A-110B. Third-Year Public Speaking.** (3-3) Yr. Mr. Lewis  
Prerequisite: course 5A-5B.  
110A. Oral argumentation and debate; preparation of briefs; presentation of arguments.  
110B. Practice in extemporaneous speaking; preparation of the occasional address. Open to students selected from 110A.
- 111C-111D. Literary Interpretation.** (3-3) Yr. Mrs. Hunnewell  
Prerequisite: course 2A-2B.  
The dramatization of one novel, the oral reading and classroom presentation of selected one-act plays, and the study and abridgment of one three-act play in relation to public reading technique.
- 122. Diction and Voice.** (3) I, II. Mr. Karr
- 155A-155B. Play Production.** (3-3) Yr. Mr. Freud
- 165. Phonetics and American Pronunciation.** (3) I. Mr. Hultzén  
May be applied toward the English major. Recommended for graduate students.
- \*166. History of Rhetorical Theories.** (3) II. Mr. Hultzén  
May be applied toward the English major. Recommended for graduate students.
- 190. Forensics.** (1-1) Yr. Mr. Lewis

\* Not to be given 1938-39.

190 Introduction to Forensics I 1938

From 1885 to the P

## FRENCH

- HENRY RAYMOND BRUSH, Ph.D., Professor of French.  
 PAUL PÉRIGORD, Ph.D., Professor of French Civilization.  
 ALEXANDER GREEN FITE, Ph.D., Associate Professor of French.  
 MYRON IRVING BARKER, Ph.D., Assistant Professor of French.  
 \*FRANCIS J. CROWLEY, Ph.D., Assistant Professor of French.  
 MARIUS IGNACE BIENCOURT, Docteur de l'Université de Paris, Assistant Professor of French.  
 CLINTON C. HUMISTON, Ph.D., Assistant Professor of French.  
 L. GARDNER MILLER, Docteur de l'Université de Strasbourg, Instructor in French.  
 MADELEINE LETESSIER, A.B., Associate in French.  
 ALICE HUBARD, M.A., Associate in French.  
 PAUL BONNET, Lic. ès Lettres, Associate in French.  
 HORACE S. CRAIG, M.A., Associate in French.

*Letters and Science List.*—All undergraduate courses in French are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—French A, B, C, D, or their equivalents. Two years of high school Latin or Latin A and B, or the equivalent, must be completed before the beginning of the senior year. History 4A-4B, Philosophy 3A-3B, and a modern language are strongly recommended.

*The Major.*—Required: twenty-four units of upper division French, including courses 101A-101B, 109A-109B, 112A-112B.

Any of the remaining upper division courses except 140A-140B and 109M-109N may be applied on the major. With the permission of the department four units of the twenty-four may be satisfied by appropriate upper division courses in the following departments: English, German, Greek, Latin, Spanish, Italian, or philosophy.

Students with majors in French will also be required to take a comprehensive examination covering history, geography, and other general information concerning France.

## LOWER DIVISION COURSES

The ordinary prerequisites for each of the lower division courses are listed under the description of these courses. Students who have had special advantages in preparation may, upon examination, be permitted a more advanced program; or, such students may be transferred to a more advanced course by recommendation of the instructor.

**A. Elementary French.** (5) I, II.

Miss Letessier in charge

**A-g. Reading Course for Graduate Students.** (No credit) I. Mr. Miller  
 Three hours a week.

\* Absent on leave, 1988-89.

- B. Elementary French.** (5) I, II. Miss Letessier in charge  
Prerequisite: course A or two years of high school French.
- C. Intermediate French.** (3) I, II. Mr. Humiston in charge  
Prerequisite: course B or three years of high school French.
- CD. Intermediate French.** (5) I, II. Mr. Humiston in charge  
Prerequisite: course B or three years of high school French.
- D. Intermediate French.** (3) I, II. Mr. Humiston in charge  
Prerequisite: course C or four years of high school French.
- 5A-5B. Advanced French.** (3-3) Yr. Mr. Périgord, Mr. Miller  
Prerequisite: course D.
- 5AB. Advanced French.** (5) II. Miss Letessier  
Prerequisite: course D.
- \* **19. Dramatic Interpretation in French.** (2) II. Miss Letessier  
The study and presentation of a masterpiece of French dramatic literature. Only those students will be eligible for registration in this course who have done, without credit, certain preliminary work required by the department during the preceding semester. The work of the course will end with the production and this production will constitute the examination. This course may be taken only twice for credit.

## UPPER DIVISION COURSES

The prerequisite to all upper division courses except 109M-109N and 140A-140B is sixteen units in the lower division, including course D with a grade of A or B, or 5A-5B (or 5AB).

Courses 101A-101B and 109A-109B are ordinarily prerequisite to other upper division courses.

All upper division courses, with the exception of 109M-109N and 140A-140B, are conducted mainly in French.

**101A-101B. Composition, Oral and Written.** (3-3) Beginning each semester.  
Mr. Barker, Mr. Biencourt, Mr. Miller

**109A-109B. Survey of French Literature and Culture.** (3-3) Yr.  
Mr. Périgord  
Limited to major students in French. Not open to students who have taken or are taking course 109M-109N.

109A. The Middle Ages, the Renaissance, and the seventeenth century.  
109B. The eighteenth, nineteenth, and twentieth centuries.

**109M-109N. A Survey of French Literature and Culture.** (3-3) Yr.  
Mr. Humiston

Given in English; does not count on the major in French.  
Not open to students who have taken or are taking course 109A-109B.  
109M. The Middle Ages, the Renaissance, and the seventeenth century.  
109N. The eighteenth, nineteenth, and twentieth centuries.

**112A-112B. The Nineteenth Century.** (2-2) Yr. Mr. Brush  
Prerequisite: courses 101A-101B and 109A-109B.  
112A. From 1789 to 1830.  
112B. From 1830 to 1885.

- 114A-114B. Contemporary French Literature from 1885 to the Present.** (2-2) Yr. Mr. Fite
- \*115A-115B. Modern French Drama.** (2-2) Yr. Mr. Fite
- 118A-118B. The Sixteenth Century.** (2-2) Yr. Mr. Humiston
- 120A-120B. The Seventeenth Century.** (2-2) Yr. Mr. Périgord
- \*121A-121B. The Eighteenth Century.** (2-2) Yr. ———
- 130A-130B. Grammar, Composition, and Style.** (3-3) Yr. Mr. Fite
- Prerequisite: an average grade higher than C in French courses.  
Practice in oral and written composition based on selected models. This course is required of all candidates for the certificate of completion of the teacher-training curriculum, or for the degree of Master of Arts.
- 140A-140B. French Civilization.** (2-2) Yr. Mr. Périgord
- Presentation of the larger cultural elements in European history as caused, influenced, diffused, or interpreted by the French people.  
Lectures in English, reading in French or English. Intended primarily for major students in English, history, economics, and political science.
- 199A-199B. Special Studies in French.** (2-2) Yr.  
Mr. Périgord, Mr. Biencourt, Mr. Barker
- Prerequisite: senior standing and at least twelve units of upper division French.

## PROFESSIONAL COURSE

- 390. The Teaching of French.** (3) I. Mr. Brush
- Prerequisite: courses 101A-101B and 109A-109B, the latter being permitted concurrently.

## GRADUATE COURSES

- 201A-201B. Historical Grammar.** (2-2) Yr. Mr. Brush
- History of French forms, sounds and syntax. An elementary knowledge of Latin is indispensable.
- \*204A-204B. Voltaire and his Age.** (2-2) Yr. Mr. Crowley
- 206A-206B. Reading and Interpretation of Old French Texts.** (2-2) Yr. Mr. Brush
- 252. Methodology of Romance Philology. Seminar.** (2) II. Mr. Brush
- 257A-257B. Seminar in the French Renaissance.** (2-2) Yr. Mr. Humiston
- 298A-298B. Special Studies in Literary Criticism.** (2-2) Yr. Mr. Fite

\* Not to be given 1938-39.

## GEOGRAPHY

GEORGE McCUTCHEM McBRIDE, Ph.D., Professor of Geography.  
 BURTON M. VARNEY, Ph.D., Associate Professor of Geography.  
 CLIFFORD M. ZIERER, Ph.D., Associate Professor of Geography.  
 MYRTA LISLE McCLELLAN, B.S., Assistant Professor of Geography.  
 RUTH EMILY BAUGH, Ph.D., Assistant Professor of Geography.  
 ROBERT M. GLENDINNING, Ph.D., Assistant Professor of Geography.  
 KAZUO KAWAI, M.A., Instructor in Geography and History.  
 HALLOCK F. RAUP, Ph.D., Instructor in Geography.

*Letters and Science List.*—All undergraduate courses in geography are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Required: Geography 1A-1B, 3, and 5B, Geology 1C or 1A. Recommended: Anthropology 1A-1B, Botany 1A, Economics 1A-1B, Geology 1B, one year of history, Physics 1A-1B, Political Science 3A-3B, and at least one modern foreign language.

*The Major.*—The minimum requirement for the major is eighteen or twenty-one units of upper division work in geography, including courses 101, 113, and 115, plus six or three units selected from courses in fields approved by the department; a list of such courses may be secured from the departmental adviser.

## LOWER DIVISION COURSES

**1A-1B. Elements of Geography.** (3-3) Beginning each semester.

Miss McClellan, Mr. Raup

Lectures, two hours; laboratory, two hours; field trips.

Not open for full credit to students who have credit for course 5A.

Course 1A is prerequisite to 1B.

A study of the main features of the physical environment in their relation to man's life and activities.

An expenditure of \$4 for field trips may be incurred by students in 1B.

**3. Introduction to Weather and Climate.** (3) I, II.

Mr. Varney

Lectures, two hours; laboratory, two hours.

Prerequisite: sophomore standing.

A study of the earth's atmosphere and the phenomena which produce weather and climate; recording of meteorological observations; work with meteorological instruments; study of weather maps.

**5A-5B. Economic Geography.** (3-3) Beginning each semester.

Mr. Glendinning

5A. No prerequisite, but limited to prospective majors in economics and business administration. Not open to students who have credit for course 1A-1B. Students who have credit for course 1A or 1B will receive only 1½ units of credit for course 5A.

A brief study of those elements of the natural environment essential to a geographic interpretation of economic activities. Several half-day field trips.

5B. Prerequisite: course 5A or 1A-1B.

The principles of economic geography as developed from a study of representative areas, commodities, and industries.

## UPPER DIVISION COURSES

Course 1A-1B (or, for majors in economics and business administration, 5A-5B) is prerequisite to all upper division courses except 181.

- 101. Fundamentals of Geographic Field Work.** (3) II. Mr. Zierer  
Saturdays.  
To be taken by major students normally during the junior year.  
Registration to be made only after consultation with the instructor.  
Selected field studies in the Los Angeles area. The course affords training in field mapping of rural and urban types and in techniques of areal analysis.
- 108. The Geographic Basis of Human Society.** (3) I, II. Miss Baugh  
The geographic element in the evolution of primitive cultures and of advanced civilizations. A study of various types of physical habitat in relation to social organization and institutions, together with the corresponding human culture.
- 111. The Conservation of Natural Resources.** (3) I. Mr. Zierer  
Discussion of current problems in the United States arising in connection with the utilization of lands for forestry, grazing, recreation, agriculture, mining, and other uses.
- 118. General Climatology.** (3) I. Mr. Varney  
To be taken by major students normally in the first semester of the junior year.  
Course 3 is especially desirable as a preparation for this course.  
A study of the causes of climatic phenomena, of the larger features which characterize the climates of the earth, and of the influence of climatic conditions upon man.
- 114. Regional Climatology: Western Hemisphere.** (3) II. Mr. Varney  
Prerequisite: course 113.  
A study of the various types of climate, with reference to their underlying causes and to the effects of climate on man in the region.
- 115. Physical Bases of Geography.** (3) I. Mr. Glendinning  
A study of the basic physical factors existing in each of the major landscape groups of the earth, with special emphasis on the interrelations of land forms, soils, drainage, and vegetation types. Several field trips required.
- 121. The Geography of Anglo-America.** (3) I. Mr. Zierer  
Delimitation and analysis of the principal economic geographic divisions of the United States, Canada, and Alaska.
- 122A-122B. The Geography of Latin America.** (3-3) Yr. Mr. McBride  
A study of the physical conditions characterizing the countries of Latin America, particularly in relation to the life of the inhabitants.  
122A. South America.  
122B. Mexico, Central America, and the West Indies.
- 123A-123B. The Geography of Europe.** (2-2) Yr. Miss Baugh  
The effect of geographic conditions upon the economic status, political organization, and distribution of population in the present-day states of Europe.  
123A. The Atlantic States of Europe.  
123B. Eastern and Southern Europe.

- 124. The Geography of Asia.** (3) I, II. Mr. Kawai  
A study of the geographic factors which affect the social and economic conditions in the leading countries of eastern Asia.
- 131. The Geography of California.** (3) I, II. Miss Baugh  
An analysis of geographic conditions in the seven major provinces of California. Utilization of resources, routes of communication, location of settlements and distribution of population in their geographical and historical aspects. Two field trips.
- 155. Advanced Economic Geography.** (3) II. Mr. Zierer  
A study of cities from the viewpoint of location, form, and functional evolution. The manufactural and commercial phases are emphasized.
- 171A-171B. The Geographic Setting of American History.** (2-2) Yr. Mr. McBride  
Additional prerequisite: a university course in American history.  
A study of the relation of the physical environment to the historical development of the peoples inhabiting the Americas.  
171A. Anglo-America. 171B. Latin America.
- 173. The Historical Geography of the Mediterranean Region.** (2) II. Miss Baugh  
A study of the geographic factors operative in the Mediterranean lands, particularly in their influence on ancient history.
- 181. Current Problems in Political Geography.** (2) I, II. Mr. McBride  
Prerequisite: junior standing.  
Consideration of the geographical basis of some important problems in domestic and international affairs, with stress upon the geographic principles involved.
- 199. Problems in Geography.** (2) I, II. Mr. Varney and the Staff  
Open only to seniors who have the necessary preparation for undertaking semi-independent study of a problem. Registration only after conference with the instructor in whose field the problem lies.

## PROFESSIONAL COURSE

- 369. The Teaching of Geography.** (3) I, II. Miss McClellan  
Limited to twenty students, registration to be made only after consultation with the instructor.  
The fundamental purposes of geography as an instrument of instruction; changing point of view; the basic principles; the various methods of presentation; the use of materials in the presentation of the subject.

## GRADUATE COURSES†

- 240. The Growth of Geographic Thought.** (3) II. Mr. Zierer
- 251. Seminar in Regional Geography.** (3) I. Mr. McBride  
The anthropogeography of the tropical plateaus of America.
- 255. Seminar in Physical Geography.** (3) I. Mr. Varney  
Oceanic and continental influences on the climates of California.
- 275. Advanced Field Problems in Local Geography.** (3) I, II. Mr. Glendinning, Mr. Zierer

† A thesis is required of all candidates for the master's degree in geography.

## GEOLOGY

- WILLIAM JOHN MILLER, Ph.D., Sc.D., Professor of Geology.  
 JAMES GILLULY, Ph.D., Professor of Geology.  
 EDGAR K. SOPER, Ph.D., Associate Professor of Geology.  
 ALFRED R. WHITMAN, Ph.D., Associate Professor of Geology.  
 U. S. GRANT, Ph.D., Associate Professor of Geology.  
 JOSEPH MURDOCH, Ph.D., Assistant Professor of Geology.  
 ROBERT W. WEBB, Ph.D., Instructor in Geology.  
 CORDELI DURRELL, Ph.D., Instructor in Geology.  
 WILLIAM C. PUTNAM, Ph.D., Instructor in Geology.

*Letters and Science List.*—All undergraduate courses in geology are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Required: Chemistry 1A–1B; physics; Civil Engineering 1LA, 1FA, 1LB, 1FB (geology sections); Geology 1A–1B; Mineralogy 3A–3B; trigonometry; engineering drawing. Certain of these preparatory courses may be postponed to the upper division by permission of the department. Recommended: French and German.

*The Major.*—Geology 102A–102B, 103, 107, 199A–199B, Paleontology 111, and at least five units of other upper division courses in the department which may include mineralogy and paleontology. Certain allied courses in chemistry, physics, mathematics, biological sciences, and geography are recommended. The student's program is to be made out in accordance with some definite plan approved by the department.

*Laboratory Fees.*—Mineralogy 3A, 3B, \$2.

## GEOLOGY

## LOWER DIVISION COURSES

## 1A. General Geology: Dynamical and Structural. (3) I, II.

Mr. Murdoch, Mr. Webb

Lectures, three hours; and one section meeting a week.

Two half-day field trips are required.

Prerequisite: elementary chemistry.

Not open to students who have taken or are taking course 1C.

A study of the materials and structure of the earth and the processes and agencies by which the earth has been and is being changed.

## 1B. General Geology: Historical. (3) I, II.

Mr. Miller

Prerequisite: course 1A or 1C.

A study of the geological history of the earth and its inhabitants, with special reference to North America.

## 1C. General Geology: Physiographic. (3) I, II.

Mr. Miller, Mr. Soper, Mr. Putnam

Two half-day field trips are required.

Not open to students who have taken or are taking course 1A.

An elementary course dealing with the earth's surface features and the geological laws governing their origin and development.

**1D. Physiography. (2) II.**

Mr. Putnam

Lecture, one hour; laboratory, three hours.

Prerequisite: courses 1A or 1C, and 1B.

Two field trips and three extra lecture hours a semester may be required.

The principles of physiography in their application to the study of selected regions, especially those of the western United States. Map work, reports, outside reading, and field trips.

## UPPER DIVISION COURSES

**102A-102B. Field Geology. (3-3) Yr. Saturdays. Mr. Gilluly, Mr. Putnam**

Prerequisite: courses 1B, 103 (may be taken concurrently), Civil Engineering 1LA, 1FA, 1LB, 1FB (geology sections), and physics.

Credit in this course toward the major is given only to students who take the year's work.

Introduction to field geology. Theory and practice of geologic mapping, and practice in the observation and interpretation of geologic phenomena, entailing weekly field trips into the nearby hills, and occasional longer excursions to points of special interest in a region remarkably rich in geologic features.

**103. Introduction to Petrology. (4) I.**

Mr. Durrell

Lectures, two hours; laboratory, six hours.

Prerequisite: course 1A, Mineralogy 3A-3B, and college chemistry.

The general characteristics, origins, mode of occurrence and nomenclature of rocks, and description of the more common types, accompanied by determinative laboratory practice.

**106. Economic Geology: Metalliferous Deposits. (3) II.** Mr. Whitman

Prerequisite: courses 1B and 103.

A systematic study of ore occurrences, and of the genetic processes and structural factors involved.

**107. Physical Geology of North America. (2) II.**

Mr. Miller

Prerequisite: courses 1A or 1C, and 1B.

A course in advanced general geology with special reference to a regional study of North America.

**108. Economic Geology; Nonmetalliferous Deposits. (2) I.** Mr. Murdoch

Prerequisite: courses 1A or 1C, 1B, and elementary chemistry.

Special attention is given to coal, petroleum, building stones, clay, limes, salines, gypsum, fertilizers, and various minor minerals.

**111. Petroleum Geology. (3) II.**

Mr. Soper

Prerequisite: courses 102A, 116.

Geology applied to exploration for petroleum; the geology of the principal oil fields of the world with emphasis upon United States fields; and field methods in oil explorations. Lectures, map work, problems, and field trips to nearby oil fields.

**116. Structural Geology. (3) I.**

Mr. Soper

Lectures, two hours; laboratory, three hours.

Prerequisite: courses 102A (which may be taken concurrently), and 103.

A working knowledge of descriptive geometry is desirable.

The phenomena of fracture, folding, flow, and the graphic solution of problems with laboratory and field investigations.

**\*119. Geophysics. (2) I.**

Lecture, one hour; laboratory, three hours.

Prerequisite: courses 102A-102B, 116, and a year course in college physics.

A study of geophysical principles and methods with special reference to the location of petroleum and ore-deposits.

**199A-199B. Problems in Geology. (2-2) Yr.**

Mr. Miller, Mr. Soper, Mr. Whitman, Mr. Grant, Mr. Webb

Open only to seniors who are making geology their major study. Reports and discussions. Courses 199A and 199B should not be taken concurrently.

**GRADUATE COURSES†**

**235A-235B. Geology of California. (3-3) Yr.** Mr. Soper, Mr. Grant

235A. Physical geology of California. Mr. Soper

235B. Paleontology and stratigraphy of California. Mr. Grant

**251. Seminar in Petrology. (3) I.** Mr. Miller

Advanced study of igneous and metamorphic rocks with emphasis on petrogenesis.

**252. Seminar in Geomorphology. (3) II.** Mr. Miller

Emphasis on general principles and regional studies.

**260A-260B. Seminar in Structural and Economic Geology. (3-3) Yr.**

Mr. Gilluly

**290A-290B. Selected Problems in Geology. (3-3) Yr.** Mr. Whitman

**299A-299B. Research in Geology. (1-6; 1-6) Yr.**

Mr. Miller, Mr. Gilluly, Mr. Soper, Mr. Grant

**MINERALOGY****LOWER DIVISION COURSE**

**3A-3B. Introduction to Mineralogy. (3-3) Yr.** Mr. Murdoch, Mr. Webb

Lecture, one hour; laboratory, six hours; discussion, one hour (3A only).

Prerequisite: elementary chemistry and physics; Geology 1A (may be taken concurrently with 3A). Fee, \$2 a semester.

Lectures and laboratory practice in crystal morphology and projection, determination of minerals by their physical and chemical properties, and descriptive mineralogy.

**UPPER DIVISION COURSES**

**101. Paragenesis of Minerals. (2) II.** Mr. Murdoch

Prerequisite: Mineralogy 3A-3B, Chemistry 1A-1B.

\* Not to be given 1988-89.

† A candidate for a master's degree in geology must have to his credit, in addition to the general University requirements, the minimum lower and upper division requirements for the department major and must have completed Geology 107 and 116, and Paleontology 111, or equivalents. Acceptance of the candidate and of his program must be approved by the department. A thesis is required.

**109A-109B. Optical Mineralogy and Petrography.** (2-4) Yr. Mr. Durrell

109A: Laboratory, six hours.

109B: Lecture, one hour; laboratory, nine hours.

Prerequisite: Mineralogy 3B; Geology 103 (which may be taken concurrently).

Study of the optical properties of minerals; mineral recognition under the microscope. The study and description of rocks, and their microscopic characters.

**110. Mineral Grain Analysis.** (3) I.

Mr. Gilluly

Lecture, one hour; laboratory, six hours.

Prerequisite: Mineralogy 109A-109B, and senior standing.

Methods in identification of minerals in grains; special emphasis on the clastic rocks, including mechanical analysis and immersion methods.

## PALEONTOLOGY†

## UPPER DIVISION COURSES

**111. Systematic Paleontology.** (3) I.

Mr. Grant

Lectures, two hours; laboratory, three hours.

Prerequisite: Geology 1B or Paleontology 1.

A general introduction to the study of invertebrate fossils.

**\*114. Micropaleontology.** (2) II.

Lecture, one hour; laboratory, three hours.

Prerequisite: Paleontology 111 and Geology 102A, 102B, 116.

A study of the microscopic fossils with special reference to age determination and correlation of strata in application to oil-field problems.

**115. Systematic Conchology and Echinology.** (3) II.

Mr. Grant

Lecture, one hour; laboratory, six hours.

Prerequisite: Paleontology 111, Geology 1B.

An introduction to the classification and identification of the western American marine Cenozoic mollusca and echinoidea.

† Courses in vertebrate paleontology may be found under the announcement of the Department of Zoölogy (p. 245).

\* Not to be given 1938-39.

## GERMAN

GUSTAVE OTTO ARLT, Ph.D., Professor of German.

ROLF HOFFMANN, Ph.D., Associate Professor of German.

FRANK HERMAN REINSCH, Ph.D., Associate Professor of German.

ALFRED KARL DOLCH, Ph.D., Associate Professor of German.

PHILIP ROBERT PETSCH, J.D., Instructor in German.

CARL W. HAGGE, M.A., Instructor in German.

GERALD M. SPRING, Ph.D., Instructor in German.

WAYLAND D. HAND, Ph.D., Instructor in German.

CHRISTEL B. SCHOMAKER, M.A., Associate in German.

ERIK WAHLGREN, M.A., Associate in German.

---

BERT JOHN VOS, Ph.D., Research Associate in German.

*Letters and Science List.*—All undergraduate courses in German and Swedish are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Required: courses A, B, C, D, and 6A–6B or their equivalents. Recommended: History 4A–4B, English 1A–1B, Philosophy 3A–3B.

*The Major.*—Twenty-four units in upper division courses, including courses 105A–105B, 106A–106B, 117, 118A–118B and at least four units made up from the senior courses 111A–111B, and 119. Students looking forward to the secondary credential should take also 106C–106D.

*Requirements for Admission to Graduate Courses.*

A candidate for admission to graduate courses in German language and literature must meet, in addition to the general University requirements, the minimum requirements for an undergraduate major in this department. If the candidate is deficient in this prerequisite he must fulfill it by undergraduate work which is not counted toward his graduate residence.

*Requirements for Advancement to Candidacy.*

1. A reading knowledge of a modern foreign language other than German, preferably French.

2. A satisfactory reading and speaking knowledge of German.

3. An elementary comprehensive examination in German literature, language, and history.

*Requirements for Master's Degree.*

For the general requirements, see p. 106. The Department of German favors the Comprehensive Examination Plan.

## LOWER DIVISION COURSES

The ordinary prerequisites for each of the lower division courses are listed under the description of these courses. Students who have had special advantages in preparation may, upon examination, be permitted a more advanced program; or such students may be transferred to a more advanced course by recommendation of the instructor.

- A. Elementary German.** (5) I, II. Mr. Hand in charge  
This course corresponds to the first two years of high school German.
- A-g. Elementary German for Graduate Students.** (No credit.) Mr. Spring  
Three hours a week.
- B. Elementary German.** (5) I, II. Mr. Hand in charge  
Prerequisite: course A or two years of high school German.
- C. Intermediate German.** (3) I, II. Mr. Hagge in charge  
Prerequisite: course B or three years of high school German.
- D. Intermediate German.** (3) I, II. Mr. Hagge in charge  
Prerequisite: course C or four years of high school German.
- CD. Intermediate German.** (5) II. Mr. Hagge in charge  
Prerequisite: course B or three years of high school German.
- 5A-5B. Advanced German.** (3-3) Yr. Mr. Schomaker  
Prerequisite: course D or consent of the instructor.
- 5T. Scientific German.** (3) I, II. Mr. Petsch  
Prerequisite: course D or consent of the instructor.  
An introduction to science readings, covering all fields of science, but with special emphasis on the field of each individual student.
- 6A-6B. Review of Grammar, Composition, and Conversation.** (2-2) Yr. Mr. Dolch in charge  
Prerequisite: course B or three years of high school German.
- 19. Dramatic Interpretation in German.** (2) I. Mr. Hoffmann  
Prerequisite: consent of the instructor.  
The study and interpretation of at least one German drama; the production of the drama constitutes the final examination. This course may be taken only twice for credit.

## UPPER DIVISION COURSES

The prerequisite for all upper division courses except 140A-140B is course D (or CD) or the equivalent. Major students are also required to take course 6A-6B.

- 104A-104B. Introduction to Modern German Literature.** (3-3) Yr.  
Selected readings from nineteenth century authors. Mr. Reinsch
- 105A-105B. German Classics of the Eighteenth Century.** (3-3) Yr.  
Selected works of Lessing, Goethe, Schiller. Mr. Reinsch
- 106A-106B. Grammar, Composition, and Conversation.** (2-2) Yr.  
Mr. Spring, Mr. Schomaker
- 106C-106D. Grammar, Composition, and Conversation.** (2-2) Yr.  
Prerequisite: course 106A-106B. Mr. Schomaker
- 107. Phonetics of the German Language.** (1) II. Mr. Dolch
- 110A-110B. German Lyrics and Ballads.** (2-2) Yr. Mr. Hoffmann
- 111A-111B. The German Novelle from Goethe to the Present.** (2-2) Yr.  
Mr. Hoffmann  
Prerequisite: course 104A-104B or 105A-105B or 106A-106B.

117. **History of the German Language. (2) I.** Mr. Dolch  
Prerequisite: course 106A-106B, 107.
- 118A-118B. **History of German Literature. (3-3) Yr.** Mr. Arlt  
Prerequisite: course 104A-104B or 105A-105B.  
Lectures and discussions; collateral reading.  
118A: the Middle Ages. 118B: from the Reformation to 1850.
119. **Middle High German. (3) II.** Mr. Dolch  
Prerequisite: courses 117 and 118A.  
Outline of grammar, selections from the Nibelungenlied, Kudrun, and the Court Epics.
- 140A-140B. **German Civilization. (2-2) Yr.** Mr. Hoffmann  
Prerequisite: junior standing.  
Lectures and reports. Conducted in English. May not be offered as part of the major or minor in German.  
A general survey of the development of German civilization in its more important cultural manifestations.
- 199A-199B. **Problems in German Literary History and Criticism. (2-2) Yr.** Mr. Arlt and the Staff  
Prerequisite: senior standing and at least twelve units of upper division German.  
An introduction to problems and technique of literary research.

## PROFESSIONAL COURSE

390. **The Teaching of German. (3) I.** Mr. Reinsch  
Prerequisite: graduate standing in the Department of German.  
Required of all candidates for the general secondary credential in German. To be taken concurrently with Supervised Teaching 320A.

## GRADUATE COURSES

201. **Bibliography and Methods of Literary History. (2) I.** Mr. Arlt  
An introduction to the means and methods of graduate study. Lectures and reports. Required of all candidates for the M.A. degree.
206. **German Literature from Humanism to Gottsched. (2) I.** Mr. Arlt  
Lectures and reports.
222. **Goethe's Faust. (2) II.** Mr. Reinsch  
Critical and interpretative study of Goethe's *Faust*, Parts I and II.
225. **The Nineteenth Century Drama. (2) II.** Mr. Arlt  
Critical and historical study of the German Drama from Romanticism to Naturalism.
231. **Gothic. (2) I.** Mr. Dolch  
An introduction to the study of Gothic grammar and texts. Graduate students in other language departments may be admitted with consent of the instructor.



## HISTORY

FRANK J. KLINGBERG, Ph.D., Professor of History.

WALDEMAR WESTERGAARD, Ph.D., Professor of History.

JOHN CARL PARISH, Ph.D., Professor of History.

JOSEPH B. LOCKEY, Ph.D., Professor of History.

ROWLAND HILL HARVEY, Ph.D., Associate Professor of History.

LOUIS KNOTT KOONTZ, Ph.D., Associate Professor of History.

DAVID K. BJORK, Ph.D., Associate Professor of History.

ANDRÉ LOBANOV-ROSTOVSKY, Associate Professor of History.

ROLAND D. HUSSEY, Ph.D., Associate Professor of History.

LUCY M. GAINES, M.A., Assistant Professor of History.

JOHN W. OLMSTED, M.A. (Oxon.), Assistant Professor of History.

JOHN W. CAUGHEY, Ph.D., Assistant Professor of History.

BRAINERD DYER, Ph.D., Assistant Professor of History.

CLINTON N. HOWARD, Ph.D., Assistant Professor of History.

KAZUO KAWAI, M.A., Instructor in History and Geography.

KENNETH P. BAILEY, Ph.D., Instructor in History.

CHARLES MOWAT, M.A. (Oxon.), Associate in History.

ROBERT C. GILLINGHAM, M.A., Lecturer in History.

GODFREY DAVIES, M.A. (Oxon.), Lecturer in History.

*Letters and Science List.*—All undergraduate courses in history are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Required: (1) courses 4A-4B or 5A-5B, and (2) course 8A-8B, or equivalent preparation for students transferring from other departments or other institutions. Recommended: Political Science 3A-3B, Political Science 31A-31B, Economics 1A-1B, Geography 1A-1B, and Philosophy 3A-3B. One of these recommended courses may be substituted for one of the required history courses, with approval of the department.

Recommended: French, German, Latin, Spanish, Italian, or a Scandinavian language. For upper division work in history, a reading knowledge of one of these is usually essential. For language requirements for graduate work, see *Announcement of Graduate Study*.

*The Major.*—Twenty-four units of upper division work in history. In certain cases two or six upper division units in either political science or economics approved by the department may be counted on the major.

The major must include a year course in European history [one of the following: 111A-111B, 112A-112B, 121A-121B, 142A-B-C-D (any two consecutive semesters), 153A-153B] and a year course in American history (one of the following: 162A-162B, 171A-171B).

The major must also include History 199A-199B in a field for which preparation has been made in the junior year. This course may not be entered in Feb-

\* In residence second semester only, 1938-39.

ruary except with the special permission of the instructor. (See below, under History 199, p. 180). Fields in which work in History 199 is normally offered are: Medieval Europe, Modern Europe, Great Britain and the Empire, United States, and Hispanic America.

*Honors in History.*—Students who pass with distinction a special honors examination for seniors given each May will be recommended to receive the bachelor's degree with honors or highest honors in history. (See History 198.)

#### LOWER DIVISION COURSES

**4A-4B. History of Europe. (3-3)** Beginning each semester.

Mr. Westergaard, Mr. Kawai

Lectures, two hours; quiz section, one hour.

The growth of European civilization from the decline of the Roman Empire to the present time.

**5A-5B. History of England and Greater Britain. (3-3)** Beginning each semester.

Mr. Klingberg, Mrs. Gaines, Mr. Olmsted, Mr. Howard, Mr. Mowat

**8A-8B. History of the Americas. (3-3)** Yr.

Mr. Lockey

Lectures, two hours; quiz section, one hour.

A survey of the history of the Western Hemisphere.

\*9A-9B }  
9C-9D } Great Personalities. (2-2) Yr.

\*9A. United States.

\*9B. Latin America.

9C. England.

9D. Continental Europe.

Mr. Howard  
Mr. Olmsted

**39. Pacific Coast History. (2)** I, II.

Mrs. Gaines

**46. Economic History of the United States. (3)** I, II.

Mr. Harvey, Mr. Bailey

Primarily for sophomores. Open to other students only with the written consent of the instructor.

#### UPPER DIVISION COURSES

The prerequisite for all upper division courses is History 4A-4B, or 5A-5B, or 8A-8B, or other preparation satisfactory to the instructor.

**111A-111B. Ancient History. (3-3)** Yr.

Mr. Howard

111A. Greek History to the Roman Conquest.

111B. Roman history to the sixth century A.D.

**112A\*-112B. Economic History of the Western World. (3-3)** Yr.

Mr. Harvey

Prerequisite: Economics 1A-1B and History 4A-4B or 5A-5B.

\*112A. From early times to 1750.

112B. From 1750 to the present, including a brief survey of the contemporary economic society of the Orient.

**121A-121B. The Middle Ages. (3-3)** Yr.

Mr. Bjork

A survey of the main currents of European history from the fall of the Roman Empire to about 1500 A.D.

\* Not to be given, 1988-89.

- \*131A-131B. The Renaissance. (2-2) Yr.** Mr. Klingberg  
 131A. The civilization of the Renaissance in Italy.  
 131B. The civilization of the Renaissance in northern Europe.
- 142A-B-C-D. Modern Continental Europe since 1648. (3 units for each semester.)** Mr. Lobanov, Mr. Olmsted, Mrs. Gaines  
 142A. From 1648 to 1740. I.  
 142B. From 1740 to 1815. II.  
 142C. From 1789 to 1870. I.  
 142D. Since 1870. II.
- 144A-144B. History of Northern and Eastern Europe. (2-2) Yr.** Mr. Westergaard  
 Prerequisite: senior standing; German or French or Latin or one of the Scandinavian languages, and History 4A-4B or 5A-5B, and one upper division course, preferably in Continental or English History.  
 Period covered, *circa* 1500 to 1740.
- 148A-148B. Diplomatic History of Europe in the Nineteenth Century. (3-3) Yr.** Mr. Lobanov  
 Open to graduates, and to seniors who have the consent of the instructor.
- 149A-149B. History of Russia. (2-2) Yr.** Mr. Lobanov  
 Russia from its earliest days to the present.
- 152A-152B. Constitutional History of England. (2-2) Yr.** Mr. Howard  
 Prerequisite: course 5A-5B or 153A-153B or the consent of the instructor.  
 A study of the growth of the institutions of British government.
- 153A-153B. Social and Political History of Modern England: 1485 to the Present. (3-3) Yr.** Mr. Klingberg, Mr. Howard
- \*155A-155B. History of the British Empire. (2-2) Yr.** Mr. Klingberg  
 Prerequisite: senior standing and two years of college history, including course 4A-4B or 5A-5B or 8A-8B and one upper division course in history. Attention of students interested in the history of the British Empire is called to Political Science 153.
- 161. History of Spain and Portugal. (3) II.** Mr. Hussey
- 162A-162B. History of Hispanic America from 1808 to the Present. (3-3) Yr.** Mr. Caughey, Mr. Hussey  
 Prerequisite: course 8A-8B, or equivalent preparation approved by the instructor.
- \*164A-164B. History of Inter-American Diplomatic Relations. (2-2) Yr.** Mr. Lockey  
 Prerequisite: senior standing and two years of college history, including course 8A-8B or 162A-162B.
- 171A-171B. History of the United States. (3-3) Beginning each semester.** Mr. Parish, Mr. Koontz, Mr. Dyer  
 A general course dealing with English colonies in North America and the political and social history of the United States.

\* Not to be given 1938-39.

**\*172A-172B. Constitutional History of the United States. (2-2) Yr.**

Mr. Dyer

Prerequisite: course 171A-171B or the consent of the instructor.

**173A-173B. The Civil War and Reconstruction. (2-2) Yr.** Mr. Dyer

Prerequisite: course 8A-8B, or 171A-171B, or consent of the instructor.

Emphasis is placed on the political, economic, and social aspects of the period.

**181A-181B. History of the Westward Movement. (2-2) Yr.** Mr. Parish

Prerequisite: senior standing and two years of college history, including one upper division course. These must include 8A-8B or 171A-171B.

A study of expansion in the United States from the Atlantic to the Pacific.

**188A-188B. History of California. (2-2) Yr.** Mr. Caughey

Prerequisite: in addition to the general requirements for upper division history courses, History 39, or equivalent preparation approved by the instructor.

**191A-191B. History of the Far East. (3-3) Yr.** Mr. Kawai

A general survey of the history of the Far East from the earliest times to the present, with emphasis on recent international relations.

**198. Conferences and Reading for Honors. (2) I, II.** Mr. Olmsted in charge

Primarily for qualified history majors who intend to take the optional examination for honors in history given each May. Whenever possible students should enroll at the beginning of the junior year. May be taken four times for credit.

**199A-199B. Special Studies in History. (2-2) Yr.**Mr. Klingberg, Mr. Westergaard, Mr. Parish, Mr. Lockey,  
Mr. Koontz, Mr. Bjork, Mr. Olinsted, Mr. Caughey

This course may not be entered in February except with the special permission of the instructor. Students expecting to graduate in June should begin the course in September of their senior year. Those graduating in mid-year should begin the course in the final semester of their junior year. For prerequisites, consult the instructor.

## PROFESSIONAL COURSE

**390. The Teaching of History and Social Studies. (3) I, II.** Mr. Gillingham

This course may be counted in partial fulfillment of the 18-unit requirement in education for the General Secondary Credential. Recommended to be taken in the senior year.

## GRADUATE COURSES

**201. Historiography and Bibliography. (3) I.** Mr. Hussey**254A-254B. Seminar in Medieval History. (3-3) Yr.** Mr. Bjork

Studies in northern European political and economic developments.

**257A-257B. Seminar in European History. (3-3) Yr.** Mr. Westergaard

Studies in continental European History prior to 1914.

\* Not to be given, 1938-39.

- ~~260A~~<sup>\*</sup>~~260B~~. Seminar in English History. (3-3) Yr. Mr. Davies  
Studies in the Stuart period.
- 261A-261B. Seminar in English History. (3-3) Mr. Klingberg  
Studies of England in the 19th century.
- 262A-~~262B~~. Seminar in English History. (3-3) Yr. Mr. Harvey  
Studies in the reform movements of the 19th century.
- 265A-265B. Seminar in Hispanic-American History. (3-3) Yr. Mr. Lockey  
Studies in the colonial and early national periods.
- 269A-269B. Seminar in United States History. (3-3) Yr. Mr. Koontz  
Studies in the colonial frontier.
- 270A-270B. Seminar in United States History. (3-3) Yr. Mr. Hussey  
Studies in the Revolutionary era.
- 271A-271B. Studies in United States History. (3-3) Yr. Mr. Parish  
Studies in westward expansion.
- 272A-272B. Seminar in United States History. (3-3) Yr. Mr. Dyer  
Studies in political and social problems of the middle 19th century.
- 274A-274B. Seminar in Pacific Coast History. (3-3) Yr. Mr. Caughey

\* Given only in second semester, 1938-39.

## HOME ECONOMICS

HELEN B. THOMPSON, Ph.D., Professor of Home Economics.

GRETA GRAY, Ph.D., Associate Professor of Home Economics.

\*VERZ R. GODDARD, Ph.D., Assistant Professor of Home Economics.

MARGUERITE G. MALLON, Ph.D., Assistant Professor of Home Economics.

LEILA M. DOMAN, Ph.D., Instructor in Home Economics.

MARTHA E. DAVIS, Ph.D., Instructor in Home Economics.

GLADYS TIMSON STEVENSON, Ph.D., Instructor in Home Economics.

FLORENCE A. WILSON, M.A., Associate in Home Economics.

A student may select a major in this department either (a) in Home Economics, leading to the degree of Bachelor of Education in the Teachers College and to the Special Secondary Credential in Homemaking; or (b) in Household Science, leading to the degree of Bachelor of Arts in the College of Letters and Science.

## The Teachers College

*Preparation for the Major in Home Economics.*—Home Economics 1A-1B, 11A-11B, 43; Art 2A, 21; Chemistry 2A-2B, 10; Physiology 1; Sociology 30A-30B.

*The Major in Home Economics, leading to the Special Secondary Credential in Home Making.*—Home Economics 108, 118A, 120, 162A-162B, 164A-164B, 168, and eight units of advanced home economics or other courses approved by the department.

*The Minor in Education.*—Education 103, 170; Directed Teaching, six to ten units; Home Economics 390. Three units to be chosen from Education 112, 120, or Psychology 110.

*Vocational Home Economics.*—A vocational curriculum in home economics is maintained under the provisions of the Smith-Hughes Act. This curriculum leads to the degree of Bachelor of Education and to the Special Secondary Credential in Home Making. It is open to students who have received the Junior Certificate and who have had practical experience in the administration of a home. All applicants must be approved by the Department of Home Economics.

## The College of Letters and Science

*Letters and Science List.*—All undergraduate courses except 32, 43, 102A-102B, 108, and 175 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major in Household Science.*—Home Economics 11A-11B; Chemistry 1A-1B, 8; Economics 1A-1B; Physiology 1.

*The Major in Household Science.*—Required: eighteen units in upper division home economics, including (1) course 162A-162B; (2) at least six units chosen from 110, 118A, 120 (3) five to eight units chosen from 125, 159, 164A-164B, 168, 199A, 199B; and six additional units to be selected with the approval of the department from upper division courses in business administration, chemistry, economics, psychology, or zoölogy.

\* In residence second semester only, 1988-89.

**Laboratory Fees.**—Courses 1A, 1B, 175, \$1.50; 108, 199A, 199B, \$2; 11B, \$2.50; 102A, 102B, 110, 120, 125, 159, \$3; 11A, \$4.

#### LOWER DIVISION COURSES

**1A-1B. Clothing.** (3-3) Beginning each semester.

Miss Wilson, Mrs. Stevenson

Prerequisite: matriculation credit in "clothing" or Art 2A.

Fee, \$1.50 a semester.

The study of kinds and qualities of materials for different uses; construction of typical forms of clothing; artistic qualities of dress design, pattern, color and weave of fabrics; individual and social standards in the selection of clothing.

**11A. Elementary Food.** (3) I, II.

Miss Thompson, Miss Davis

Prerequisites: high school chemistry or Chemistry 2A. Fee, \$4.

The classification, occurrence, and general properties of foodstuffs; the principles involved in food preparation and preservation; compilation of recipes; practice in judging food preparations and in meal service.

**11B. Food Economics.** (3) I, II.

Miss Doman

Prerequisite: course 11A. Fee, \$2.50.

The production, transportation, and marketing of food materials; the legal and sanitary aspects of food products handled in commerce; prices in relation to grades and standards.

**32. Elements of Nutrition.** (2) I, II.

Miss Thompson, Miss Goddard

Prerequisite: six units of natural science.

The principles of nutrition and their application in normal and sub-normal conditions of growth and physical development, and as a factor in the health of adults.

**43. Elementary Household Administration.** (2) I, II.

Mrs. Stevenson

Management problems including those pertaining to the social aspects of the home in the care and training of children.

#### UPPER DIVISION COURSES

**102A-102B. Food and Dietetics.** (3-3) Yr.

Miss Mallon

Prerequisite: Chemistry 1A-1B, or high school chemistry and Physiology 1. Fee, \$3 a semester.

A brief study of the nutritive values of the food materials; individual food needs in normal and pathological conditions both in adult life and in childhood; planning of dietaries; calculation and preparation of diets with special reference to cost of materials in relation to nutritive standards.

**108. Textiles.** (2) I.

Miss Wilson

Prerequisite: Art 2A, Economics 1A or Home Economics 1B. Fee, \$2.

Study of weaves, patterns, color, texture, shrinkage, and durability of fabrics; chemical, physical, and microscopic examination of fibers and yarns; evaluation of labels, bulletins, advertisements, and other available consumer aids in buying textile materials.

**110. Food Compositions.** (3) II.

Miss Goddard

Prerequisite: Chemistry 8 or 10. Fee, \$3.

Detailed study of the proximate principles, the inorganic constituents, and the vitamins with reference to their occurrence in the different food materials, their chemical properties, and their nutritive values as affected by heat or the admixture of other food substances.

- 118. Nutrition.** (3) I. Miss Thompson, Miss Mallon  
 Prerequisite: Chemistry 8 or 10, Physiology 1.  
 Discussions of the chemical and biological factors in metabolism, energy transformation, the quantitative relations of the ash constituents, nitrogen and mineral balances in both normal and pathological conditions. Attention is given to recent literature bearing upon growth and upon normal and sub-normal nutrition in infancy and childhood.
- 120. Dietetics.** (3) I, II. Miss Mallon  
 Prerequisite: Chemistry 8 or 10, Home Economics 110 or 118A. Fee, \$3.  
 Daily food requirements as indicated by the experimental studies that have established the quantitative basis in dietetics; calculations of standard portions and combinations of foods; computations and scoring of dietaries with special reference to food requirements in childhood and adolescence and in varying physiologic conditions at all periods of life.
- 125. Experimental Cookery.** (2) I, II. Miss Davis  
 Prerequisite: course 110 or Chemistry 10. Fee, \$3.  
 Quantitative methods in food preparation under controlled conditions.
- 136A-136B. Institution Economics.** (3-3) Yr. Miss Davis  
 Prerequisite: Economics 1A-1B, Home Economics 11B. Fee, \$2 a semester.  
 The economic principles and problems involved in the organization and administration of institution households such as residence halls, hotels, hospitals, and school lunchrooms.
- 159. Metabolism Methods.** (3) II. Miss Goddard  
 Prerequisite: Chemistry 8 or 10; Home Economics 118A or equivalent preparation. Fee, \$3.  
 Observations of the influence of special diets upon various phases of metabolism; practice in the methods of determining blood constituents, basal metabolic rate and nitrogen and mineral excretions.
- 162A-162B. Economics of the Household.** (2-2) Beginning each semester. Miss Gray  
 Prerequisite: Economics 1A-1B, or six or more units in home economics.  
 Standards of living; size, composition, income, and expenditures of American households; study of the factors which have developed the modern household and which influence its activities and its selection and utilization of goods and services. Management of financial resources to meet the present and future needs of the family.
- 164A-164B. Housing and Household Sanitation.** (2-2) Yr. Miss Gray  
 Housing and its relations to the activities and the economic problems of the household. Measures for improving health conditions.
- 168. Family Relationships.** (2) I. Miss Gray  
 A study of the social development of the home and its contribution to culture at different stages of civilization; modern problems of family life pertaining to the social and personal well-being of the group.

\* Not to be given 1938-39.

**175. Advanced Study of Costume. (3) II.**

Miss Wilson

Prerequisite: Art 2A, 21, Home Economics 1A-1B. Fee, \$1.50.

Practice in the development of designs for individuals and of the adaptation of materials and methods of construction to the various problems of modern costume.

**199A-199B. Problems in Home Economics. (2-2) Yr.**

Miss Thompson, Miss Gray, Miss Goddard

Prerequisite: senior standing with such special preparation as the problem may demand. Sections 1 and 2, field investigations and statistical studies; the expense of the problem to be met by the student. Sections 3 and 4, laboratory; fee, \$2 a semester.

Assigned problems for individual investigation, the work of each student to be directed by the instructor in whose division of the field the problem lies.

**PROFESSIONAL COURSE**

**390. Principles of Home Economics Teaching. (3) II.**

Miss Thompson, Miss Doman

Prerequisite: Psychology 1A-1B, six or more units in home economics.

The development of home economics as an educational movement; homemaking courses and their presentation in high schools; homemaking activities in the elementary school; critical review of texts and references in relation to curriculum requirements in different types of schools.

**GRADUATE COURSES**

**202. Personal and Family Economics. (2) II.**

Miss Gray

Critical comparison of surveys, budget studies, financing customs and business planning of families and individuals of varying levels of income.

**251. Seminar in Nutrition. (2) I.**

Miss Mallon

Recent advances in the science of nutrition developed by feeding and metabolism experiments and in the dietetic treatment of disease.

**282. Selected Problems. (2) I, II.**

Miss Thompson, Miss Gray, Miss Goddard, Miss Mallon

Laboratory or field investigation in nutrition, food economics, or household administration.

## ITALIAN\*

ARTHUR PATCH MCKINLAY, Ph.D., Professor of Latin.

CHARLES SPERONI, Ph.D., Instructor in Italian.

PERINA PIZIALI, M.A., Associate in Italian and Associate in Clinical Psychology.

---

FRANCO BRUNO AVERARDI, J.D., Ph.D., Lecturer in Italian.

*Letters and Science List.*—All undergraduate courses in Italian are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

## LOWER DIVISION COURSES

- |   |                           |
|---|---------------------------|
| <b>A. Elementary Italian.</b> (5) I, II.                              | Mr. Speroni, Miss Piziali |
| <b>B. Elementary Italian.</b> (5) I, II.<br>Prerequisite: course A.   | Mr. Speroni               |
| <b>C. Intermediate Italian.</b> (3) I, II.<br>Prerequisite: course B. | Mr. Averardi, Mr. Speroni |
| <b>D. Intermediate Italian.</b> (3) I, II.<br>Prerequisite: course C. | Mr. Averardi              |

## UPPER DIVISION COURSES

- |   |              |
|---|--------------|
| <b>101A-101B. Composition, Oral and Written.</b> (3-3) Yr.<br>Prerequisite: course D.                             | Mr. Speroni  |
| <b>103A-103B. Survey of Italian Literature in English.</b> (2-2) Yr.  | Mr. Averardi |
| <b>150A-150B. Dante's "Divine Comedy" in English Translation.</b> (2-2) Yr.<br>Knowledge of Italian not required. | Mr. Averardi |

---

\* The University of California at Los Angeles does not offer a major in Italian. Students wishing to satisfy the requirement for a major in Italian are referred to the *General Catalogue* of the departments at Berkeley.

**LIFE SCIENCES GROUP**

**LOYE HOLMES MILLER, Ph.D., Chairman.**

This group is composed of the departments of Bacteriology, Botany, and Zoölogy, and has been organized for the purpose of unifying and coördinating the activities in these fields. Although no attempt is made to curtail the free development of each department, the special committee in charge of the Life Sciences Group endeavors to articulate, for their mutual benefit, the courses and research work of the three departments concerned.

The announcements of the departments comprising this group appear in their alphabetical order.

## MATHEMATICS

EARLE R. HEDRICK, Ph.D., Sc.D., Professor of Mathematics and Vice-President and Provost of the University.

GEORGE E. F. SHERWOOD, Ph.D., Professor of Mathematics.

WILLIAM M. WHYBURN, Ph.D., Professor of Mathematics.

TRACY Y. THOMAS, Ph.D., Professor of Mathematics.

GLENN JAMES, Ph.D., Associate Professor of Mathematics.

PAUL H. DAUS, Ph.D., Associate Professor of Mathematics.

MAX ZORN, Ph.D., Associate Professor of Mathematics.

HARRIET E. GLAZIER, M.A., Assistant Professor of Mathematics.

GUY H. HUNT, C.E., Assistant Professor of Applied Mathematics.

EUPHEMIA R. WORTHINGTON, Ph.D., Assistant Professor of Mathematics.

WENDELL E. MASON, M.S.E., M.E., Assistant Professor of Applied Mathematics.

CLIFFORD BELL, Ph.D., Assistant Professor of Mathematics.

FREDERICK A. VALENTINE, Ph.D., Instructor in Mathematics.

ANGUS E. TAYLOR, Ph.D., Instructor in Mathematics.

---

HARRY M. SHOWMAN, E.M., M.A., Lecturer in Mathematics and Registrar.

*Letters and Science List.*—All undergraduate courses in mathematics except 19, and all undergraduate courses in civil engineering are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Required: courses C (or the equivalent), 8, 6, 3A, 3B, 4A, with an average grade of C or higher, except that students who have completed two years of high school algebra and also trigonometry may be excused, upon examination, from course 8. Course 109 may be replaced, by permission, by the equivalent course 4B. Recommended: physics, astronomy, and a reading knowledge of French and German.

*The Major.*—Courses 111, 112A–112B, and 119, together with fourteen additional upper division units, must be included in every mathematics major. The student must maintain an average grade of C or higher in upper division courses in mathematics.

Students who are preparing to teach mathematics in high school are advised to elect courses 101, 102, 104, 390.

*Business Administration.*—Freshmen in this college are required to take courses 8 and 2, except that students who have completed two years of high school algebra and also trigonometry may be excused, upon examination, from course 8.

*Pre-Engineering and Pre-Mining.*—The University of California offers at Los Angeles the first two years of the curricula of the colleges of Engineering and Mining which are in Berkeley. Students intending to pursue their studies in the engineering colleges at Berkeley should consult the departmental pre-engineering adviser before making out their programs.

The minimum requirements for admission to the courses 3A-3B, 4A-4B or to 3A, 3C-4B are high school algebra, plane geometry, plane trigonometry, and course 8 unless excused as noted above. Prospective engineering students are urged, however, to add, in their high school course, another half-year of algebra and solid geometry to this minimum preparation.

*Fees.*—Civil Engineering 1FA, 1FB, \$5; Civil Engineering 3, \$25.

LOWER DIVISION COURSES

Students who have not had trigonometry in the high school must elect course C before they will be admitted to any further work except course 8 or course 19.

- C. Trigonometry.** (2) I, II. Mr. Bell, Miss Glazier  
 Prerequisite: high school geometry and course 8. By permission of the department the prerequisite of course 8 may be varied in special cases.  
 Not open to students who have had trigonometry in high school.
- F. Spherical Trigonometry.** (1) I, II. Miss Worthington  
 Prerequisite: plane trigonometry.
- 2. Mathematics of Finance.** (3) I, II. Mr. Daus  
 Prerequisite: course 8.
- 3A. Plane Analytic Geometry.** (3) I, II. Mr. Bell, Mr. Mason  
 Prerequisite: courses C and 8, or the equivalents.
- 3AB. Analytic Geometry and First Course in Calculus.** (6) II. Mr. Daus  
 Prerequisite: courses C and 8, or the equivalents.  
 This course is equivalent to Mathematics 3A and 3B.
- 3B. First Course in Calculus.** (3) I, II. Mr. Hunt, Miss Glazier  
 Prerequisite: course 3A.
- 3C. First and Second Courses in Calculus.** (6) I. Mr. Sherwood  
 Prerequisite: course 3A.  
 This course is equivalent to courses 3B and 4A. Engineers must subsequently take course 4B also.
- 4A. Second Course in Calculus.** (3) I, II. Mr. Taylor  
 Prerequisite: course 3B.
- 4B. Third Course in Calculus.** (3) I, II. Mr. James  
 Prerequisite: course 4A.  
 Course 4B may be substituted for Mathematics 109 with the approval of the department.
- 6. Solid Analytic Geometry and Determinants.** (2) I, II. Mr. James  
 Prerequisite: course 3A.
- 7. Mathematics for Social and Life Sciences.** (3) II. Mr. Daus  
 Prerequisite: course 8 or the equivalent.  
 This course gives in brief form an introduction to analytic geometry and the calculus, and other mathematical material particularly designed for students of the social and life sciences.
- 8. College Algebra.** (3) I, II. Mr. Sherwood, Mr. Hunt, and the Staff  
 Prerequisite: at least one year of high school algebra.  
 Within a few weeks the class meetings will be reduced from five to three a week for all students except the few who require extra review and drill.

- 10A. Vectors and Allied Topics.** (2) I. Mr. Bell  
Prerequisite or concurrent: course 4A.  
Prescribed for pre-engineering students in the mechanical and electrical engineering curricula.
- 10B. Elementary Differential Equations and Applications.** (2) II. Mr. Bell  
Prerequisite or concurrent: course 4B.  
Prescribed for pre-engineering students in the mechanical and electrical engineering curricula.  
Not open for full credit to students who have credit for course 119.
- 19. Foundations of Arithmetic.** (2) I, II. Miss Glazier, Miss Worthington  
Prerequisite: sophomore standing.

## UPPER DIVISION COURSES

Students may not elect upper division courses unless they have taken or are taking Mathematics 3B and 4A or their equivalents.

- 101. Elementary Geometry for Advanced Students.** (3) I. Mr. Daus  
Prerequisite: course 3A.  
Selected topics in elementary geometry, with particular emphasis on recent developments.
- 102. Elementary Algebra for Advanced Students.** (3) II. Miss Worthington  
Prerequisite: course 8, 3B, 4A.  
Selected topics in algebra, with particular reference to modern points of view.
- 104. History of Mathematics.** (3) I. Miss Glazier  
A nontechnical course open to students who have some knowledge of the fundamental ideas of analytic geometry and calculus.
- 109. Third Course in Calculus.** (3) I, II. Mr. Sherwood  
Prerequisite: courses 3B and 4A.  
Course 4B may be substituted for Mathematics 109 with the approval of the department.
- 111. Theory of Algebraic Equations.** (3) I, II. Mr. James, Mr. Zorn  
Prerequisite: courses 8, 3B, and 4A.
- 112A-112B. Introduction to Higher Geometry.** (2-2) Beginning each semester. Mr. Daus, Mr. Sherwood  
Prerequisite: courses 6, 3B, and 4A.
- \*113. Synthetic Projective Geometry.** (3) II. Mr. Daus  
Prerequisite: course 112A-112B, or consent of the instructor.
- 114. Modern Geometry.** (3) II. Mr. Sherwood  
Prerequisite: courses 6, 112A-112B.
- 115. Theory of Numbers.** (3) I. Mr. Daus
- 119. Differential Equations.** (3) I, II. Mr. Bell  
Prerequisite: course 109 or its equivalent.  
Not open for full credit to students who have had course 10B.
- \*121. Mathematical Theory of Statistics.** (3) II.  
Prerequisite: course 109 or its equivalent.

\* Not to be given 1988-89.

- 122A-122B. Advanced Calculus.** (3-3) Yr. Mr. Whyburn  
Prerequisite: course 109.
- 124. Vector Analysis.** (3) I. Mr. James, Mr. Zorn  
Prerequisite: course 109 and one year of college physics.
- 125. Analytic Mechanics.** (3) II. Mr. Valentine  
Prerequisite: course 109 or its equivalent, and Physics 105.
- 199. Special Problems in Mathematics.** (3) I, II. Mr. Whyburn  
Prerequisite: consent of the department.

PROFESSIONAL COURSE

- 390. The Teaching of Mathematics.** (3) II. Miss Glazier  
Prerequisite: courses 3B and 4A.  
A critical inquiry into present-day tendencies in the teaching of mathematics.

GRADUATE COURSES

- \*211. Higher Plane Curves.** (3) I. Mr. Daus
- 215. Non-Euclidean Geometry.** (3) I. Mr. Daus
- 216. Differential Geometry.** (3) II. Mr. James
- 221A-221B. Higher Algebra.** (3-3) Yr. Mr. Zorn
- 224A-224B. Functions of a Complex Variable.** (3-3) Yr. Mr. Thomas
- 243. Real Variables—Differential Equations.** (3) I. Mr. Whyburn
- 244. Real Variables—Integration.** (3) II. Mr. Whyburn
- 260. Seminars.** (2-3) I, II.

Topics in analysis, geometry, and algebra, and in their applications, by means of lectures and informal conferences with member of the staff. During 1938-1939, there will be lecture seminars on the following subjects, in charge of the persons indicated: (a) Algebraic Geometry, Mr. Daus; (b) Projective Differential Geometry, Mr. James; (c) Complex Variables, Mr. Hedrick; (d) Differential Equations, Mr. Whyburn; (e) Algebra, Mr. Zorn; (f) Modern Geometry, Mr. Thomas.

CIVIL ENGINEERING†

- 11A-11B. Plane Surveying Lectures.** (2-2) Beginning each semester.  
Mr. Hunt, Mr. Mason  
Prerequisite: trigonometry and geometric drawing.
- 1FA-1FB. Plane Surveying Field Practice.** (1-1) Beginning each semester.  
Mr. Hunt, Mr. Mason  
Prerequisite or concurrent: course 11A-11B. Fee, \$5 a semester.
- 3. Summer Class in Plane Surveying.** (3) Mr. Mason  
Prerequisite: course 1FA-1FB. Fee, \$25.  
Four weeks of field work after the close of the college year.
- 8. Materials of Engineering Construction.** (2) I, II. Mr. Mason  
Prerequisite: sophomore standing.

\* Not to be given 1938-39.

† First two years only.

## MECHANIC ARTS

HAROLD W. MANSFIELD, Assistant Professor of Mechanic Arts and Director of Shops.

FOSS R. BROCKWAY, Associate in Mechanic Arts.

JAMES W. MARSH, Associate in Mechanic Arts.

ADRIAN D. KELLER, M.A., Associate in Mechanic Arts.

CHARLES H. PAXTON, B.S., Associate in Mechanic Arts.

THOMAS A. WATSON, Associate in Mechanic Arts.

---

WENDELL E. MASON, M.S.E., M.E., Assistant Professor of Applied Mathematics.

## The Teachers College

*Preparation for the Major.*—Mechanical Engineering D; Mechanic Arts 11, 14, 15A-15B, 16, 17A, 18A, 21; recommended, mathematics and physics.

*The Major, leading to the Special Secondary Credential in Industrial Arts Education.*—Thirty units of work approved by the department, of which twenty-four units must be in upper division courses.

*The Minor in Education.*—Education 103, 160, 164, 170; Directed Teaching, six to ten units; Mechanic Arts 190.

*Special Secondary Credential in Vocational Arts.*—A two-year curriculum leading to the special secondary teaching credential in vocational arts is maintained under the provisions of the Smith-Hughes Act. This course is open to experienced journeymen workmen who are high school graduates. All applications must be approved by the Supervisor of Trade and Industrial Teacher Training of the Division of Vocational Education. A statement of the requirements for the Limited Credential in Industrial Arts Education will be found in Bulletin 12 published by the State Board of Education, July, 1935.

## The College of Letters and Science\*

*Letters and Science List.*—Mechanical Engineering D, 1, 2, and 6 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Laboratory Fees.*—Mechanics Arts 11, 14, 15A, 15B, 17A, 17B, 18A, 18B, 21, 29, 31, 101A, 101B, 102, 104A, 104B, 105, 107A, 107B, 112, 114, 115, 125, \$3; Mechanical Engineering 10B, \$5.

## MECHANICAL ENGINEERING

**D. Engineering Drawing.** (2) I, II.

Mr. Mansfield

Lettering, orthographic projection, pictorial representation, developed surfaces and intersections, dimensioning, fastenings for machinery, working drawings, topographical drawing.

---

\* The University of California offers at Los Angeles the first two years in preparation for admission to the junior year of its College of Engineering at Berkeley. Students intending to pursue their studies in this college should present their programs for approval to the pre-engineering adviser.

- 1. Elements of Heat Power Engineering.** (3) I, II. Mr. Paxton  
Heat engines, steam power plants, boiler room equipment, steam engines, turbines; Diesel and other internal combustion engines; fuels.
- 2. Descriptive Geometry.** (3) I, II. Mr. Paxton  
Lecture, one hour; laboratory, six hours.
- 6. Machine Drawing.** (3) I, II. Mr. Paxton  
Lecture, one hour; laboratory, six hours.  
Design and delineation of simple machine parts in the drafting room, with special emphasis upon the production of drawings which conform to standard practice.
- 10B. Treatment of Engineering Materials.** (2) I, II.  
Mr. Mason, Mr. Watson, Mr. Keller  
Prerequisite: Civil Engineering 8. Fee, \$5.

## MECHANIC ARTS

## LOWER DIVISION COURSES

- 11. Bench Work in Wood.** (2) Mr. Keller  
Fee, \$3.  
Fundamental hand tool and joinery operations, including the use of saw, plane, chisels, and the layout and development of all joints essential in wood construction. Operation of speed lathe, including spindle, faceplate and chuck turning.
- \*13A-13B-13C. Printing.** (2-2-2) Three semesters. Mr. Brockway  
Principles, maintenance, and operation of the school print shop. Problems and practice in job printing, type arrangement, and newspaper make-up; type and equipment.
- 14. Storage Batteries.** (2) I. Mr. Marsh  
Fee, \$3.  
Lead-burning, battery construction, battery charging, equalizing, treatments, cycling, testing; battery testing by use of cadmium electrode, hydrometer, high rate discharge, and the new S.A.E. methods; the chemical reactions and make-up of the battery; plate formation, separators, and electrolytes.
- 15A-15B. The Automobile.** (3-3) Yr. Mr. Brockway, Mr. Marsh  
Fee, \$3 a semester.  
15A. Principles of reconstruction and maintenance. Cut-away and dry chassis units used. Take-down and assembly of automotive units; adjustment and operation of internal-combustion engines; use and construction of automotive measuring devices.  
15B. Principles of design and operation of internal-combustion engines, clutches, gear sets, frames, springs, wheels, and tires, with demonstrations and instruction in adjustments and general upkeep of the automobile.
- 16. Architectural Drawing.** (2) I. Mr. Mansfield  
An introduction to architectural drawing; the house, plans, elevations, sections, working drawings; architectural symbols and details; perspective drawing; lettering; reproduction by the blue print and other printing processes.

\* Not to be given 1988-89.

- 17A-17B. Machine Shop. (2-2) Yr.** Mr. Watson  
 Fee, \$3 a semester.  
 Elementary machine shop practice; fundamental operations and tool processes; operations of standard power tools. Layout and bench work. Distinguishing various metals; working from blue prints and sketches; tool sharpening.
- 18A-18B. Sheet Metal. (2-2) Yr.** Mr. Mansfield, Mr. Marsh  
 Fee, \$3 a semester.  
 Work in tin plate, galvanized iron, and other metals; development of patterns in drafting room; use, care, and upkeep of bench and machine equipment.
- 21. General Woodwork. (2) II.** Mr. Keller  
 Fee, \$3.  
 Fundamentals of construction as applied to small boats, paddle boards, and surf boards. Building construction including simple form building, framing, and use of the steel square.
- 29. Applied Photography. (2) I, II.** Mr. Keller  
 Fee, \$3.  
 Fundamentals of photography; exposure, developers and their characteristics, films, filters, and development of negatives and prints.
- 31. Elements of Machine Woodwork. (2) I.** Mr. Keller  
 Fee, \$3.  
 Adjustment, maintenance, and use of stationary and portable wood-working machinery, including circular saws, band saw, jointer, router, and shaper. Development of projects and problems as required.

#### UPPER DIVISION COURSES

- 101A-101B. Cabinet Work. (3-3) Yr.** Mr. Keller  
 Fee, \$3 a semester.  
 101A. Case and furniture making; construction and use of jigs, methods of laying out various parts, preparation and application of paints, stains, and varnishes in finishing and refinishing. Development of models showing correct construction of table corners, rails, legs, and drawers. Brief presentation of period furniture.  
 101B. Advanced cabinet work and furniture making; brief discussion of design as applied to furniture. The use of carving, inlay, marquetry, upholstering tools, materials and equipment. Construction of advanced projects.
- 102. General Shop. (2) I.** Mr. Brockway  
 Fee, \$3.  
 Analysis and construction of projects involving combined use of various tools, materials, and processes.
- 104A-104B. Applied Electricity. (2-2) Yr.** Mr. Marsh  
 Fee, \$3 a semester.  
 104A. Direct current electric and magnetic circuits; calculation of field and armature winding; principles of motors and generators; wire splicing, construction of circuits and various projects.  
 104B. Induction, inductance, alternating current generators and motors; single, two, and three phase currents, star and delta connections, transformers; calculations for winding transformers; construction of projects involving the use of alternating current electricity. Individual problems considered.

**105. Automotive Laboratory. (3) I.**

Mr. Marsh

Fee, \$3.

The Diesel engine, two and four stroke; marine and stationary, automotive and aeronautic types; governors and fuel nozzles; air and airless injection; the use of card indicators and pyrometers in operation; petroleum, fuel and lubricants, and their laboratory tests; gasoline testing for anti-knock qualities.

**106A-106B. Industrial Arts Drawing. (2-2) Yr.**

Mr. Mansfield

Technical sketching, lettering, assembly and detail drawings, tracing and reproduction; drawing and design of shop projects suitable for high school classes.

**107A-107B. Machine Shop. (2-2) Yr.**

Mr. Watson

Prerequisite: course 17A-17B. No prerequisite for graduate students on consent of instructor. Fee, \$3 per semester.

Advanced machine shop practice; machine construction and repair; tool-making; use of precision instruments; development work on research apparatus; model making and how to apply and prepare for patents.

**112. General Metal Work. (2) II.**

Mr. Brockway

Fee, \$3.

A study of metals and metal working methods; heat treatments; oxy-acetylene welding, brazing, forging, and plate metal working.

**114. Electric Apparatus. (2) II.**

Mr. Marsh

Prerequisite: course 104A-104B. Fee, \$3.

Electrical instruments and meters, their principles, use, and installation; operation of complete student plant including alternators, transformers, exciters, motors, and synchronous condenser; switchboard work, three phase, single phase and three wire systems of distribution. Lectures, demonstrations, and construction work.

**115. Automobile Reconstruction. (3) II.**

Mr. Brockway

Fee, \$3.

Principles of automobile repair and maintenance for the technical student and individual car owner. Engine reconstruction; trouble location, corrective methods. Modern automotive machine tool use; cylinder grinding, piston fitting and valve reconditioning. Fender and body maintenance.

**125. Tractors. (3) II.**

Mr. Brockway

Fee, \$3.

Diesel and gasoline tractors; principles of operation in laboratory and field; fuels and lubricants; drives and controls. Practice in taking down, assembling, and adjusting. Approved methods of maintenance.

**190. Organization and Administration of Industrial Arts Education. (2) II.**

Mr. Mansfield

**199A-199B. Special Problems in Technical Related Subjects. (2-2) Yr.**

Prerequisite: junior standing.

Mr. Mansfield and the Staff

Tools, materials, processes of industry, and special studies in the field of mechanic arts.

**MILITARY SCIENCE AND TACTICS**

**CHARLES E. SEVERSON**, Colonel, U. S. Army, Professor of Military Science and Tactics.

**OLIVER E. TRECHTER**, Major, U. S. Army, Associate Professor of Military Science and Tactics.

**DON R. NORRIS**, Major, U. S. Army, Associate Professor of Military Science and Tactics.

**ROBERT O. SHOE**, Major, U. S. Army, Associate Professor of Military Science and Tactics.

**ROBERT C. VAN VLIET, JR.**, Major, U. S. Army, Assistant Professor of Military Science and Tactics.

**GUSTAV J. BRAUN**, Major, U. S. Army, Assistant Professor of Military Science and Tactics.

**EVERETT C. WALLACE**, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.

---

**LEROY W. ALLEN**, M.A., Associate Professor of Music.

*Letters and Science List.*—All undergraduate courses in this department are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

The University of California at Los Angeles does not offer a major in military science and tactics in the College of Letters and Science. At Berkeley, a combination major of military science and either (a) history and political science or (b) jurisprudence may be taken. Students wishing to satisfy the requirements for such a combination major are referred to the GENERAL CATALOGUE of the departments at Berkeley.

The courses in military training are those prescribed by the War Department for infantry and coast artillery units of the senior division of the Reserve Officers' Training Corps. The United States furnishes arms, equipment, uniforms, and some textbooks for the use of the students belonging to such units. An amount necessary to replace articles not returned by the students will be collected by the Comptroller.

The student who is found by the Medical Examiner to be ineligible for enrollment in military science and tactics may be assigned by the Examiner to the individual gymnastics section of Physical Education 3.

The primary object of establishing units of the Reserve Officers' Training Corps is to qualify students for appointment in the Officers' Reserve Corps of the United States Army. Students who complete the advanced course and who participate in such summer camps as the Secretary of War may prescribe are eligible upon graduation for appointment and commission by the President of the United States in the Officers' Reserve Corps, which is intended to furnish a great part of the commissioned personnel for the temporary forces which this nation will require in time of emergency.

The courses are divided into two groups, namely, the basic course and the advanced course, with distinctive missions as indicated below.

**BASIC COURSE**

The purpose of this course is to produce better citizenship through sound character development, under the guidance of the Constitution of the United States.

The basic course is prescribed for all first-year and second-year undergraduate male students who are citizens of the United States, able-bodied and under twenty-four years of age at the time of admission to the University. A first-year or second-year student claiming exemption because of noncitizenship, physical disability, or age will present a petition on the prescribed form for such exemption. Pending action on his petition the student will enroll in and enter the course prescribed for his year.

Students who have received training in a junior R. O. T. C. unit may be given advanced standing on the basis of two years junior R. O. T. C. for one year senior R. O. T. C. However, advanced standing will not excuse a student from the two years basic training required by the University unless he elects to take the advanced course, in which event junior R. O. T. C. credit to the extent of 1½ years senior R. O. T. C. credit may be given. Application for advanced standing must be made when registering and must be accompanied by a recommendation from the professor of military science and tactics at the school which the student attended.

**1A-1B. Basic Military Training. (1½-1½) Yr.**

Mr. Severson, Mr. Trechter, Mr. Norris, Mr. Shoe,  
Mr. Van Vliet, Mr. Braun, Mr. Wallace

Two hours of field instruction and one hour of class instruction each week.

Instruction in National Defense Act. Obligations of citizenship, military history and policy, current international situation, military courtesy, military hygiene and first aid, map reading, military organization, rifle marksmanship, primary instruction in coast artillery ammunition, weapons and material, and leadership to include the duties of a private.

**2A-2B. Basic Military Training. (1½-1½) Yr.**

Mr. Severson, Mr. Trechter, Mr. Norris, Mr. Shoe,  
Mr. Van Vliet, Mr. Braun, Mr. Wallace

Two hours of field instruction and one hour of class instruction each week.

Instruction in characteristics of infantry weapons, automatic rifle, musketry, scouting and patrolling, combat principles of the squad and section; primary Coast Artillery instruction in position finding for sea coast and antiaircraft artillery; leadership to include the duties of a corporal.

**MILITARY BAND AND DRUM AND BUGLE CORPS**

Students who play musical instruments suitable for use in the Military Band or in the Drum and Bugle Corps may take such work under the appropriate sections of courses 1A-1B, 2A-2B.

Mr. ———, Mr. Allen

**ADVANCED COURSE**

The purpose of this course is to select and appoint qualified graduates in the Officers' Reserve Corps of the United States Army.

The advanced course is prescribed for such third-year and fourth-year students as have completed the basic course and elect to continue their military training.

Any member of the senior division of the Reserve Officers' Training Corps who has completed two academic years of service in that division, who has been selected for further military training by the Vice-President and Provost of the University and the professor of military science and tactics, and who executes the following written agreement, will be entitled, while not subsisted in kind, to a commutation of subsistence fixed by the Secretary of War in accordance with law (about \$72 a year).

....., 198.....  
 In consideration of commutation of subsistence to be furnished in accordance with law, I hereby agree to complete the advanced course Infantry (Coast Artillery) E. O. T. C. in this or any other institution where such course is given, to devote five hours per week during such period to military training prescribed and to pursue the courses of camp training during such period as prescribed by the Secretary of War.

.....  
 (Signature)

The course of camp training is for six weeks during the summer vacation normally following the student's completion of the first year of the advanced course. The United States furnishes uniform, transportation and subsistence and pays students at the rate prescribed for the seventh enlisted grade of the regular army. Students who attend receive one-half unit of credit for each week of the duration of the camp.

Cadet officers and, so far as practicable, sergeants of the unit, will be appointed from members of the senior and junior classes, respectively.

**103A. Advanced Infantry Training. (3) I, II.**

Mr. Shoe, Mr. Braun, Mr. Norris

†Instruction and practice in the duties of officers in connection with the basic course; instruction in pistol and rifle marksmanship, machine gun and howitzer company weapons, aerial photographs, map reading, motors, company administration, and leadership to include duties of the platoon sergeant.

**103B. Advanced Infantry Training. (3) I, II.**

Mr. Shoe

†Instruction and practice in the duties of officers in connection with the basic course; combat principles of howitzer company squads, combat principles of machine gun and rifle platoon, field fortification, defense against chemical warfare, and leadership to include duties of the company officer.

**104A. Advanced Infantry Training. (3) I, II.**

Mr. Braun

†Instruction and practice in the duties of officers in connection with the basic course; instruction in military history and military law, tanks, mechanization, anti-tank weapons, property procurement, and combat leadership to include duties of company officers and battalion staff.

**104B. Advanced Infantry Training. (3) I, II.**

Mr. Trechter

†Instruction and practice in the duties of officers in connection with the basic course, instruction in company administration and supply, combat principles to include rifle and machine gun company and howitzer platoon, tanks and mechanization, infantry, field signal communications, and leadership to include duties of company officers and battalion staff.

† Each student must enroll for two hours of field instruction and three hours of class instruction each week.

**143A. Advanced Coast Artillery Training. (3) I. Mr. Norris, Mr. Wallace**

†Instruction and practice in the duties of an officer in connection with the basic course; instruction in basic gunnery and position finding for sea coast artillery, map reading, aerial photographs, and leadership to include duties of platoon sergeant.

**143B. Advanced Coast Artillery Training. (3) II. Mr. Wallace**

†Instruction and practice in the duties of an officer in connection with the basic course; instruction in basic gunnery and position finding for anti-aircraft artillery, orientation, signal communication, C. A., and leadership to include duties of the battery officer.

**144A. Advanced Coast Artillery Training. (3) I. Mr. Norris**

†Instruction and practice in the duties of an officer in connection with the basic course; instruction in military history, military law, battery administration and supply, artillery material, and leadership to include duties of battery officers and battalion staff.

**144B. Advanced Coast Artillery Training. (3) II. Mr. Norris**

†Instruction and practice in the duties of an officer in connection with basic course; instruction in motor transportation, Coast Artillery tactics and combat orders; field engineering, defense against chemical warfare, and leadership to include duties of battery officers and battalion staff.

**SUMMER CAMPS**

Students who satisfactorily complete a course in a Reserve Officers' Training Corps or a military training summer camp conducted by the United States Government may receive credit toward graduation at the rate of one-half unit a week for each course completed. But it is provided (a) that no credit thus earned in or after 1925 shall excuse a student from the courses in military science and tactics required of all male undergraduates during their freshman and sophomore years, and (b) that the total credit thus earned by any student shall not exceed six units.

† Each student must enroll for two hours of field instruction and three hours of class instruction each week.

## MUSIC

ARNOLD SCHOENBERG, Professor of Music.  
 FRANCES A. WRIGHT, Associate Professor of Music.  
 LEROY W. ALLEN, M.A., Associate Professor of Music.  
 ROBERT URIEL NELSON, M.A., Instructor in Music.  
 WALTER H. RUBSAMEN, Ph.D., Instructor in Music.

ALEXANDER SCHREINER, F.A.G.O., Lecturer in Music and University Organist.  
 RAYMOND MOREMEN, M.S.M., Lecturer in Music.  
 HELEN CHUTE DILL, M.A., Supervisor of Training, Music.  
 LAVERNA L. LOSSING, M.A., Supervisor of Training, Music.

## The Teachers College

*Preparation for the Major.*—Courses 1A-1B, 2A-2B, 7A-7B, 14A-14B, 35A-35B.

*The Major, leading to the Special Secondary Credential in Music.*—Courses 104A-104B, 105A-105B, 108A-108B, 109A-109B; either 114A-114B or 115A-115B; four or six units chosen from courses 111A-111B, 124, and 125. The remainder of the twenty-four required upper division units may be selected from courses 122A-122B, 123A-123B, 126, 127, 128 and 199B.

*The Minor in Education.*—Education 103, 170; Directed Teaching, 6-10 units; Music 112A-112B.

## The College of Letters and Science

*Letters and Science List.*—All undergraduate courses except 7A-7B, 18A-18B, 46A-B-C-D, 108A-108B, 112A-112B, and 115A-115B are included in the Letters and Science List of Courses. For regulations governing this list, see p. 64. A major in music is not offered in the College of Letters and Science.

## LOWER DIVISION COURSES

- 1A-1B. Solfeggio.** (3-3) Yr. Miss Wright  
 Elementary theory, dictation, and music reading. Basic course for the major in music.  
 Elementary theory: preparation for harmony; working knowledge of major and minor scales; diatonic chord lines and intervals.  
 Dictation: one, two, and three part melodic dictation.
- 2A-2B. The History and Appreciation of Music.** (3-3) Yr. Mr. Schreiner  
 The consideration of music from formal, esthetic, and historical standpoints.
- 7A-7B. Elementary Voice.** (2-2) Yr. Mr. Moremen  
 Restricted to major students in music in Teachers College.
- 9A-B-C-D. Chorus and Glee Club.** (1 unit each semester.) Mr. Moremen
- 10A-B-C-D. University Symphony Orchestra.** (2 units each semester.)  
 Prerequisite: permission of the instructor. Mr. Allen  
 The study and performance of standard symphonic literature.

- 11A-B-C-D. A Cappella Choir.** (2 units each semester.) Mr. Moremen  
Prerequisite: permission of the instructor.  
The study and performance of standard choral works for unaccompanied voices.
- 14A-14B. Counterpoint.** (2-2) Yr. Mr. Schoenberg, Mr. Nelson  
Prerequisite: course 35A-35B.
- \*15A-15B. Strings, Elementary.** (2-2) Yr. Mr. Allen
- \*16A-16B. Brass, Elementary.** (2-2) Yr. Mr. Allen
- \*17A-17B. Woodwind, Elementary.** (2-2) Yr. Mr. Allen
- 18A-18B. Piano, Elementary.** No credit. Yr. Mr. Schreiner  
Restricted to students in the Teachers College.  
This course displaces one unit of the student's study list.
- 35A-35B. Harmony.** (3-3) Yr. Mr. Schreiner  
Prerequisite: course 1A-1B or its equivalent. May be taken concurrently.
- 37A-37B. Piano, Intermediate.** (2-2) Yr. Miss Wright
- 46A-B-C-D. University Band.** (1 unit each semester.) Mr. Allen  
Prerequisite: permission of the instructor.

## UPPER DIVISION COURSES

The piano requirement, prerequisite to junior standing in the Department of Music, is the ability to play such music as the accompaniments in the Teacher's Manuals of the Music Hour Series and the Progressive Series, four-part hymns and folk songs, and contrapuntal compositions equivalent to First Lessons in Bach, edited by Walter Carroll. In special cases this requirement may be reduced for students with corresponding proficiency on other approved instruments.

- 104A-104B. Form and Analysis.** (2-2) Yr. Mr. Schoenberg  
Prerequisite: course 35A-35B.  
Analysis of homophonic and contrapuntal music.
- 105A-105B. Composition.** (2-2) Yr. Mr. Schoenberg, Mr. Nelson  
Prerequisite: courses 14A-14B, 35A-35B, 104A-104B. The latter may be taken concurrently.  
Vocal and instrumental composition in the smaller forms.
- †108A-108B. Advanced Voice.** (2-2) Yr. Mr. Moremen  
Prerequisite: course 7A-7B.
- 109A-109B. Conducting.** (1-1) Yr. Mr. Allen  
Prerequisite: courses 1A-1B, 35A-35B.  
The theory and practice of conducting choral and instrumental organizations.
- 110A-110B. String Ensemble.** (1-1) Yr. Mr. Rubsamen  
Prerequisite: permission of the instructor.

\* Not to be given, 1988-89.

† Restricted to major students in music in Teachers College.

- 111A-111B. History of Music in Western Civilization. (3-3) Yr.**  
 Mr. Rubsamen  
 Prerequisite: course 2A-2B, or its equivalent, and junior standing.  
 This course duplicates course 111A-111B, given prior to September, 1938.
- 112A-112B. Music Education. (3-3) Yr.**  
 Miss Wright  
 Prerequisite: junior standing.  
 Organization and administration of music in elementary and secondary schools.
- 114A-114B. Instrumentation. (2-2) Yr.**  
 Mr. Allen  
 Prerequisite: course 35A-35B, and junior standing.  
 The theory and practice of writing for instrumental ensembles. The study of orchestral scores and an introduction to symphonic orchestration.
- †115A-115B. Instrumental Technique and Repertoire. (2-2) Yr.**  
 Mr. Allen  
 Prerequisite: course 35A-35B, and junior standing.  
 A theoretical and practical study of the instruments of the orchestra and band, including the principles of arranging music for representative combinations. Appropriate literature for instrumental ensembles.
- 116A-116B. Piano, Literature and Interpretation. (1-1) Yr.**  
 Mr. Nelson  
 Prerequisite: permission of the instructor.
- \*119A-119B. Wind Instrument Ensemble. (2-2) Yr.**  
 Mr. Allen, Mr. Rubsamen  
 Prerequisite: permission of the instructor.
- 122A-122B. Double Counterpoint, Canon and Fugue. (2-2) Yr.**  
 Mr. Schoenberg  
 Prerequisite: course 14A-14B, and the consent of the instructor.
- 123A-123B. Advanced Form and Composition. (2-2) Yr.** Mr. Schoenberg  
 Prerequisite: course 105A-105B, or its equivalent, and the permission of the instructor.  
 Composition in the larger forms.
- 124. Bach. (2) I.** Mr. Rubsamen  
 Prerequisite: courses 2A-2B, 35A-35B.  
 A study of the life and works of Bach.
- 125. Beethoven. (2) II.** Mr. Rubsamen  
 Prerequisite: courses 2A-2B, 35A-35B.  
 A study of the life and works of Beethoven.
- 126. The Evolution of Sonata Form. (2) I. II.** Mr. Nelson  
 Prerequisite: courses 2A-2B, 35A-35B.  
 A study of the history and development of the sonata.
- \*127. The Evolution of the Opera. (2) II.** Mr. Nelson  
 Prerequisite: courses 2A-2B, 35A-35B.  
 A study of the history and development of the opera.
- 128. Modern Tendencies in Music. (2) I.** Mr. Nelson  
 Prerequisite: courses 14A-14B, 35A-35B.  
 A study of form, style and idiom in contemporary music.
- 199. Special Studies in Music. (2) I, II.** Mr. Schoenberg, Mr. Rubsamen  
 Prerequisite: permission of the instructor.

† Restricted to major students in music in Teachers College.

\* Not to be given, first semester, 1938-39.

PROFESSIONAL COURSES

**360A. Elementary Music Education. (2) I, II.**

Mrs. Dill

Prerequisite: sophomore standing.

A course in music education designed to prepare the general elementary teacher to teach under supervision. Required of all candidates for the general elementary credential.

**360B. Elementary Music Education. (2) I, II.**

Miss Lossing

Prerequisite: sophomore standing.

A course in music education for the general elementary teacher. The emphasis is upon music in the integrated program. Required of all candidates for the general elementary credential.

**NAVAL SCIENCE AND TACTICS**

**HERBERT W. UNDERWOOD**, Commander, U. S. Navy; Graduate U. S. Naval Academy; Graduate U. S. Naval War College; Graduate U. S. Naval Academy Postgraduate Course, Mechanical Engineering; Professor of Naval Science and Tactics.

**GEORGE C. MILLER**, Lieutenant Commander, U. S. Navy; Graduate U. S. Naval Academy; Graduate U. S. Naval War College; Associate Professor of Naval Science and Tactics.

**GEORGE G. CRISSMAN**, Lieutenant, U. S. Navy; Graduate U. S. Naval Academy; Graduate U. S. Naval Postgraduate School; Assistant Professor of Naval Science and Tactics.

*Letters and Science List.*—All undergraduate courses in this department are included in the *Letters and Science List of Courses*. For regulations governing this list, see page 64.

**NAVAL RESERVE OFFICERS' TRAINING CORPS**

By action of the Secretary of the Navy and of the Regents of the University in June, 1938, provision has been made for the establishment of a unit of the Naval Reserve Officers' Training Corps on the Los Angeles campus of the University.

Approximately eight-five students in freshman standing will be accepted in the unit for the year beginning September, 1938. Enrollment is restricted to able-bodied male students who are citizens of the United States and are between the ages of fourteen and twenty-four years. Students must pass the same physical examination as is required of all candidates for admission to the Naval Academy.

The courses in navigation, seamanship, communications, naval history, ordnance and gunnery, naval aviation, military law, naval administration, and mechanical and electrical engineering are those prescribed by the Navy Department for the Naval Reserve Officers' Training Corps. The United States furnishes arms, equipment, uniforms, and textbooks for the use of these students. At the end of each academic year the Department of Naval Science and Tactics will set a date for the return of equipment. The names of students who fail to return equipment issued to them will be reported to the Comptroller in order that appropriate action may be taken by the University authorities. Upon satisfactory completion of the course the uniform becomes the property of the student.

The primary object of the Naval Reserve Officers' Training Corps is to provide systematic instruction and training at civil institutions which will qualify selected students of such institutions for appointment as officers in the Naval Reserve. The Naval Reserve Officers' Training Corps is expected to train Junior Officers for the Naval Reserve and thus assist in meeting a demand for increased commissioned personnel in time of war or national emergency.

Courses in Naval Science are given for those who intend to complete the four years of training for a commission in the Naval Reserve. While only students signifying such a purpose will be admitted, students who for sufficient

reasons are forced to discontinue their training before their commission is granted, will be permitted, at the end of two years, to count such training in lieu of the military training prescribed by the University. All courses in naval science described hereinafter include infantry drill for one hour weekly for all Naval R. O. T. C. students.

The basic course (lower division) consists of the first two years in the Department of Naval Science and Tactics and is open only to freshmen and sophomores of the University.

The advanced course (upper division) consists of the final two years in Naval Science and Tactics or of such shorter periods of time as may, in exceptional cases, outlined in the regulations, be prescribed by the Secretary of the Navy. The advanced course is open only to students who have successfully completed the basic course, and who have been selected by the Professor of Naval Science and Tactics for upper division work.

A member of the Naval Reserve Officers' Training Corps who is enrolled in the advanced course is entitled to commutation of subsistence from the first day during an academic term that the student starts the advanced course in training until he completes the course at the institution or his connection with the Naval Reserve Officers' Training Corps is severed in accordance with the regulations prescribed, except that subsistence in kind will be furnished in lieu of commutation of subsistence for any periods devoted to cruises. The amount allowed for subsistence, which will be fixed from time to time by the Secretary of the Navy, will not exceed the value prescribed by law for a commuted ration in the Navy.

Naval Reserve Officers' Training Corps practice cruises will be held annually as prescribed by the Navy Department. Attendance at one advanced cruise is required of all students enrolled in the advanced course. Advanced course students receive the pay of enlisted men of the seventh pay grade of the Navy during their attendance on cruises.

Basic course students may be authorized to attend cruises but while so doing will not receive pay. All Naval Reserve students attending cruises are furnished transportation and subsistence by the United States.

Credit may be allowed for courses completed in summer practice cruises at the rate of one-half unit per week for each course so completed; the maximum credit obtainable is six units.

#### LOWER DIVISION COURSES

##### 1A-1B. Naval Science (first year). (1½-1½) Yr.

Mr. Underwood and the Staff

Two hours of classroom work and one hour of drill or practical exercise per week.

(a) Naval history.

(b) Ordnance: practical and theoretical instruction in infantry and artillery drill, construction of guns, ammunition, powder and explosives.

(c) Seamanship; boats, types of ships, buoys, ground tackle.

(d) Communications: Morse code, semaphore alphabet, flags, pennants, signals.

In addition to course 1A-1B, freshmen in the Naval Unit will be required to take Astronomy 9 (2), during one semester of their freshman year.

**\*2A-2B. Naval Science (second year). (1½-1½) Yr.**

Mr. Underwood and the Staff

Continuation of course 1A-1B. Two hours of classroom work and one hour of drill or practical exercise per week.

(a) Seamanship: hulls and fittings, ground tackle, steering of steamers, duties of officers, weather, towing, maneuvering, emergency drills.

(b) Ordnance: breech mechanisms, firing circuits, gun sights, depth charges, torpedoes, mines, naval gunnery and fire control.

(c) Gunnery: principles of naval gunnery, gunnery training, safety precautions, range finding and keeping, boresighting, gunnery installations and fire control of various types of naval vessels.

In addition to course 2A-2B, sophomores in the Naval Unit will be required to take Astronomy 10 (2), during one semester of their sophomore year.

**UPPER DIVISION COURSES**

The general prerequisites for admission to the upper division courses are: completion of two years' training in the basic course, selection for further training, and execution of an agreement in writing as explained in the following paragraph:

Any student enrolled in the advanced course of the Naval Reserve Officers' Training Corps who has completed the two academic years in the basic course and who has been selected for further naval training by the President of the University and the Professor of Naval Science and Tactics, and who executes the following written agreement, will be entitled, while not subsisted in kind, to the commutation of subsistence fixed by the Secretary of the Navy in accordance with law:

**CONTRACT**

In consideration of commutation of subsistence to be furnished in accordance with law, I hereby agree:

*First*, to continue training in the Advanced Course of the Naval Reserve Officers' Training Corps until the completion thereof as a prerequisite to graduation unless sooner discharged by orders of the Bureau of Navigation, Navy Department;

*Second*, to devote to naval training the number of hours per academic week prescribe for the Advanced Course in the Department of Naval Science and Tactics by the current annual catalogue of this educational institution, and to devote five hours per week, when prescribed, to such naval training as is ordered;

*Third*, to participate in one Advanced Course cruise;

*Fourth*, to be immunized to typhoid fever and smallpox when and as directed to do so by the Professor of Naval Science and Tactics unless satisfactory proof of immunity from these diseases is furnished.

Qualified graduates of the Naval Reserve Officers' Training Corps will on their application be appointed as Ensigns in the Volunteer Naval Reserve without professional entrance examination.

Members of the Volunteer Naval Reserve who associate themselves with Fleet Divisions and attend drill with a division will become eligible for transfer to the Fleet Reserve which carries with it retainer pay and better opportunities to qualify for promotion.

\* Not to be given, 1938-39.

**\*101A-101B. Advanced Naval Science (third year). (3-3) Yr.**

Mr. Underwood and the Staff

Three hours of classroom work and one hour of drill or practical exercise per week.

(a) Seamanship: naval leadership, rules of the road, collision and grounding cases.

(b) Gunnery: naval gunnery and fire control, employment of weapons in attack, training.

(c) Engineering: engineering processes, boilers, main engines, auxiliaries, internal combustion engines, operation and management of the engineering department of a naval vessel.

(d) Tactics: elementary tactics, maneuvers, naval battles of the World War, estimate of the situation and formulation of orders.

(e) Communications: organization and operation of the naval communications service.

In addition to 101A-101B students in the Naval Unit will be required to take Astronomy 109 (2) during one semester of their junior year.

**\*102A-102B. Advanced Naval Science (fourth year). (3-3) Yr.**

Mr. Underwood and the Staff

Three hours of classroom work and one hour of drill or practical exercise per week.

(a) Administration: naval policy and administration, naval organization ashore and afloat, Navy Regulations, discipline, Naval Reserve Regulations.

(b) Naval aviation: mission and history of naval aviation, types and uses of naval aircraft, aerology, elementary theory of flying, aircraft engines, aircraft instruments and navigation, aircraft carriers, tactics of naval aircraft.

(c) Military law: naval law, military government and martial law, articles for the government of the Navy, rules of evidence, procedure of naval courts and boards.

(d) Engineering: uses of electricity aboard ship, magnetism, generators, motors, storage batteries, electric drive, switchboards, searchlights, interior communication, electric steering, gunnery circuits, radio and sonics.

In addition to 102A-102B students in the Naval Unit will be required to take Astronomy 110 (2) during one semester of their senior year.

\* Not to be given 1938-39.

## PHILOSOPHY

ERNEST C. MOORE, Ph.D., LL.D., Professor of Philosophy and Education.

CHARLES H. RIEBER, Ph.D., LL.D., Professor of Philosophy, Emeritus.

JOHN ELOF BOODIN, Ph.D., Professor of Philosophy.

DONALD A. PIATT, Ph.D., Professor of Philosophy.

HANS REICHENBACH, Ph.D., Professor of Philosophy.

HUGH MILLER, Ph.D., Associate Professor of Philosophy.

\*DONALD C. WILLIAMS, Ph.D., Assistant Professor of Philosophy.

ISABEL CREED, Ph.D., Instructor in Philosophy.

KATE GORDON, Ph.D., Professor of Psychology.

*Letters and Science List.*—All undergraduate courses in this department are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Twelve units of lower division courses in philosophy, including course 3A-3B.

*The Major.*—Twenty-four units in upper division courses, not more than six of which may be taken in allied courses in other departments with the approval of the departmental adviser. Not later than the beginning of the senior year, the student must submit for approval to the department a statement of the courses which he expects to offer in fulfillment of major requirements for graduation.

## LOWER DIVISION COURSES

All lower division courses are introductory and carry no prerequisite.

**1A-1B. Logic. (3-3) Yr.**

Mr. Reichenbach, Miss Creed

The forms and principles of valid reasoning in practical life and in the sciences.

**2A-2B. Introduction to Philosophy. (3-3) Yr.**

Mr. Piatt

Elementary survey of the general problems of philosophy and of the fundamental types of philosophy.

**3A-3B. History of Philosophy. (3-3) Yr.**

Mr. Boodin, Mr. Moore, Mr. Miller, Miss Creed

An introductory course, tracing the thought of the major philosophers of the ancient and modern world.

**40. Problems of Ethics and Religion. (2) II.**

Mr. Williams

An introductory study of moral principles, their application, and their relation to religious belief.

**\*41. Problems of Metaphysics and Knowledge. (2) I.**

Mr. Miller

An introduction to the problems of metaphysics and to central issues in theories of knowledge.

\* In residence second semester only, 1938-39.

\* Not to be given, 1938-39.

## UPPER DIVISION COURSES

The department offers upper division courses of two types:

(1) Courses dealing with the principles of wide fields of study and showing the interrelations of the special studies pursued in other departments. This type includes courses 104A-104B, 112, 121, 136A-136B, 146, 150, 153, 164. These are open to students of junior standing who, in the judgment of the instructors, are adequately prepared by fundamental work in this or other departments. Such courses should be chosen with reference to the student's major interest.

(2) Courses devoted to more special studies in the history, problems, and theories of philosophy, and intended primarily for the student majoring in this subject. This type includes courses 102, 115, 116, 117, 119, 122, 123, 124, 141A-141B, 150, 152, 173, 199A-199B.

**102. Pragmatism. (2) II.**

Mr. Piatt

Prerequisite: six units of credit in philosophy.

A study of pragmatism in relation to American life and thought: James, Schiller, Peirce, Dewey, Mead and others.

**104A-104B. Ethics. (3-3) Yr.**

Mr. Piatt

104A. A study of the evolution of morality, and its psychological basis as exemplified in representative ethical theories.

104B. Application of ethical theory and method to current social problems, with special reference to fascism, communism, and democracy.

**112. Philosophy of Religion. (3) I.**

Mr. Boodin

A comparative study of religions with reference to the place of religion in modern civilization.

**\*115. Kant. (2) II.**

Mr. Piatt

Prerequisite: course 122 or 123.

Reading of the *Critique of Pure Reason*, together with explanatory and critical comments on Kant's main position in the fields of religion and ethics.

**\*116. Plato. (2) I.**

Mr. Boodin

Prerequisite: course 3A-3B.

The philosophy of Plato, with special attention to his idealism.

**117. Aristotle. (2) I.**

Mr. Boodin

Prerequisite: course 3A-3B.

Aristotle's philosophy and its significance for present thought.

**119. Modern Idealism. (2) I.**

Mr. Miller

Prerequisite: course 3A-3B.

The historical antecedents and development of post-Kantian idealism.

**121. Political Philosophy. (3) I.**

Mr. Miller

A study of the sources and development of our political institutions.

**122. British Empiricism. (2) I.**

Miss Creed

Prerequisite: course 3A-3B.

An examination of the philosophies of Locke, Berkeley, and Hume.

\* Not to be given, 1938-39.

- 123. Continental Rationalism. (3) II.** Miss Creed  
Prerequisite: course 3A-3B.  
The rise of modern science, and the philosophies of Descartes, Spinoza, and Leibniz.
- \*124. Nineteenth Century Philosophy. (3) II.** Mr. Miller  
Prerequisite: course 3A-3B.  
A survey of those movements of nineteenth century thought which are of importance for the thought of today: especially the development of dialectical philosophy from Kant to Karl Marx.
- 136A-136B. Esthetics. (2-2) Yr.** Miss Gordon  
A study of the appreciation of beauty and of standards of excellence in various arts. The first semester deals with a study of the concepts of esthetics as developed in Hume, Kant, Hegel, Schiller, Croce, and others. In the second semester concrete forms of imaginative expression are studied.
- 141A-141B. Present Tendencies of Thought. (2-2) Yr.** Mr. Moore  
Prerequisite: course 3A-3B.  
A study of contemporary movements in philosophy.
- 146. Philosophy of Literature. (3) II.** Mr. Williams  
Comparison between philosophical and literary expressions of typical problems of philosophy.
- 147. Philosophy of History. (3) II.** Mr. Miller  
A survey of the basic ideas involved in the treatment of history; the relating of history to theoretical science; a study of selected philosophers of history: Hegel, Marx, Croce, Spengler, and others.
- 150. Philosophy of Science. (2) II.** Mr. Reichenbach  
Fundamental concepts, methods, and presuppositions of natural science.
- 151. Philosophy of Nature. (2) I.** Mr. Reichenbach  
The physical universe and man's place in it in the light of modern discoveries.
- 152. Metaphysics. (3) II.** Mr. Miller  
A critical study of the origin, validity, and limits of metaphysical theory.
- \*153. Fundamental Concepts of Biology. (2) II.** Mr. Miller  
An examination into the theoretical foundations of biological, psychological, and sociological science.
- 161. Theory of Knowledge. (3) II.** Mr. Williams  
Prerequisite: course 3A-3B.  
Studies in modern epistemology: the nature of mind and knowledge with reference to the present psychological problems and to the methods of the sciences.
- \*164. General Logic. (3) I.** Mr. Williams  
A study of the system of formal logic, deductive and inductive, with especial attention to newer developments in logical theory.
- 173. The Social Mind. (2) II.** Mr. Boodin  
The evolution, forms, and characteristics of society: an analysis of the basic concepts of the social sciences.
- 199A-199B. Selected Problems in Philosophy. (2-2) Yr.**  
Mr. Piatt and the Staff

\* Not to be given, 1988-89.

GRADUATE COURSES

- \*204. Theory of Value. (3) II. \_\_\_\_\_
- \*214. Logical Theory. (3) I. \_\_\_\_\_
- 251C-251D. Seminar: Concepts of Cosmology. (3-3) Yr.  
I, Mr. Piatt; II, Mr. Boodin.
- \*252A-252B. Seminar: Concepts of Metaphysics. (3-3) Yr. \_\_\_\_\_
- 261C-261D. Seminar: Concepts of Epistemology. (3-3) Yr.  
Mr. Reichenbach

---

\* Not to be given 1938-39.

**PHYSICAL EDUCATION FOR MEN**

FREDERICK W. COZENS, Ph.D., Professor of Physical Education and Director of Men's Gymnasium.

JOHN F. BOVARD, Ph.D., Professor of Physical Education.

WILLIAM H. SPAULDING, A.B., Director of Athletics.

PAUL FRAMPTON, M.A., Associate Supervisor of Physical Education for Men.

CECIL B. HOLLINGSWORTH, Ed.B., Assistant Supervisor of Physical Education for Men.

DONALD K. PARK, A.B., Assistant Supervisor of Physical Education for Men.

WILBUE C. JOHNS, Ed.B., Assistant Supervisor of Physical Education for Men.

NORMAN D. DUNCAN, Ed.B., Junior Supervisor of Physical Education for Men.

THOMAS E. HELT, A.B., Junior Supervisor of Physical Education for Men.

JAMES G. SCHAEFFER, A.B., Assistant in Physical Education for Men.

WOLF READE, Assistant in Fencing.

M. BRIGGS HUNT, Ed.B., Assistant in Physical Education for Men.

---

DONALD MACKINNON, M.D., Physician for Men.

WILLIAM J. NORRIS, M.D., Consultant, Student Health Service.

LEWIS GUNTHER, M.D., Consultant, Student Health Service.

Physical Education 3 is prescribed for all first-year and second-year undergraduate male students who are under twenty-four years of age. A student claiming exemption because of age will present to the Registrar a petition on the prescribed form for such exemption. A student whose health requires either exemption or special assignment will report directly to the Medical Examiner. Pending action on his petition, the student will enroll in and regularly attend the required course in physical education.

*Medical Examination.*—(a) Students entering the University for the first time and (b) reëntering students must pass a medical examination upon admission. All students are given an examination each year. The examiner may exempt the student from required military training; he may assign the student to an individual gymnastics section of Physical Education 3.

**The Teachers College**

*Preparation for the Major.*—Chemistry 2A–2B or Chemistry 1A; Physiology 1; Zoölogy 1A or Biology 1; Zoölogy 35; Physical Education 1, 3 (2 units), 5, 30, 40.

*The Major, leading to the Special Secondary Credentials in Physical Education.*—Courses †120, 131, 140, 149, 156A–156B, 182, †190, †192A–192B.

*The Minor in Education.*—Courses 154, 155A–155B; Education 112, 170; Directed Teaching, six to ten units.

† Courses so marked are listed under the Department of Physical Education for Women.

**The College of Letters and Science\***

*Letters and Science List.*—Courses 1 and 3 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

**LOWER DIVISION COURSES**

1. **Hygiene and Sanitation.** (1) I, II. Th, 8. Mr. MacKinnon
- †3. **Prescribed Physical Education for Freshmen and Sophomores.** (½) I, II. Mr. Cozens and the Staff
- Archery, baseball, basketball, boxing, cricket, fencing, American football, golf, gymnastics, handball, soccer, swimming, tennis, track, water polo, wrestling, individual gymnastics. Classes meet twice weekly. Section assignments are made by the department after students have been classified according to their performance in the "General Athletic Ability Test" given by the staff to all entering men during the first week of each semester.
- Physical Education 3 may be elected by students in the junior and senior years.
5. **First Aid and Bandaging.** (2) II. Mr. Park
- The care of common accidents and emergencies on the playground and athletic field.
20. **Fundamentals of Scouting.** (2) I. Mr. Frampton
- Need of organizations for youth; history and growth of the Boy Scouts of America; the Boy Scout Program; organization of a troop and techniques of troop management; fundamentals involved in troop activities.
- Three field trips required.
40. **The Technique of Teaching Swimming and Life Saving.** (2) II. Mr. Park, Mr. —

Preparation for and conduct of the Red Cross Life Saving Test and the Red Cross Life Saving Examiner's Test; advanced techniques in teaching swimming.

**UPPER DIVISION COURSES**

131. **Administration of Physical Education.** (3) II. Mr. Bovard
- Prerequisite: Physical Education for Women 120.
- The scope of the field of physical education and its relation to modern education theory. Details of the organization of physical education activities, organization and classification of children, planning of school programs, arrangement and construction of equipment and the principles which govern these.
140. **Physical Education Tests and Measurements.** (2) I. Mr. Cozens
- Anthropometric measurements, cardiovascular and physiological ratings, physical efficiency, and motor ability tests. Common tests used in physical education; statistical method applied to physical education measurement.

\* The University of California at Los Angeles does not offer a major in physical education in the College of Letters and Science. In the College of Letters and Science at Berkeley a combination major of Physical Education and Hygiene may be taken. Students planning to become candidates for the degree of Bachelor of Arts at Berkeley, offering this major, are referred to the publications of the departments at Berkeley.

† For full statement of the requirement of this course refer to page 84.

149. **Kinesiology.** (3) I. Mr. Frampton  
Prerequisite: Zoölogy 35.
154. **The Technique of Teaching Elementary School Activities.** (2) I. Mr. Frampton  
The technique of teaching activities in the elementary school leading up to games of higher organization.
- 155A-155B. **The Technique of Teaching Gymnastic Activities.** (2-2) Yr. Mr. Hollingsworth  
Prerequisite: gymnastics, and boxing or wrestling.  
Tactics, free exercises, apparatus, gymnastic dancing, and gymnastic games.
- \*156A-156B. **The Technique of Teaching Athletic Activities.** (2-2) Yr. Mr. Spaulding, Mr. Cozens, Mr. Johns, and Mr. Schaeffer  
Prerequisite: football, track, basketball and baseball.  
156A. Track, rugby, and basketball. 156B. Football, baseball, and soccer.
182. **Corrective Physical Education.** (3) II. Mr. Johns  
Prerequisite: course 149.  
The application of massage and exercise to the treatment of orthopedic and remedial conditions. Two clinic hours a week to be arranged in addition to lecture and demonstration periods.
- 199A-199B. **Problems in Physical Education.** (2-2) Yr. Mr. Cozens, Mr. Bovard

## GRADUATE COURSES

- 250A-250B. **Seminar in Physical Education.** (3-3) Yr. Mr. Cozens, Mr. Bovard  
The meaning, methods and techniques of research procedure as applied to physical education; a critical review of selected studies, literature, practices and procedures in the field; application of this training to the independent solution of a problem. Admission on consultation with the instructor.
- 276A-276B. **Research in Physical Education.** (2-2) Yr. Mr. Cozens, Mr. Bovard

COURSES LISTED IN THE  
DEPARTMENT OF PHYSICAL EDUCATION FOR WOMEN

120. **Principles of Physical Education.** (2) II. Miss Cubberley
190. **Physiology of Exercise.** (3) I. Mr. Bovard, Mrs. Johnson
- 192A-192B. **Administration of Health Education.** (3-3) Yr. Miss Harshberger, Mrs. Johnson

\* Not to be given, 1988-89.

### PHYSICAL EDUCATION FOR WOMEN

FREDERICK W. COZENS, Ph.D., Professor of Physical Education.

MARTHA B. DEANE, B.S., Associate Supervisor of Physical Education for Women and Director of Women's Gymnasium.

HAZEL J. CUBBERLEY, M.A., Associate Supervisor of Physical Education for Women.

LUCILE B. GRUNEWALD, M.A., Assistant Supervisor of Physical Education for Women.

EDITH R. HARSHBERGER, M.A., Assistant Supervisor of Physical Education for Women.

ORSIE THOMSON, M.A., Assistant Supervisor of Physical Education for Women.

GEORGIA B. JOHNSON, Ph.D., Instructor in Physical Education for Women.

ETHEL S. BRUCE, Associate in Physical Education for Women.

EDITH I. HYDE, M.A., Associate in Physical Education for Women.

BERNECE H. HOOPER, M.A., Associate in Physical Education for Women.

MARION S. MATTERN, M.A., Associate in Physical Education for Women.

MARJORY G. ALLEN, Ed.B., Assistant in Physical Education for Women.

JOSEPHINE E. KETCIK, Ed.B., Assistant in Physical Education for Women.

ROBERT TYLER LEE, Assistant in Dance and Assistant in Art.

JEAN LOUISE HODGKINS, M.A., Assistant in Physical Education for Women.

LILLIAN R. TITCOMB, M.D., Physician for Women.

DIANA W. ANDERSON, M.A., Supervisor of Training, Physical Education.

### The Teachers College

*Preparation for the Major.*—Courses 5, 30, 32A–32B, 33A–33B, 35, 42A–42B, 43A–43B, and Chemistry 2A–2B or 1A, Biology 1, Zoölogy 35, Physiology 1, Home Economics 32.

*The Major, leading to the Special Secondary Credential in Physical Education.*—Courses 114A, 120, 131, 140, 149, 181A–181B, 182, 183, 190, 192A–192B.

*The Minor in Education.*—Education 103, 170, Directed Teaching, six to ten units, Physical Education 121A–121B, 121C–121D.

### The College of Letters and Science†

*Letters and Science List.*—Courses 2, 4, 44, 114A–114B, 133, 135, and 180B are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

† The University of California at Los Angeles does not offer a major in physical education in the College of Letters and Science. A group major in physical education and hygiene is offered in the University at Berkeley. Students wishing to satisfy the requirements for this major are referred to the *General Catalogue* of the departments at Berkeley.

## LOWER DIVISION COURSES

**2. Hygiene.** (2) I, II.

Mrs. Titcomb

**†4. Prescribed Physical Education for Freshmen and Sophomores.** (3) I, II.  
Miss Deane and the Staff

The following activities are offered: dance fundamentals, folk dancing, character dancing, swimming, tennis, lacrosse, badminton, archery, volleyball, hockey, basketball, soccer, games for the elementary school, and dancing for the elementary school. Students whose physical condition indicates the need of modified activity are assigned to individual physical education classes.

Classes meet twice weekly. Section assignments are made only by the department.

Teachers College students are required to take one semester each of games and dancing for the elementary school, in addition to two elective courses.

Course 4 may be elected for credit by students of junior and senior standing.

**5. Safety Education and First Aid.** (2) II.

Mrs. Johnson

Prevention and care of common accidents and emergencies in the home and school.

**30. Introduction to Physical Education.** (1) I.

Miss Hyde

The scope and significance of physical education in the modern school program.

**32A-32B. Folk Dancing.** (1-1) Yr.

Miss Hooper

A study of folk dances and folk lore with methods of presentation.

**33A-33B. Dancing.** (1-1) Yr.

Mr. Lee

33A. *Dance Fundamentals—Elementary.* Fundamental movements, simple dance forms, improvisation and dance composition.

33B. *Character Dancing.* Practice in character dancing with methods of presentation.

**35. Music Analysis.** (1) I, II.

Miss Deane

A study of music structure in its relation to dance form.

**40. The Technique of Teaching Swimming and Life Saving.** (2) II.

Mrs. Mattern

Preparation for and conduct of the Red Cross Life Saving Test and the Red Cross Life Saving Examiner's Test; advanced technique in teaching swimming.

Students must be at least twenty years of age to receive the Red Cross Life Saving Examiner's Certificate.

**42A-42B. Theory and Practice in Tennis and Swimming.** (1-1) Yr.

Mrs. Bruce, Mrs. Mattern

42A. Lectures, demonstrations, and practice in tennis and badminton.

42B. Lectures, demonstrations, and practice in swimming.

† For full statement of the requirement of this course refer to page 34.

**43A-43B. Athletics. (1-1) Yr.**

Miss Thomson

An intermediate course for the development of skills in the following team sports: field hockey, basketball, baseball, field ball, soccer, speedball, lacrosse, and volleyball.

**44. Principles of Health Education. (2) I, II.**

Miss Harshberger

A study of personal and community health problems.

## UPPER DIVISION COURSES

**104A-104B. Club Activities and Camp Craft. (2-2) Yr.** Miss Hooper

104A. *Training course for leaders of girls' clubs and school organizations.* Organization and program planning, and analysis of problems of leadership. Practical experience in leadership in one of the local council organizations in the city.

104B. *Training course for camp counselors.* Theory and practice in camp activities. Attendance at week-end training camp required. May be taken without course 104A.

**111A-111B. Physical Education in the Elementary School. (2-2) Yr.**

Miss Anderson, Miss Harshberger, Miss Hooper, Mrs. Johnson

Prerequisite or concurrent: Education 100 or Psychology 112, and Physical Education 4 (Games and Dancing for Elementary Schools).

Not open to students majoring in physical education.

Health instruction related to physical education. Presentation of games and dancing.

**114A-114B. Folk Festivals. (2-2) Yr.**

Miss Hooper

114A. The purpose, source of material, organization and administration of folk festivals. Presentation of a Christmas folk festival.

This course is required for physical education majors.

114B. Study of folk lore, festivals, and pageants. An original folk festival or pageant is required from each student.

**120. Principles of Physical Education. (2) II.**

Miss Cubberley

A survey of the more significant influences which serve as a foundation for theory and practice in physical education. The implications of these factors with respect to objectives, methods, and materials of physical education.

**121A-121B. Principles of Teaching Athletics. (2-2) Yr.** Miss Thomson

Prerequisite: course 43A-43B, or the equivalent.

Analysis of problems in teaching athletic activities, including techniques and game forms, with special reference to their use in planning lesson units. Advanced practice is offered in team activities with emphasis on the interpretation of rules and the technique of officiating.

Field work in officiating (in the city schools and recreation centers) is required.

**121C-121D. Principles of Teaching Dance. (2-2) Yr.**

Miss Deane

Prerequisite: course 35 and satisfactory completion of lower division courses in dancing.

A survey of the program in dance from kindergarten to university. Practice in dance fundamentals—intermediate.

- 133. Dance Recital. (3) II.** Miss Deane, Mr. Lee  
Prerequisite: course 33A or 4 (Advanced Dance Fundamentals).  
Development of dances for a recital program. Production work on sets and costumes. Participation in dance recital.
- 135. Dance Accompaniment. (2) I, II.** Miss Deane, Mr. Lee  
Prerequisite: course 35.  
Advanced study in music analysis for dance. Development in percussion accompaniment.
- 149. Kinesiology. (3) I.** Miss Grunewald  
Prerequisite: Zoölogy 35.  
A study of the joint and muscular mechanism of movements.
- \*180A-180B. Administration of Physical Education and Community Recreation. (2-2) Yr.**  
Prerequisite: senior standing.  
180A. *Administration of physical education.* Administrative policies of the physical education department in schools and colleges; equipment, appointment and supervision of staff; teaching load; organization and administration of activities; classification of pupils by tests and examination; grading; general office organization and administration.  
180B. *Administration of community recreation.* Designed to meet the needs of recreation leaders in playgrounds, industrial organizations, and social service institutions.
- 181A-181B. Organization and Management of Physical Education Activities. (2-2) Yr.** Miss Thomson, Miss Deane  
Prerequisite: courses 120, 121A-B-C-D.  
181A. A study of practical problems involved in the conduct of athletic programs in secondary schools and colleges. Emphasis is placed upon the organization of activities for a playday for the Los Angeles County Elementary Schools. Reports of special investigations and committee work.  
181B. A study of public performances in the school program. Their purpose, types, sources of material, development, organization and presentation. The use of dance, music, lighting, costuming, etc.
- 182. Corrective Physical Education. (3) II.** Miss Grunewald  
Prerequisite: course 149.  
Study of body mechanics and of the causes and treatment of faulty antero-posterior and lateral deviations and foot and leg conditions, with special emphasis on the individual program adaptations and corrective procedures. Methods of teaching corrective gymnastics to large groups.
- 183. Massage and Therapeutic Exercise. (3) I.** Miss Grunewald  
Prerequisite: course 182.  
Study of massage and therapeutic exercises applied in the treatment of disturbances of the cardio-vascular, nervous, muscular, and digestive systems.

† Not to be given, 1988-89.

190. **Physiology of Exercise.** (3) I. Mr. Bovard, Mrs. Johnson  
Prerequisite: Physiology 1.  
A study of the effects of physical education activities on the human organism and the physiological bases for program construction.
- 192A-192B. **Administration of Health Education.** (3-3) Yr.  
Prerequisite: course 190. Miss Harshberger, Mrs. Johnson
- 192A. *Health Instruction in the Elementary and Secondary Schools.* A study of learning experiences directed toward the development of health knowledge, practices and attitudes and their function in improving health behavior.
- 192B. *Health Protection.* A consideration of the problems, principles, and methods involved in the supervision of child health in schools, camps, and playgrounds.
- 192C. **Administration of Health Education.** (2) II. Miss Harshberger  
No prerequisite.  
Not open to majors in physical education or to students who have credit for course 192A-192B. Planned for a minor for general secondary students.  
An analysis of health problems in the secondary school.

SUPERVISED TEACHING

For courses in supervised teaching see Training Department, p. 240.

COURSES LISTED IN THE  
DEPARTMENT OF PHYSICAL EDUCATION FOR MEN

131. **Administration of Physical Education.** (3) II. Mr. Bovard
140. **Tests and Measurements in Physical Education.** (2) I. Mr. Cozens
- 199A-199B. **Problems in Physical Education.** (2-2) Yr.  
Mr. Bovard, Mr. Cozens
- 250A-250B. **Seminar in Physical Education.** (3-3) Yr.  
Mr. Bovard, Mr. Cozens
- 276A-276B. **Research in Physical Education.** (2-2) Yr.  
Mr. Bovard, Mr. Cozens

## PHYSICS

SAMUEL J. BARNETT, Ph.D., Professor of Physics.

\*VERN O. KNUDSEN, Ph.D., Professor of Physics and Dean of Graduate Study.

JOHN MEAD ADAMS, Ph.D., Associate Professor of Physics.

LAURENCE E. DODD, Ph.D., Associate Professor of Physics.

HIRAM W. EDWARDS, Ph.D., Associate Professor of Physics and Director of Relations with Schools.

JOSEPH W. ELLIS, Ph.D., Associate Professor of Physics.

JOSEPH KAPLAN, Ph.D., Associate Professor of Physics.

E. LEE KINSEY, Ph.D., Associate Professor of Physics.

ARTHUR H. WARNER, Ph.D., Assistant Professor of Physics.

NORMAN A. WATSON, Ph.D., Instructor in Physics.

ROBERT W. LEONARD, M.A., Assistant in Physics.

*Letters and Science List.*—All undergraduate courses in physics are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Required: Physics 1A, 1B, 1C, 1D, or their equivalents (in meritorious cases Physics 2A–2B may be accepted); Chemistry 1A–1B; Mathematics C, 3A, 3B, 4A, or their equivalents. Recommended: a reading knowledge of German and French.

*The Major.*—Twelve units of upper division physics, consisting of 105, 107A, 108B, and 110A; and twelve units chosen from other upper division courses in physics, Mathematics 119, 122A–122B, 124, 125, Chemistry 110, and Astronomy 117A–117B, 199A–199B. At least eight of these latter twelve units shall be courses in the Department of Physics.

*Laboratory Fees.*—Courses 1A, 1B, 1C, 1D, 2A, 2B, \$5; 108A, \$6; 107A, 107B, 108B, 113C, 114C, \$12. The student will, in addition, be held responsible for all apparatus lost or broken.

## LOWER DIVISION COURSES

Prerequisite for 1A, 1B, 1C, 1D: either (1) the high school course in physics, or (2) trigonometry and the high school course in chemistry. Prerequisite for course 2A–2B: (1) three years of high school mathematics, or (2) two years of high school mathematics and college algebra. Prerequisites for course 4A–4B are elementary algebra and plane geometry.

Physics 1A, 1B, 1C and 1D constitute a two-year sequence in general physics which is required of, or recommended for, major students in physics and astronomy and of students in pre-engineering, pre-mining, and pre-chemistry. Physics 1A and 1B are required of students in architecture, and Physics 1A and either 1B, 1C or 1D are required of major students in chemistry. Other students may elect any part of the course but at least two parts are necessary to meet the laboratory requirement for the Junior Certificate.

Students who have credit for courses 2A–2B or 4A–4B may receive additional credit of not more than one and one-half units for each of courses 1A

\* In residence second semester only, 1988–89.

and 1B, and not more than two units for each of courses 1C and 1D. In general, not more than twelve units of credit will be given for any amount of lower division work. Credit in excess of twelve units will be given only in exceptional cases, when approved by the department.

**1A. General Physics: Mechanics of Solids. (3) I, II.**

Mr. Adams, Mr. Ellis, Mr. Dodd, ———

Lecture and laboratory, four hours; demonstration one hour. Fee, \$5.

**1B. General Physics: Mechanics of Liquids, and Heat. (3) II.**

Mr. Dodd, Mr. Watson, ———

Lecture and laboratory, four hours; demonstration one hour. Fee, \$5.

**1C. General Physics: Electricity and Magnetism. (3) I.**

Mr. Warner, Mr. Kinsey, Mr. Watson, ———

Prerequisite: course 1A or the equivalent. Fee, \$5.

Lectures, two hours; laboratory, three hours.

**1D. General Physics: Light and Sound. (3) II.**

Mr. Ellis, Mr. Kinsey, Mr. Warner, Mr. Watson, ———

Lectures, two hours; laboratory, three hours. Fee, \$5.

**2A-2B. General Physics. (4-4) Yr.**

Mr. Edwards, Mr. Kaplan, Mr. Kinsey, Mr. Watson

Lecture, three hours; laboratory, two hours; demonstration, one hour. Fee, \$5 a semester.

Mechanics, sound, heat, light, electricity. Prescribed for premedical students.

**4A-4B. General Physics. (3-3) Yr.**

Mr. Barnett

Prerequisite: elementary algebra and plane geometry.

A descriptive course, with laboratory work, fully illustrated by experiments. Course 4B may be taken before 4A with permission of the instructor.

**UPPER DIVISION COURSES**

Prerequisite for all upper division courses: Physics 1A, 1B, 1C, 1D, or 2A-2B (in special cases, 4A-4B); Mathematics 3A-3B; or the equivalents.

**105. Analytic Mechanics. (3) I.**

Mr. Edwards

The statics and dynamics of particles and rigid bodies.

**107A. Electrical Measurements. (3) II.**

Mr. Warner, ———

Prerequisite: course 1C. Fee, \$12.

Laboratory exercises in the measurement of direct current quantities, with explanatory lectures on electricity and magnetism.

**107B. Electrical Measurements. (3) II.**

Mr. Warner, ———

Prerequisite: course 107A. Fee, \$12.

Laboratory exercises with alternating current circuits, and lectures on electric circuit theory, the propagation of electric waves, and thermionic vacuum tubes.

**108A. Geometrical Optics. (3) I.**

Mr. Dodd

Prerequisite: course 1D or 2B, or equivalent. Fee, \$6.

Lectures, demonstrations, and laboratory work on geometrical methods applied to the optics of mirrors, prisms, and lenses, and to their use in modern optical instruments.

- 108B. Physical Optics. (4) I.** Mr. Ellis, Mr. Watson  
 Fee, \$12.  
 Lectures, demonstrations, and laboratory work dealing with interference, diffraction, polarization, and their applications.
- 109. Modern Optical Instruments. (2) II.** Mr. Dodd  
 Prerequisite: course 108A.  
 Specialized studies in the applied optics of modern instruments used in astronomy, surgery, and industrial laboratories. Emphasis on recent design.
- 110A-110B. Electricity and Magnetism. (2-3) Yr.** Mr. Barnett  
 The elementary mathematical theory, with a limited number of experimental demonstrations.
- 112. Heat. (3) I.** Mr. Adams  
 Thermodynamics, with applications to physical chemistry.
- 113. Introduction to Spectroscopy. (3) II.** Mr. Ellis
- 113C. Spectroscopy Laboratory. (1) II.** Mr. Ellis, Mr. Watson  
 Fee, \$12.  
 Prerequisite or concurrent: course 113 or Astronomy 117B.
- 114A-\*114B. Mechanics of Wave Motion and Sound. (3-3) Yr.** Mr. Knudsen  
 Lectures and demonstrations on the fundamental theory of wave motion and sound, with applications to recent developments in acoustics.
- 114C. Mechanics of Wave Motion and Sound Laboratory. (1) II.** Mr. Knudsen  
 Prerequisite: courses 107 and 114B or consent of the instructor. Fee, \$12.
- 121. Atomic Physics. (3) II.** Mr. Adams  
 An introductory view of the properties and constituents of atoms, as disclosed by the advances of the past thirty-five years.  
 Lectures with demonstrations, and readings.
- 199A-199B. Special Problems in Physics. (2-2) Yr.** Mr. Knudsen and the Staff

## GRADUATE COURSES

Courses 210A-210B, 215, and 220A are required of all candidates for the master's degree with major in physics.

- 208. Classical Optics. (3) II.** Mr. Ellis
- 210A-210B. Electricity and Magnetism; Advanced Course. (3-3) Yr.** Mr. Barnett  
 Electrostatics, electrodynamics, electron theory, magnetism, restricted theory of relativity, theory of radiation. Open to graduate students who have taken 110A-110B, and to other graduate students with the consent of the instructor.
- \*212. Thermodynamics. (3) I.** Mr. Kaplan
- \*213. Diatomic and Polyatomic Spectra. (3) II.** Mr. Ellis

\* Not to be given, 1938-39.

215. Statistical Mechanics. (3) II.	Mr. Kaplan
220A. Theoretical Mechanics. (3) I.	Mr. Kinsey
220B. Theoretical Mechanics. (3) II.	Mr. Kinsey
*220C. Quantum Mechanics. (3) II.	Mr. Kinsey
260. Seminar: Acoustics, Short Waves, Collision Phenomena, Nuclear Physics. (2 or 3)	Mr. Knudsen in charge
For 1938-39: <i>Nuclear Physics</i> . (2) I.	Mr. Kaplan
290A-290B. Research. (1-3; 1-3) Yr.	Mr. Knudsen in charge

## COURSES IN ANOTHER DEPARTMENT

Astronomy 117A-117B. Astrophysics. (3-3) Yr.	Mr. Kaplan
Astronomy 199A-199B. Sec. 2. Special Studies in Astrophysics. (2-2) Yr.	Mr. Kaplan

---

\* Not to be given, 1938-39.

## POLITICAL SCIENCE

CHARLES G. HAINES, Ph.D., Professor of Political Science.

MALBONE W. GRAHAM, Ph.D., Professor of Political Science.

FRANK M. STEWART, Ph.D., Professor of Political Science.

CHARLES H. TITUS, Ph.D., Associate Professor of Political Science.

J. A. C. GRANT, Ph.D., Associate Professor of Political Science.

H. ARTHUR STEINER, Ph.D., Assistant Professor of Political Science.

ERIC ARMOUR BEECROFT, Ph.D., Assistant Professor of Political Science.

THOMAS I. COOK, Ph.D., Assistant Professor of Political Science.

RUSSELL H. FITZGIBBON, Ph.D., Assistant Professor of Political Science.

WINSTON W. CROUCH, Ph.D., Instructor in Political Science.

*Letters and Science List.*—All undergraduate courses in political science are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Course 3A-3B, or its equivalent, and one of the following: Political Science 10, 31, 32, 34. In addition the department recommends that majors take one or more of the following courses: Economics 1A-1B, Geography 1A-1B, History 4A-4B, History 5A-5B, or History 8A-8B.

Students intending to select political science as a major subject are advised to take one course in political science throughout the year in each of the freshman and sophomore years.

*The Major.*—Twenty-four units in upper division courses, not more than four of which may be taken in courses approved by the department in anthropology, business administration, economics, geography, history, philosophy, psychology, or sociology. The work must be divided among the different fields of political science in accordance with the requirements of the department. A copy of the regulations may be obtained from the departmental adviser.

The student must maintain an average grade of C in upper division courses in political science.

*Related Curricula.*—For the Curriculum in Public Service and the Curriculum in International Relations, students are referred to pages 71, 74 of this Catalogue.

## LOWER DIVISION COURSES

**3A-3B. American Government.** (3-3) Beginning each semester.

Mr. Beecroft, Mr. Cook, Mr. Fitzgibbon, Mr. Crouch

3A. A study of principles and problems in relation to the organization and functions of the American system of government.

3B. A survey of the organization and functions of the national government with special attention to the features and principles of the Federal Constitution. Some features of the organization of state and local governments will be briefly considered.

Students who have credit for American Institutions 101 will receive only two units for Political Science 3A.

<sup>1</sup> In residence first semester only, 1988-89.

**10. Elementary Law. (3) I.**

Mr. Grant

Prerequisite: sophomore standing.

The development of the English and Roman legal systems; elementary principles of the common law, as modified by statutes and judicial decisions.

**31. Government of European Democracies. (3) I, II.**

Mr. Beecroft, Mr. Fitzgibbon

Prerequisite: sophomore standing and course 3A-3B.

A comparative study of constitutional principles, governmental institutions, and political problems, primarily with respect to England and France.

This course duplicates 31A given prior to September, 1938, and is equivalent to Political Science 1A given at the University of California, Berkeley.

**32. Government of European Dictatorships. (3) I, II.**

Mr. Fitzgibbon

Prerequisite: sophomore standing and course 3A-3B.

An introductory study of the governments of Italy, Germany, and the Soviet Union, with emphasis upon dictatorial technique and ideology, the transformation of governmental institutions, and contemporary problems.

This course duplicates 31B given prior to September, 1938, and is equivalent to Political Science 1B, given at the University of California, Berkeley.

**34. American State and Local Government. (3) I.**

Mr. Crouch

Prerequisite: sophomore standing and course 3A-3B.

Development of state constitutions. The legislative, executive, and judicial departments in state government; popular methods of control; and relation between the state and local rural government, with special reference to California.

## UPPER DIVISION COURSES

Prerequisites for all courses: Political Science 3A-3B, or its equivalent, and one of the following: Political Science 10, 31, 32, 34. In addition the department recommends that students majoring in Political Science take one or more of the following courses: Economics 1A-1B, Geography 1A-1B, History 4A-4B, 5A-5B, or 8A-8B.

**110. History of Political Ideas. (3) I, II.**

Mr. Cook

An exposition and critical analysis of the ideas of the major political philosophers and schools from Plato to Burke, with emphasis on the setting, the logical structure of their systems, and the significance of these ideas in terms of the contemporary scene.

**112. Modern Political Thought. (3) I, II.**

Mr. Beecroft

An exposition and critical analysis of the major schools of political thought in the nineteenth and twentieth centuries.

**113. American Political Theory. (3) I.**

Mr. Cook

A survey of the development of American ideas concerning political authority from Cotton and Williams to Hoover and Roosevelt.

**117. Jurisprudence. (3) II.**

Mr. Haines

Development of law and legal systems; comparison of methods and procedure in making and enforcing law in Roman and common law systems; consideration of fundamental legal concepts; contributions and influence of modern schools of legal philosophy in relation to law and government.

**118. Nature of the State. (3) II.**

Mr. Cook

Prerequisite: course 110 or 112.

An attempt to develop by critical dialectic a coherent theory of the state. Concepts such as sovereignty, law, liberty, rights, equality will be especially emphasized.

**125. Foreign Relations of the United States. (3) I.**

Mr. Graham

A survey of the factors and forces entering into the formation and carrying out of American foreign policy, with special emphasis on contemporary problems.

**126. Contemporary Hispanic American International Relations. (3) II.**

Mr. Fitzgibbon

A study of international relations of the Hispanic American countries in recent decades, (a) among themselves, (b) with the United States, (c) with Europe and Asia; current developments in such matters as boundary disputes, arbitration and conciliation, Pan-American conferences; Hispanic-American participation in the League of Nations.

**127. International Relations. (3) I, II.**

Mr. Graham, Mr. Steiner

A general survey of the institutions and agencies of international government with major stress on outstanding issues in the diplomacy of the postwar period.

**133A-133B. International Law. (3-3) Yr.**

Mr. Steiner

A critical analysis of the general principles of the law of nations as demonstrated in the decisions of international and municipal tribunals and in the practices of nations.

**\*136. Problems of the Pacific Area. (3) II.**

Mr. Steiner

A contemporary survey of the internal problems of China and Japan and of the factors underlying Sino-Japanese conflict; also, a brief summary of the problems of other powers having interests in the Pacific.

**138. International Relations of the Far East. (3) II.**

Mr. Steiner

A survey of the relations of China and Japan with the western world and with each other, with an analysis of their conflicting interests.

**141. Political Parties and Practical Politics. (3) I, II.**

Mr. Titus

An analysis of the organization, functions, and activities of political parties; a study of pressure groups and defensive mechanisms to offset political programs; and an introduction to the technique of playing practical politics.

**142. Elections. (2) I.**

Mr. Titus

An analysis of political behavior and activities pertaining to elections.

**143. Legislatures and Legislation. (2) II.**

Mr. Grant

The functions of legislatures. The organization and procedure of typical legislative bodies; the problems and principles of law making; the legislative functions of the courts and of the administration.

**\*146. Public Opinion and Propaganda. (2) II.**

Mr. Titus

A study of the nature and the means of formation of public opinion. Public opinion as a factor in popular government and as a control device in the modern state with special reference to current conditions in American democracy.

\* Not to be given, 1938-39.

- 151. The Governments of Hispanic America. (3) I.** Mr. Fitzgibbon  
The governments of representative states; a study of constitutional development, political practices, and the elements of strength and weakness in contemporary governmental organization.
- 153. The Governments of the British Empire. (2) II.** Mr. Beecroft  
The constitutional and political relations of the imperial and Dominion governments; the governments of India, the crown colonies, the protectorates and the mandated territories.
- 154. The Governments of Central Europe. (3) I.** Mr. Graham  
An intensive study of the breakdown of the Austro-Hungarian Empire and the constitutional reorganization of the Danubian Succession States, with special attention to contemporary and political issues, parties, elections, and foreign relations.
- 155. The Governments of Eastern Europe. (3) II.** Mr. Graham  
An intensive study of the breakdown of the Russian Empire and the constitutional reorganization of the Soviet Union and the Baltic States, with special attention to contemporary political issues, parties, elections, and foreign relations.
- 156. Administrative Law. (3) I.** Mr. Haines  
The rights, duties, and liabilities of public officers; relief against administrative action; extraordinary legal remedies; jurisdiction, conclusiveness, and judicial control; legal principles and tendencies in the development of public administration.
- 157A-157B. Constitutional Law. (4-4) Yr.** Mr. Haines, Mr. Grant  
General principles of constitutional law, federal and state; relations and powers of the federal government and the states; limitations on the federal government and the protection accorded to individual rights under the American constitutional system.
- 158. Government and Business. (3) I.** Mr. Grant  
An intensive study of the commerce and police powers, with particular emphasis upon the administrative and judicial powers of state and federal authorities.
- 162. Municipal Government. (3) I, II.** Mr. Stewart, Mr. Crouch  
A comparative study of the modern municipality in the United States and the principal countries of Europe; history and growth of cities; relation of city to the state; legal aspects of city government; parties and electoral problems; types of municipal organization, mayor and council, commission, and city manager; problems of metropolitan areas.
- 163. Municipal Administration. (3) II.** Mr. Crouch  
Administrative organization; personnel; finance; city planning and zoning; charities, recreation, education; water supply; streets and parks, police, courts, correction; health, housing, fire, traffic, and control of utilities.
- 181. Principles of Public Administration. (3) I.** Mr. Stewart  
Development of public administration and its relation to other branches of government; the process of centralization; the process of integration; reorganization of administration; budgets; purchasing; problems of personnel; and types of control of the administration.

- 182. Lectures in Public Administration. (1) II.** Mr. Crouch  
A special series of lectures offered by members of the department and public officials on various contemporary problems of public administration, with special reference to the metropolitan community.  
May be taken twice for credit.
- \*183. Administrative Functions. (3) II.** Mr. Stewart  
Activities of the national, state, and local governments are studied. Certain of the following problems will be analyzed: highway administration; state and regional planning; public welfare; police administration; and selected topics in national administration.
- 199A-199B. Special Problems in Political Science. (2-2) Yr.**  
Prerequisite: credit for six units of upper division courses in political science, and the special requirements necessary for the field selected for special study. Permission to register for this course is required.
- Section 2. Problems in International Relations. Mr. Steiner  
Section 4. Methods of Administrative Management. Mr. Stewart, Mr. Crouch  
Section 5. Problems in Comparative Government. Mr. Beecroft  
Section 6. Problems in Politics and Legislation. Mr. Titus, Mr. Grant  
Section 7. Problems in Hispanic-American Political Institutions. Mr. Fitzgibbon

## GRADUATE COURSES

- 252A-252B. Seminar in Public Law. (2-2) Yr.** Mr. Haines  
**253A-253B. Seminar in International Relations. (2-2) Yr.** Mr. Steiner  
**\*254A-254B. Seminar in Public Administration. (2-2) Yr.** Mr. Stewart  
**255A-255B. Seminar in Comparative Constitutional Law. (2-2) Yr.** Mr. Grant  
**256A-256B. Seminar in Comparative Government. (2-2) Yr.** Mr. Graham  
**257A-257B. Seminar in Political Theory. (2-2) Yr.** Mr. Cook  
**259A-259B. Seminar in Political and Electoral Problems. (2-2) Yr.** Mr. Titus  
**262A-\*262B. Seminar in Municipal Government. (2-2) Yr.** Mr. Stewart  
**275A-275B. Special Study and Research. (2-4; 2-4) Yr.** The Staff

## AMERICAN INSTITUTIONS

- 101. American Institutions. (2) I, II.** Mr. Titus, Mr. Steiner  
The fundamental nature of the American constitutional system and of the ideals upon which it is based. This course satisfies the "Requirement of American Institutions." (see page 37.)  
This course may not be applied toward the Political Science major, and is not open to students who have credit for Political Science 3A-3B. A student who has credit for 3A only may take course 101, but will receive therefor only one unit. A student who has credit for course 101 will receive only two units for course 3A.

\* Not to be given, 1988-89.

**BUREAU OF GOVERNMENTAL RESEARCH**

The Bureau of Governmental Research was established in 1937 chiefly to perform the three functions of: (1) maintaining a collection of current pamphlets, periodicals, and documents relating to public administration and local government; (2) providing facilities for upper division and graduate students and members of the faculty to pursue study and research in public administration, local government, and related fields; and (3) conducting studies of governmental functions of particular interest to southern California and cooperating with public officials in solving their administrative problems.

Further information may be obtained from Mr. Frank M. Stewart, Room 46, Library.

## PSYCHOLOGY

KNIGHT DUNLAP, Ph.D., Professor of Psychology.

KATE GORDON, Ph.D., Professor of Psychology.

FRANKLIN FEARING, Ph.D., Professor of Psychology.

GRACE M. FERNALD, Ph.D., Associate Professor of Psychology.

ELLEN B. SULLIVAN, Ph.D., Associate Professor of Psychology.

S. CAROLYN FISHER, Ph.D., Assistant Professor of Psychology.

JOSEPH A. GENGERELLI, Ph.D., Assistant Professor of Psychology.

FRANK C. DAVIS, Ph.D., Assistant Professor of Psychology.

HOWARD C. GILHOUSEN, Ph.D., Assistant Professor of Psychology.

ROY M. DORCUS, Ph.D., Assistant Professor of Psychology.

RALPH L. BEALS, Ph.D., Assistant Professor of Anthropology.

PERINA PIZIALI, M.A., Associate in Clinical Psychology and Associate in Italian.

*Letters and Science List.*—All undergraduate courses in psychology and anthropology are included in the Letters and Science List of Courses. For regulations governing this list see page 64.

*Preparation for the Major.*—(1) Psychology 1A-1B or 3A-3B; (2) nine units selected from the following (at least six to be in one subject): physical science, life science, Greek, calculus; (3) a semester of formal logic.

*The Major.*—Psychology 106A or 107A; and fifteen other units, all of which may be in upper division courses in psychology, or which may include Anthropology 103 or 125 or both. The six remaining units may be in upper division courses in psychology, or, subject to the approval of the department, in related courses in other departments.

*Laboratory Fees.*—Courses 106A, 106B, 107A, 107B, 150B, \$3.

## LOWER DIVISION COURSE

**1A-1B. General Psychology.** (3-3) Beginning each semester.

Mr. Davis in charge

An introduction to the facts and problems of psychology.

Not open to students who have credit for course 3A-3B.

## UPPER DIVISION COURSES

Course 1A-1B or the equivalent is prerequisite to all upper division courses, except 101.

**101. Principles of Psychology.** (3) I, II.

Mr. Fearing

A brief survey of general psychology, open only to upper division students who do not have credit for course 1A-1B or the equivalent.

**106A-106B. Experimental Psychology.** (3-3) Yr.

Mr. Dorcus

Lecture, one hour; laboratory, four hours; assigned readings. Fee, \$3 a semester.

Methods, techniques, and typical results in experimental research in psychology.

- 107A-107B. Mental Measurements.** (3-3) Beginning each semester.  
 Fee, \$3 a semester. Miss Sullivan
- 107A.** A study of the construction, techniques of application, and interpretation of tests and scales. Practice in statistical procedures applicable to data derived from tests.
- 107B.** Continuation of the study of principles of measurement, with practice in the construction, administration, and scoring of standardized tests and scales, and their diagnostic interpretation.
- 108. Physiological Psychology.** (3) I. Mr. Fearing  
 Integrative activities, consciousness, intelligent behavior, receptor and effector processes in relation to neuro-muscular structure and function. Facts, problems and methods.
- 110. Educational Psychology.** (3) I, II. Mr. Gengerelli  
 Adolescence, maturation, habit formation, formal and informal training.
- 112. Child Psychology.** (3) I, II. Miss Fernald  
 The psychology of the infant and child, with especial reference to mental development.
- 120. History of Psychology, Ancient Period.** (3) I. Mr. Dunlap  
 Psychological concepts from Homer to the Alexandrian period, outlined in relation to their cultural settings and their influence on modern psychology.
- 124. History of Psychology, Early Modern Period.** (2) II. Mr. Fearing  
 The development of psychological theories from Descartes to Helmholtz.
- \* **125. History of Psychology, Second Modern Period.** (2) I, II. Mr. Gengerelli  
 Psychological theories and research from Wundt to the end of the nineteenth century.  
 Not open to students who took course 124A or 124B prior to September, 1937.
- 126. Contemporary Psychology.** (2) I. Mr. Gilhausen  
 The variant tendencies in current psychology, including critical examination of the more important so-called "schools" of psychology.
- 134. Sensation and Perception.** (2) I. Miss Fisher  
 Intensive study of sense perception, with reference to the structure and functions of sense mechanisms, and experimental findings.
- 135. Imagination and Thought.** (2) II. Miss Gordon  
 Imagination, memory, anticipatory and constructive thinking.
- 136. Motor Patterns and Motivation.** (2) II. Mr. Gilhausen  
 Theories and experimentally determined facts concerning drives, needs, preferences, and desires.
- 137. Human Learning.** (2-2) Yr. Mr. Davis  
 A study of experimental methods and results, with consideration of leading theories.
- 138. Feeling and Emotion.** (3) II. Mr. Dunlap  
 The nature and basis of the affective factor in life, with application to problems of personal and social adjustment and development.

- 145A-145B. Social Psychology, General Course.** (2-2) Yr. Miss Fisher
- 147. The Psychological Method in the Social Sciences.** (3) II. Mr. Fearing  
Psychological factors in major social problems, including social control, propaganda, group conflict, cultural determination, etc.
- 150A. Animal Psychology.** (3) I. Mr. Gilhausen  
Experimental methods and results in the study of the behavior of the lower animals.
- 150B. Experiments in Animal Psychology.** (3) II. Mr. Gilhausen  
Prerequisite: course 150A. Fee, \$3.  
Lecture, one hour; laboratory, six hours.
- 166A-166B. Clinical Psychology of Infancy and Childhood.** (2-2) Beginning each semester. Miss Fernald
- 166A.** A study of the problems of the child, including discussion of physical and mental abnormalities and deficiencies. Lecture and demonstration, two hours.
- 166B.** Prerequisite: courses 107A and 166A, or equivalent preparation approved by the instructor.  
Special emphasis is placed on corrective and preventive methods. Lecture, one hour; clinical work, three hours.
- 168. Abnormal Psychology.** (3) II. Mr. Dorcus  
Prerequisite: three units of upper division psychology. Students who do not have credit for course 108 may be required, early in the semester, to demonstrate an acquaintance with the elementary facts of structure and function of the nervous system.  
Disorders of sensation, perception, feeling, and thought; their nature, causation, effects on life, and amelioration.
- 175. Psychology of Religion.** (3) II. Mr. Dunlap  
The place of religion in personal and social life and its historical development in Western cultures. Specific beliefs are considered only in relation to their psychological conditions and effects.
- 199. Special Problems in Psychology.** (3) I, II. Miss Gordon and the Staff  
Prerequisite: courses 106A, 107A, and six other units in upper division psychology. Specific permission to enroll is necessary.
- GRADUATE COURSES**
- 211A-211B. Comparative Psychology.** (2-2) Yr. Mr. Gilhausen  
A comparative study of experimental results on man and the lower animals.
- 215A-215B. Commercial and Industrial Psychology.** (2-2) Yr. Mr. Dorcus
- 251A-251B. Seminar in Clinical Psychology.** (3-3) Yr. Miss Fernald  
Problems of infancy and childhood.
- \*253A-253B. Seminar in Physiological Psychology.** (3-3) Yr. Mr. Fearing
- 255A-255B. Seminar in Social Psychology.** (3-3) Yr. Mr. Fearing
- 256A-256B. Seminar in Esthetics.** (3-3) Yr. Miss Gordon
- 278A-278B. Research in Psychology.** (3-3) Yr. Mr. Dunlap

\* Not to be given, 1938-39.

## ANTHROPOLOGY

## LOWER DIVISION COURSE

- 1A-1B. General Anthropology. (3-3) Yr.** Mr. Beals  
 1A. Origin, antiquity, and races of man; physical anthropology; race problems.  
 1B. Origin and growth of culture. Problems in invention, material culture, social institutions, religion, language. May be taken without course 1A.

## UPPER DIVISION COURSES

- \*101. World Ethnography. (3) I.** Mr. Beals  
 A descriptive survey of representative primitive cultures, including backward people of civilized countries.
- \*102. Methods and Theories of Anthropology. (3) II.** Mr. Beals  
 Illustrations from specific problems and from the work of outstanding anthropologists.
- 103. Culture History. (3) I.** Mr. Beals  
 A general survey of the origin and development of early civilizations of the Old World: Europe, Asia, Africa, Oceania.
- 104. Civilizations of Mexico. (3) II.** Mr. Beals  
 Ancient civilizations and modern peoples; archeology, art, architecture, mode of life, social institutions, and religion.
- 105. The American Indian. (3) I.** Mr. Beals  
 An introductory survey of the Indians of North and South America; origins, languages, civilizations, and history.
- 125. Primitive Society. (3) II.** Mr. Beals  
 A survey of the social institutions of the simpler peoples of the world: marriage and the family, division of labor, totems and clans, social stratification, economic organizations, political institutions, etc.
- 151. Archeological Methods. (2) II. Saturdays.** Mr. Beals  
 Open to men only with the consent of the instructor. Students must arrange for transportation when necessary and supply part of their own field equipment.  
 A study of problems and methods of archeology. A large portion of the work will consist of museum visits and supervised participation in the excavation of local archeological sites.

\* Not to be given, 1938-39; probably to be given, 1939-40.

## SPANISH

- CÉSAR BARJA, Doctor en Derecho, Professor of Spanish.  
 LAURENCE DEANE BAILIFF, Ph.D., Associate Professor of Spanish.  
 MANUEL PEDRO GONZÁLEZ, Ph.D., Associate Professor of Spanish.  
 ERNEST H. TEMPLIN, Ph.D., Associate Professor of Spanish.  
 ANNA KRAUSE, Ph.D., Assistant Professor of Spanish.  
 MARION ALBERT ZEITLIN, Ph.D., Assistant Professor of Spanish.  
 HERMENEGILDO CORBATÓ, Ph.D., Assistant Professor of Spanish.  
 JOHN A. CROW, Ph.D., Instructor in Spanish.  
 MARIA L. DE LOWTHER, M.A., Associate in Spanish.  
 SYLVIA N. RYAN, M.A., Associate in Spanish.  
 FRANCISCO MONTAU, A.B., Associate in Spanish.

*Letters and Science List.*—All undergraduate courses in Spanish except 25 are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—(1) Courses A, B, C, D, and 5A-5B or 35 or the equivalent, to be tested by examination. (2) Students who wish to make Spanish their major subject must have maintained at least an average grade of C in the college courses in Spanish taken prior to obtaining the Junior Certificate. (3) A minimum of two years of high school Latin, French, German, or Italian, or Latin A and B, or English 36A-36B, or History 8A-8B. This requirement must be completed before entering upon the senior year. (4) Only students who pronounce Spanish correctly and read it fluently will be admitted to upper division courses. Students transferring from other institutions may be tested by oral examinations (5) English 1A-1B.

*NOTE.*—Students who have not completed course 5A-5B or 35 in the lower division must take 101A-101B.

*The Major.*—Required: twenty-four units of upper division courses, including 102A-102B and 116A-116B. The remaining units may include not more than four units of upper division work in French or Latin, or may be completed from courses 101, 104, 108, 109, 110, 114, 115, and 124.

Students who fail to maintain at least an average grade of C in the Spanish courses taken in the upper division will, upon approval of the Dean of the College of Letters and Science, be excluded from the major in Spanish.

The department recommends as a supplementary choice among the free electives: (1) history of the country or countries most intimately connected with the major; (2) additional study in Latin and English literature; (3) French, German, Greek, and Italian language and literature; (4) the history of philosophy.

Two years of high school Latin, or the equivalent, are prerequisite to candidacy for the master's degree in Spanish.

## LOWER DIVISION COURSES

The prerequisites for the various lower division courses are listed under these courses. Students whose high school record seems to warrant it may by examination establish their right to take a more advanced course upon recommendation of the instructor.

- A. Elementary Spanish.** (5) I, II. Miss Ryan in charge  
This course corresponds to the first two years of high school Spanish.
- B. Elementary Spanish.** (5) I, II. Miss Ryan in charge  
Prerequisite: course A or two years of high school Spanish or Spanish SA in a summer session with satisfactory grade.
- C. Intermediate Spanish.** (3) I, II. Miss Ryan in charge  
Prerequisite: course B or three years of high school Spanish.
- D. Intermediate Spanish.** (3) I, II. Miss Ryan in charge  
Prerequisite: course C or four years of high school Spanish.
- CD. Intermediate Spanish.** (5) I, II. Mr. Crow  
Prerequisite: course B or three years of high school Spanish.
- 5A-5B. Advanced Spanish.** (3-3) Yr. Mr. Templin, Mrs. Lowther  
For lower division students who have had course D or the equivalent. Designed especially for freshmen and sophomores who propose to make Spanish their major subject.
- 35. Grammar Review.** (5) I, II. Miss Ryan  
Prerequisite: same as for course 5A-5B.
- \*19. Dramatic Interpretation in Spanish.** (2) I. \_\_\_\_\_  
The study and presentation of a masterpiece of Spanish dramatic literature. Only those students will be eligible for registration in this course who shall have done, without credit, certain preliminary work required by the department during the preceding semester. The work of the course will end with the production and this production shall constitute the examination. This course may be taken only twice for credit.
- 25. Commercial Spanish.** (3) I, II. Mr. González  
Prerequisite: course C or four years of high school Spanish. Required of all majors in Business Administration who elect Spanish to fulfill their language requirement.

## UPPER DIVISION COURSES

- Prerequisite: sixteen units of lower division Spanish or the equivalent (except for course 140A-140B).  
Major students who enter the upper division without course 5A-5B or 5AB must take 101A-102B.
- Junior Courses:* Courses 101A-101B and 102A-102B.  
*Junior and Senior Courses:* Course 104A-104B, 108A-108B, 109A-109B, 114, and 124.  
*Restricted Senior Courses:* Courses 110A-110B, 115A-115B, 116A-116B.  
*Unrestricted Course:* Course 140A-140B.
- 101A-101B. Oral and Written Composition.** (3-3) Yr. Mr. Corbató, Miss Krause, Mr. Templin
- 102A-102B. Survey of Spanish Literature to 1900.** (3-3) Yr. Mr. Zeitlin, Mr. Corbató  
Required of major students in Spanish.
- 104A-104B. Survey of Spanish American Literature.** (3-3) Yr. Mr. Crow  
Lectures and reading.  
A study of the principal authors of Spanish America.

\* Not to be given, 1938-39.

- 108A-108B. **Spanish Literature from 1850-1898.** (2-2) Yr. Mr. Barja  
A study of Spanish Realism in the second half of the nineteenth century.
- 109A-109B. **Spanish Literature from 1700-1850.** (2-2) Yr. Mr. Bailiff  
A study of the Neo-classic and Romantic movements.
- 110A-110B. **Contemporary Literature.** (2-2) Yr. Miss Krause  
Reading and discussion of contemporary writers.
114. **Mexican Literature.** (2) I. Mr. González
- 115A-115B. **Readings in Classical Literature.** (2-2) Yr. Mr. Zeitlin  
Students planning to take graduate work in Spanish are expected to take this course or offer an equivalent.
- 116A-116B. **Advanced Composition.** (2-2) Yr. Mr. Bailiff, Mr. Corbató  
Required of Spanish majors.
124. **Argentine Literature.** (2) II. Mr. González
- 140A-140B. **Spanish Civilization.** (2-2) Yr. Mr. Barja  
Prerequisite: junior standing.  
A study of the growth and development of Spanish culture in the various fields. Lectures are in English, reading in Spanish or English.

## PROFESSIONAL COURSE

390. **The Teaching of Spanish.** (3) I, II. Mr. Bailiff  
Required of all candidates for the general secondary credential whose major subject is Spanish. To be taken concurrently with Supervised Teaching 320A.

## GRADUATE COURSES†

- 204A-204B. **Spanish American Literature.** (2-2) Yr. Mr. González  
Lectures, outside reading, reports, and intensive reading in class.  
204A. Gaucho Epics.  
204B. Contemporary Mexican Novels.
- 205A-205B. **Prose Masterpieces of the Sixteenth and Seventeenth Centuries.** (2-2) Yr. Mr. Barja
- 209A-209B. **The Drama of the Golden Age.** (2-2) Yr. Mr. Templin
- 210A-210B. **Contemporary Literature.** (2-2) Yr. Mr. Barja
- 212A-212B. **Historical Grammar and Old Spanish Readings.** (2-2) Yr. Mr. Zeitlin

## PORTUGUESE

- 101A-101B. **Grammar, Composition, and Reading of Texts.** (3-3) Yr. Mr. Zeitlin

† All candidates for the degree of Master of Arts must offer at least two years of high school Latin, or the equivalent.

**SUBJECT A: ENGLISH COMPOSITION**

**FRANK HERMAN REINSCH, Ph.D.,** Associate Professor of German, Chairman,  
Committee on Subject A.

---

**SELENA P. INGRAM, M.A.,** Associate in Subject A.

**<sup>1</sup>MARGARET BROWN RINGNALDA, M.A.,** Associate in Subject A.

**JAMES K. LOWERS,** Associate in Subject A.

**Subject A. No credit. I, II.**

**The Staff**

Fee, \$10.

Three hours weekly for twelve weeks. Although this course yields no credit, it displaces two units on the student's program. Every student who does not pass the examination in Subject A is required to take, in the semester immediately following this failure, the course in Subject A. Sections are limited to thirty students. For further details, see page 36.

Training in correct writing, including drill in sentence and paragraph construction, diction, punctuation, grammar, and spelling. Weekly compositions and written tests on the text.

---

<sup>1</sup> In residence first semester only, 1938-39.

**TRAINING DEPARTMENT****STAFF IN THE UNIVERSITY OF CALIFORNIA AT LOS ANGELES  
TRAINING DEPARTMENT**

**CHARLES WILKIN WADDELL, Ph.D.**, Professor of Education and Director of the Training Department.

**JESSE A. BOND, Ed.D.**, Associate Professor of Education and Associate Director of Training.

**ETHEL I. SALISBURY, M.A.**, Associate Professor of Elementary Education and Supervisor of Training.

**CORINNE A. SEEDS, M.A.**, Assistant Professor of Elementary Education and Principal of the University Elementary School.

**HELEN CHRISTIANSON, Ph.D.**, Supervisor of Nursery School Training and Lecturer in Education.

**LULU M. STEDMAN, Ed.B.**, Supervisor of Special Education.

**HELEN B. KELLER, Ed.B.**, Supervisor of Training, Elementary.

**NATALIE WHITE, M.A.**, Supervisor of Training, Art.

**HELEN CHUTE DILL, M.A.**, Supervisor of Training, Music.

**LAVERNA L. LOSSING, M.A.**, Supervisor of Training, Music.

**DIANA W. ANDERSON, M.A.**, Supervisor of Training, Physical Education.

**MARY E. HERSCHBERGER, Ed.B.**, School Counselor.

**EMMA JANE ROBINSON**, Training Teacher, Sixth Grade.

**HELEN F. BOUTON, M.A.**, Training Teacher, Fifth Grade.

**BESSIE HOYT PERSELS, M.A.**, Training Teacher, Fourth Grade.

**GERTRUDE C. MALONEY, Ed.B.**, Training Teacher, Third Grade.

**LOLA C. JENSEN, B.S.**, Training Teacher, Second Grade.

**CLAYTON BURROW, M.S.**, Training Teacher, First Grade.

**JANE BERNHARDT STRYKER, M.A.**, Training Teacher, Kindergarten.

**THELMA PIERCE, Ed.B.**, Assistant Training Teacher, Nursery School.

**YETTA STROMBERG**, Assistant Training Teacher, Kindergarten.

**ELEANOR STRAND, Ed.B.**, Assistant Training Teacher, Nursery School.

**PHOEBE JAMES**, Assistant in the Elementary School.

*Departmental Supervisors*

**HELEN M. HOWELL, Ed.B.**, Associate in Fine Arts and Supervisor of Training, Art.

**CLARA BARTRAM HUMPHREYS, M.A.**, Associate in Fine Arts.

**EVA M. ALLEN**, Associate in Commercial Practice.

**ESTELLA B. PLOUGH**, Associate in Commercial Practice.

**LEILA M. DOMAN, Ph.D.**, Instructor in Home Economics.

**FOSS R. BROCKWAY**, Associate in Mechanic Arts.

HAZEL J. CUBBERLEY, M.A., Associate Supervisor of Physical Education for Women.

PAUL FRAMPTON, M.A., Associate Supervisor of Physical Education for Men.

STAFF IN SAWTELLE BOULEVARD SCHOOL.

*Supervisors*

NORA STERRY, M.A., Principal

HELEN B. KELLER, Ed.B.

ETHEL I. SALISBURY, M.A.

*Demonstration and Training Teachers*

The staff of this city training school consists of from twenty to twenty-five city school teachers. They are selected on merit by University and city school authorities, working coöperatively.

The frequent changes in staff due to promotions to principalships and supervisory positions make it impossible to publish here an accurate list of those who are to serve during the next year.

STAFF IN JUNIOR AND SENIOR HIGH SCHOOLS

RALPH D. WADSWORTH, M.A., Principal, University High School.

HELEN M. DARSIE, M.A., Vice-Principal, University High School.

WALTER L. NOURSE, M.A., Vice-Principal, University High School.

PAUL E. GUSTAFSON, M.A., Principal, Emerson Junior High School.

CARRIE M. BROADED, M.A., Vice-Principal, Emerson Junior High School.

CRAWFORD E. PEEK, M.A., Vice-Principal, Emerson Junior High School.

LUZERNE W. CRANDALL, M.A., Supervisor of Training, Secondary.

CECILIA R. IRVINE, M.A., Supervisor of Training, Secondary.

DOROTHY C. MERIGOLD, Ph.D., Supervisor of Training, Secondary.

ATTILIO BISSIRI, M.A., Supervisor of Training, Secondary.

The rest of the secondary school staff consists of about one hundred public school teachers carefully chosen for their ability as teachers and as supervisors by the University supervisory staff and approved for such service by the public school authorities. Each ordinarily assumes responsibility for the training of not more than one to three student teachers at any one time. The personnel varies from semester to semester as the needs of the University require.

---

COURSES OF INSTRUCTION

KINDEGARTEN-PRIMARY, GENERAL ELEMENTARY

390. Introduction to Elementary Teaching. (4) I, II.

Mr. Waddell, Miss Seeds

Prerequisite: at least a C average at the time of enrollment.

An intensive study of the principles of teaching made effective by assigned reading, observation, participation, analysis of teaching problems, and preparation of units of work.

This course precedes by one semester all teaching in kindergarten-pri-

mary and general elementary grades. All students in these fields must enroll for this course not later than the first half of the senior year. At least half of those of junior high rank must also be enrolled during the second half of each year to insure availability of assignments.

---

**SUPERVISED TEACHING\***

**KINDERGARTEN-PRIMARY, GENERAL ELEMENTARY, SPECIAL SECONDARY  
CREDENTIALS**

**Prerequisites:**

Senior standing.

Satisfactory scholarship.†

Education courses as specified by the respective departments.

Approval by the University physician before each assignment.

**Courses:‡**

<b>K190A-K190B.</b>	<b>Kindergarten-Primary. (4-4)</b>
<b>E190A-E190B.</b>	<b>General Elementary. (4-4)</b>
<b>J191A-J191B.</b>	<b>General Junior High. (4-4)</b>
<b>A190.</b>	<b>Art, Elementary. (3)</b>
<b>A191.</b>	<b>Art, Junior High. (3)</b>
<b>A192.</b>	<b>Art, Secondary. (4)</b>
<b>C192A-C192B.</b>	<b>Commerce, Secondary. (4-4)</b>
<b>H191A-H191B.</b>	<b>Home Economics, Junior High. (3-3)</b>
<b>H192A-H192B.</b>	<b>Home Economics, Secondary. (3-3)</b>
<b>MA191.</b>	<b>Mechanic Arts, Junior High. (3)</b>
<b>MA192A-MA192B.</b>	<b>Mechanic Arts, Secondary. (3-3)</b>
<b>M190A-M190B.</b>	<b>Music, Elementary. (3-3)</b>
<b>M192A-M192B.</b>	<b>Music, Secondary. (3-3)</b>
<b>P190A-P190B.</b>	<b>Physical Education, Elementary. (3-3)</b>
<b>P191.</b>	<b>Physical Education, Junior High. (3)</b>
<b>P192A-P192B.</b>	<b>Physical Education, Secondary. (3-3)</b>
<b>Am. 195.</b>	<b>Americanization Teaching. (1-6)</b>
<b>§(-) 195.</b>	<b>Elective. (1 to 4)</b>

\* All candidates for supervised teaching must make formal application at the office of the Director of Training Department about the middle of the semester preceding that in which such teaching is to be done. For dates of application without late fee, see the *University Calendar and Schedule of Courses*.

† O average for all work at the University of California at Los Angeles; a C average for all courses in education; and a C average for all work in the major (when this is other than education).

‡ All courses are offered each semester.

§ For students seeking a second type of credential after having completed the requirements for one. To be taken normally without degree credit.

GENERAL SECONDARY\*

✓ 320A. Introduction to Secondary Teaching. (2) I, II. Mr. Bond  
Prerequisite: graduate standing; a minimum of six units in education, including course 170 and a selection from: courses 103, 112 (or Psychology 110), 120, 123A-123B, 150.

An intensive study of teaching and learning in the secondary school. This course is prerequisite to 320B, 323, and 324, and is so conducted as to prepare for and lead to definite placement in actual supervised teaching.

320B. Supervised Teaching, General Secondary. (4) I, II.  
Prerequisite: course 320A. Mr. Waddell, Mr. Bond

Supervised teaching consisting of participation in the instructional activities of one high school class for one semester. This course is accompanied by a required conference each week with the associate director or special supervisor. Hours for teaching by individual arrangement.

323. Practicum in Supervised Teaching. (1-4) I, II. Mr. Waddell, Mr. Bond

Prerequisite: courses 320A and 320B or the equivalent; or public school experience and approval of instructors.

A short course in secondary teaching designed for (1) those experienced in public school teaching who need to improve their teaching techniques; (2) those seeking general secondary or junior college credentials after having completed the supervised teaching required for some other type of credential; (3) those who wish to elect types of classroom or nonclassroom experience not provided in their previous training.

324. Supervised Teaching, Junior College. (4) I, II. Mr. Waddell, Mr. Bond

Prerequisite: course 320A; Education 179 or the equivalent.

Restricted to candidates for the junior college credential alone who are teaching classes in the University. Enrollment after consultation with the instructors in charge.

Teaching in lower division, observation in near-by junior colleges, reports, and conferences.

THE TRAINING SCHOOLS

Supervised teaching is provided for in (1) the University Elementary School, comprising a nursery school, kindergarten, and the elementary grades; (2) Sawtelle Boulevard Elementary School of Los Angeles City; (3) the University High School and the Emerson Junior High School of Los Angeles City; (4) other high schools of Los Angeles, Santa Monica and Beverly Hills, as requirements demand.

The work is organized and administered by the Director of the Training Department and a corps of supervisors and training teachers, chosen in every case by the University authorities.

\* Approval of the University physician is required before assignment to teaching courses.

## ZOÖLOGY

LOYE HOLMES MILLER, Ph.D., Professor of Biology.

BENNET M. ALLEN, Ph.D., Professor of Zoölogy, and Acting Dean of Graduate Study, first semester, 1938-39.

ALBERT W. BELLAMY, Ph.D., Professor of Zoölogy.

† FRANCIS B. SUMNER, Ph.D., Professor of Biology.

—————, Professor of Zoölogy.

GORDON H. BALL, Ph.D., Associate Professor of Zoölogy.

EDGAR L. LAZIER, Ph.D., Assistant Professor of Zoölogy and Assistant Dean of the College of Letters and Science.

RAYMOND B. COWLES, Ph.D., Assistant Professor of Zoölogy.

SARAH ROGERS ATSAIT, Ph.D., Assistant Professor of Zoölogy.

† MARTIN W. JOHNSON, Ph.D., Assistant Professor of Marine Biology.

EMILY H. BARTLETT, Ph.D., Instructor in Biology.

A. MANDEL SCHECHTMAN, Ph.D., Instructor in Biology.

BORIS KRICHESKY, M.A., Associate in Zoölogy.

*Letters and Science List.*—All undergraduate courses in this department are included in the Letters and Science List of Courses. For regulations governing this list, see page 64.

*Preparation for the Major.*—Zoölogy 1A-1B, and one year of college chemistry, preferably Chemistry 1A-1B. French and German are recommended.

*The Major.*—Eighteen units of upper division work in zoölogy and six units of upper division work chosen from zoölogy or from *related* courses in anthropology, bacteriology, botany, chemistry, entomology, genetics, geography, home economics, paleontology, philosophy, physics, physiology, or psychology.

*Curriculum for Medical Technicians.*—For details, see page 73.

*Laboratory Fees.*—Biology 12C, \$3; Physiology 1, 2, \$3; Zoölogy 1A, 1B, \$3; 1C, \$2; 4, \$5; 35, 100A, 100C, 105, \$3; 106, \$7.50; 107C, \$5; 111C, \$3; 112, \$2; 113D, \$2.50; 199A, 199B, \$3.

## ZOÖLOGY

## LOWER DIVISION COURSES

- 1A. General Zoölogy. (5) I.** Mr. Ball, Mr. Krichesky  
Lectures, two hours; quiz, one hour; laboratory, six hours; one required field trip. Fee, \$3.  
An introduction to the facts and principles of animal biology.
- 1B. General Zoölogy. (5) II.** Mr. Lazier, Mr. Krichesky  
Lectures, two hours; quiz, one hour; laboratory, six hours. Fee, \$3.  
Prerequisite: course 1A.  
An introduction to vertebrate morphology, physiology, and embryology.

† Member of the staff of Scripps Institution of Oceanography.

**10. Elementary Embryology. (2) II.**

Mr. Lazier

Fee, \$2.

Not open to students who have taken Zoölogy 1B at this University.

Designed for students who transfer to this University from other institutions without having had the embryological work covered in Zoölogy 1B. This work (or its equivalent in Zoölogy 1B) is required for admission to medical school.

**4. Microscopical Technique. (2) I, II.**

Miss Bartlett

Laboratory, six hours; assigned readings.

Prerequisite: course 1A and high school chemistry. Fee, \$5.

The preparation of tissues for microscopical examination.

**35. General Human Anatomy. (3) II.**

Miss Atsatt

Lecture, two hours; laboratory, three hours. Fee, \$3.

Prerequisite: sophomore standing; course 1A or Physiology 1.

## UPPER DIVISION COURSES

**100A. Genetics. (4) I.**

Mr. Bellamy

Lectures, two hours; seminar, one hour; laboratory, six hours.

Prerequisite: course 1B or Botany 1B or the equivalent. Fee, \$3.

The student is given an opportunity to become familiar with the principles of heredity and research methods in genetics.

**100B. Advanced Genetics. (2) II.**

Mr. Bellamy

Lectures, two hours; seminar, one hour.

Prerequisite: course 100A.

A continuation of 100A with special reference to experimental evolution. May be taken with 100C.

**100C. Advanced Genetics Laboratory. (2) II.**

Mr. Bellamy

Laboratory, six hours.

Prerequisite or concurrent: course 100B. Fee, \$3.

**101. Physiological Biology. (2) I.**

Mr. Krichesky

Prerequisite: Chemistry 8 and 9, or the equivalent.

Lectures, readings, and demonstrations of certain physicochemical processes and the principles of living matter.

**103. Experimental Zoölogy. (2) I.**

Mr. Schechtman

Prerequisite: course 1A-1B.

Lectures and reports on articles in scientific journals.

Factors governing cell-differentiation; a survey of the results of experimental embryology, transplantation, regeneration, and tissue culture.

**105. Mammalian Embryology. (3) I, II.**

Mr. Allen

Lecture, one hour; laboratory, six hours.

Prerequisite: course 1A and either 1B or 35. Fee, \$3.

Emphasis on man, rat, and pig.

**106. Comparative Anatomy of the Vertebrates. (4) I.**

Mr. Lazier

Lecture, two hours; laboratory, six hours.

Prerequisite: course 1A-1B (including embryology). Fee, \$7.50.

A study of the structural relationships of the vertebrates. Dissection of the elasmobranch, amphibian, and mammal.

- \*107. Cytology. (2) I.** Mr. Allen  
Prerequisite: course 1A.  
Lectures and recitations.  
The structure and activities of the cell, especially in development, in sex determination, and in heredity with a general survey of histology.
- \*107C. Cytology Laboratory. (2) I.** Mr. Allen, Miss Bartlett  
Prerequisite or concurrent; course 107. Fee, \$5.
- 111. Parasitology. (2) II.** Mr. Ball  
Prerequisite: course 1A.  
General discussion of the biological aspects of parasitism and of the animal parasites of man and the domestic animals.
- 111C. Parasitology Laboratory. (2) II.** Mr. Ball  
Prerequisite or concurrent: course 111. Fee, \$3.
- 112. Advanced Invertebrate Zoölogy. (4) I.** Mr. Johnson  
Lectures, two hours; laboratory and field, six hours.  
Prerequisite: course 1A. Course 1B is recommended. Fee, \$2.  
Morphology, habits, habitats, and life histories of both marine and fresh water invertebrates, with especial reference to local faunas.
- 113. Vertebrate Zoölogy. (2) II.** Mr. Miller  
Prerequisite: course 1A-1B.  
Emphasis upon the habits, distribution, and ecology of the avifauna of California.
- 113C. Vertebrate Zoölogy: Laboratory. (2) II.** Mr. Miller
- 113D. Vertebrate Zoölogy. (2) II.** Mr. Cowles  
Lectures, laboratory, and field work.  
Prerequisite: course 1A-1B. Fee, \$2.50.  
Ecology, life history, and taxonomy of the cold-blooded vertebrates.
- 117. Zoölogical Theories and Concepts. (2) II.** Mr. Bellamy  
Prerequisite: six units of upper division zoölogy.  
Readings, discussions, and lectures on the history and development of basic concepts and theories concerning organisms.
- 118. Endocrinology. (2) I.** Mr. Allen  
Prerequisite: course 1A.  
Lectures and reports on articles in scientific journals.
- 199A-199B. Problems in Zoölogy. (2-2) Yr.** Mr. Allen and the Staff  
Prerequisite: course 1A-1B and junior standing, with such special preparation as the problem may demand. Fee, \$3 a semester.

## GRADUATE COURSES

- 251A-251B. Seminar in Zoölogy. (1-2; 1-2) Yr.**  
Mr. Allen, Mr. Ball, Mr. Bellamy, Mr. Johnson,  
Mr. Miller, Mr. Sumner
- 251C-251D. Second Seminar in Zoölogy. (1-1) Yr.**  
Mr. Allen, Mr. Ball, Mr. Bellamy, Mr. Johnson,  
Mr. Miller, Mr. Sumner
- 274A-274B. Research in Zoölogy. (2-5; 2-5) Yr.**  
Mr. Allen, Mr. Ball, Mr. Bellamy, Mr. Johnson, Mr. Miller

\* Not to be given, 1938-39.

## BIOLOGY

## LOWER DIVISION COURSES

- 1. Fundamentals of Biology.** (3) I, II. Mr. Cowles, Mr. Haupt  
Students who have taken or are taking Botany 1A or Zoölogy 1A will not receive credit for Biology 1.  
Important principles of biology illustrated by studies of structure and activities of living organisms, both plants and animals. One field trip is required.
- 12. General Biology.** (3) II. Mr. Miller, Mr. Cowles  
Lectures, three hours; demonstration, one hour; one required field trip in the semester.  
Prerequisite: Biology 1, Botany 1A, or Zoölogy 1A.  
A course in systematic and ecologic biology with emphasis on local species.
- 12C. General Biology.** (2) II. Mr. Cowles  
Field trips and laboratory, six hours.  
Prerequisite: course 12. Fee, \$3.  
A field study of the zoölogy of southern California. Open only to those students who have shown exceptional qualifications.

## PALEONTOLOGY†

## LOWER DIVISION COURSE

- 1. General Paleontology.** (2) I, Tu Th, 10. Mr. Miller  
Lectures, quizzes, and two required Saturdays in the field.  
A discussion of the general principles of paleontology, the influences that surrounded the ancient life of the earth, and some of the ways in which animals respond to such influences.

## UPPER DIVISION COURSE

- 104. Vertebrate Paleontology.** (3) I. Mr. Miller  
Lecture, one hour; laboratory, six hours.  
Prerequisite: Zoölogy 1A-1B.  
A study of the fossil land vertebrates of the western hemisphere with reference to the present faunas and distribution.

## PHYSIOLOGY‡

## LOWER DIVISION COURSES

- 1. General Human Physiology.** (3) I. Miss Atsatt  
Lectures, two hours; laboratory, three hours.  
Prerequisite: Chemistry 2A-2B or Chemistry 1A; and Zoölogy 1A or Biology 1. Fee, \$3.  
Majors in zoölogy and students in the premedical and pre dental curricula are admitted only upon the request of their advisers.
- 2. Human Physiology.** (2) I. Miss Atsatt  
Lecture, one hour; laboratory, three hours.  
Prerequisite: Physiology 1 or Zoölogy 1B; or may be taken concurrently with Physiology 1. Fee, \$3.

† Courses in Invertebrate Paleontology are offered by the Department of Geology (p. 172).

‡ The University of California at Los Angeles does not offer a major in physiology. Students wishing to satisfy the requirements for a major in physiology are referred to the General Catalogue of the Departments at Berkeley.

## INDEX

- Abnormal psychology, 232  
Absence, leave of, 45  
Academic warning, 43  
A cappella choir, 201  
Accounting, 94, 136, 188  
Accredited schools, 27  
Acoustics, 222, 223  
Administration of the University, 18  
Administrative officers, 13  
Administration of schools, 155  
Admission—to freshman standing, 23  
    to advanced standing, 28  
    to graduate status, 31  
    of special students, 30  
    from foreign countries, 31  
Adolescence, 154  
Adult education, 156  
Advanced standing, 28  
Advancement to candidacy, 107, 110  
Advertising, 125, 139  
Aeschylus, 148  
Aesthetics, 123, 210  
Agricultural engineering, 81  
Agriculture—courses, 118  
    curriculum, 102  
    College of, 15, 16  
Algae, 133  
Algebra, 189, 190, 191  
Algebraic equations, 190  
Alumni Freshman Scholarships, 56  
American government, 224  
American history, 178, 179, 181  
American Indian, 288  
American institutions, 37, 228  
American literature, 160  
Analytic geometry, 189  
Analytic mechanics, 189, 221  
Anatomy, 243, 245  
Ancient history, 178  
Angiosperms, 138  
Animal Husbandry, Kellogg Institute of,  
    16  
Animal psychology, 232  
Announcement of courses, 117  
Anthropological Museum, 15  
Anthropology, 233  
Application fee, 23, 32  
Applied electricity, 194  
Applied physics, 66  
Appointment Secretary, 54  
Appreciation of art, 122, 124  
Archeological methods, 233  
Archery, 216  
Architectural drawing, 193  
Architecture, 90  
    School of, 15  
Argentine literature, 286  
Argumentation, 161  
Aristophanes, 147  
Aristotle, 209  
Arithmetic, 190  
Art, 99, 122  
Art education, 122, 125, 126  
Art exhibitions, 57  
Artillery, 199  
Art teaching credential, 99  
Asia, 168  
Associated Students, 47, 58  
Astronomy, 67, 127  
Astrophysics, 129  
Athletics, 213, 216, 217  
Atomic physics, 222  
Auditing, 138  
Authority of instructors, 38  
Automotive laboratory, 193, 195  
Bach, 202  
Bachelor of Arts degree, 63  
Bachelor of Education degree, 96  
Bachelor of Science degree, 87, 94, 102  
Bacteriology, 63, 130  
Ballad, 161  
Band, 197, 201  
Banking, 94, 150  
Beethoven, 202  
Beowulf, 161  
Bibliography, 161, 180  
Biological chemistry, 143  
Biology, 242, 245  
Board and lodging, 51, 52  
Bookbinding, 124  
Book illustration, 125  
Botany, 68, 132  
Bryophytes, 133  
Bureau of Governmental Research, 16, 229  
Bureau of Guidance and Placement, 54  
Bureau of International Relations, 15  
Bureau of Occupations, 54  
Bureau of Public Administration, 15  
Business Administration—College of, 16,  
    92, 135  
Business law, 136  
Business cycles, 150  
Calculus, 189, 190  
Calendar, 8  
*California Daily Bruin*, 58  
California geography, 168  
California geology, 171  
California history, 180  
California Museum of Vertebrate  
    Zoölogy, 15  
California School of Fine Arts, 16  
Campcraft, 217  
Censure, 46  
Ceramics, 124

- Change of college or major, 89  
 Chaucer, 160  
 Chemistry—College of, 15  
   courses, 141  
   major, 68  
   pre-chemistry curriculum, 78  
 Child development, 154  
 Child psychology, 231  
 Child Welfare, Institute of, 15  
 Choral, 200, 201  
 Cicero, 146, 147  
 Citriculture, 120  
 Citrus Experiment Station, 16  
 Civil engineering—courses, 191  
   pre-civil engineering curriculum, 80  
 Civil War, 180  
 Clark Memorial Library, 16, 22  
 Classification of courses, 117  
 Classics, 144  
 Clay modeling, 124  
 Climatology, 166, 167  
 Clinical psychology, 232  
 Clothing, 183  
 Coast artillery, 199  
 College Entrance Examination Board, 26  
 Colleges and departments of the University, 15  
 Commerce—College of, 15  
   courses, 139  
   teaching credential in, 99  
 Commercial education, 140  
 Commercial illustration, 125  
 Commercial law, 136  
 Community recreation, 218  
 Comparative anatomy, 242  
 Complex variable, 191  
 Composition, 159, 201  
 Comprehensive examinations, 64, 107, 160  
 Concerts, 57  
 Conchology, 172  
 Conditions, removal of, 42  
 Conducting, 201  
 Constitution, American, 37, 180, 228  
 Constitutional law, 227  
 Constitution requirement, 37, 228  
 Cookery, 184  
 Corporation finance, 137  
 Corrective physical education, 214, 218  
 Correspondence instruction, 22  
 Cosmology, 211  
 Cost accounting, 138  
 Costume, 122, 124, 126, 183, 185  
 Counterpoint, 201, 202  
 Crafts, 122, 123, 126  
 Credential fee, 116  
 Credentials, teaching, 38, 96, 101, 111  
 Crime and delinquency, 152  
 Crystallography, 171  
 Culture and race relations, 152  
 Curriculum, 154, 156  
 Cytology, 188, 244  
 Daily Bruin, 58  
 Dancing, 217, 218  
 Dante, 186  
 Debating, 162  
 Deficiencies, admission, 26, 30  
 Degrees, regulations concerning, 38  
 Dentistry—College of, 16  
   pre-dental curriculum, 79  
 Departmental majors, 66, 94, 99  
 Departments of the University, 15  
 Deposits, 49  
 Descriptive geometry, 193  
 Design, 122, 124  
 Diction and voice, 162  
 Diesel motors, 195  
 Dietetics, 183, 184, 185  
 Differential calculus, 189  
 Differential equations, 190, 191  
 Differential geometry, 191  
 Discipline, 46  
 Dismissal, honorable, 45  
 Dismissal for poor scholarship, 43  
 Dissertation, 110  
 Doctor's degree, 109  
 Dormitory, 51  
 Drama, English, 160  
 Dramatic interpretation, 162, 164, 174  
 Drawing, freehand, 122, 123  
 Drawing, mechanical, 192, 193  
 Echinology, 172  
 Economic botany, 133  
 Economic geography, 166, 168  
 Economic geology, 86, 170, 171  
 Economics, 68, 149  
 Education—courses, 99, 153  
   School of, 15  
   (See Teachers College)  
 Educational measurement, 154  
 Educational psychology, 231  
 Elections, 226  
 Electrical engineering, 81  
 Electric apparatus, 194, 195  
 Electricity and magnetism, 221, 222  
 Elementary teaching credential, 101  
 Embryology, 243  
 Employment, 53  
 Endocrinology, 244  
 Engineering—College of, 15  
   pre-engineering curricula, 80  
 Engineering, civil, 80, 191  
 Engineering, electrical, 81  
 Engineering, mechanical, 81, 192  
 Engineering drawing, 192  
 English—courses, 69, 157  
   examination in, for foreigners, 31  
   (See Subject A)  
 English history, 178, 179, 181  
 Entomology, 118  
 Epistemology, 211  
 Esthetics, 210, 232

- Ethics, 208, 209  
 Ethnography, 233  
 Euripides, 147  
 European geography, 167  
 European history, 178, 179, 180  
 Examinations—comprehensive, 64, 107, 160  
     condition, 42  
     entrance, 26  
     for credit, 44  
     medical, 33, 96, 111  
     piano test, 37  
     regulations concerning, 44  
     special, 42  
 Expenses of students, 47, 53  
 Experimental Biology, Institute of, 15  
 Experimental education, 156  
 Experimental psychology, 230, 232  
 Expulsion, 46  
 Extension Division, 15, 22, 62  
 Failures and conditions, 42  
 Family relationships, 184  
 Far East, 180, 226  
 Fees, 47  
 Fielding, 161  
 Field majors for credentials, 113  
 Final examinations, 44  
 Finance, 137, 150  
 Finance, mathematics of, 139  
 First aid, 213, 216  
 Folk dancing, 216  
 Food, 183, 184  
 Food chemistry, 142  
 Foreign language—  
     credit in, foreign students, 31  
     for junior certificate, Letters and Science, 61, 62  
     for junior certificate, Business Administration, 93  
     for junior certificate, Teachers College, 97  
     for higher degrees, 108, 109  
 Foreign relations, 226  
 Foreign schools, admission from, 31  
 Foreign trade, 151  
 Forensics, 162  
 Forestry, 102, 133  
 Freehand drawing, 122, 123  
 French, 69, 163  
 French civilization, 165  
 Fruit production, 120  
 Furniture, 124, 125  
 General secondary teaching credential, 112  
 Genetics, 243  
 Geography, 69, 166  
 Geology, 69, 169  
 Geometry, 190, 191  
 Geometrical optics, 221  
 Geomorphology, 171  
 Geophysics, 171  
 German, 70, 173  
 German civilization, 175  
 Glee Club, 200  
 Goethe, 174, 175, 176  
 Gothic, 175  
 Government, 224  
 Government of the University, 18  
 Governmental Research, Bureau of, 16, 229  
 Grade points, 41  
 Grades of scholarship, 41  
 Graduate School of Tropical Agriculture, 16  
 Graduate study, 31, 106  
 Great books, 159  
 Great personalities, 178  
 Grecian history, 178  
 Greek, 70, 147  
 Greek drama, 148  
 Guidance, 155  
 Guidance and Placement, Bureau of, 54  
 Gymnasium facilities, 35  
 Gymnasium teaching, 214, 218  
 Gymnastics, 213, 216  
 Gymnosperms, 133  
 Harmony, 201  
 Hastings College of the Law, 16  
 Health education, 217  
 Heat, 221, 222  
 Heat power engineering, 193  
 Herodotus, 147  
 High school electives, 28  
 High school program, 24  
 Hispanic America, 179, 181  
 Historiography, 180  
 History, 70, 177  
 History of art, 124, 125  
 History of astronomy, 129  
 History of education, 154, 155  
 History of mathematics, 190  
 History of music, 202  
 History of philosophy, 208  
 History of psychology, 231  
 History of the University, 17, 19  
 Home economics—courses, 182  
     credentials in, 99  
 Home economics education, 185  
 Homer, 147  
 Honorable dismissal, 45  
 Honors, 39, 77, 95, 101, 105  
 Hooper Foundation for Medical Research, 16  
 House furnishing, 122, 124  
 Household administration, 183, 184  
 Household science, 70, 182  
 House planning, 125  
 Human geography, 167  
 Human physiology, 245  
 Hygiene, 213, 216

- Idealism, 209  
 Illustration, 122, 125  
 Incidental fee, 47  
 Indian, American, 233  
 Industrial arts education, 195  
 Industrial arts teaching credential, 100  
 Industrial management, 137  
 Infantry training, 197, 198  
 Inorganic chemistry, 143  
 Institute for Social Science Research, 16  
 Institute of Child Welfare, 15  
 Institute of Experimental Biology, 15  
 Institute of Social Sciences, 15  
 Instrumentation, 202  
 Insurance, 138, 150  
 Integral calculus, 189, 190  
 Interior decoration, 122, 125, 126  
 International finance, 150  
 International law, 226  
 International relations, 15, 71, 226  
 Invertebrate paleontology, 172  
 Invertebrate zoology, 244  
 Investments, 137  
 Irrigation, 119  
 Italian, 186
- Journalism, 91**  
 Junior certificate—College of Business  
   Administration, 92  
   College of Letters and Science, 60  
   Teachers College, 96  
   honorable mention with, 77, 101  
 Junior college, 156  
 Junior college teaching credential, 115  
 Junior high school teaching credential, 101  
 Jurisprudence—courses, 225  
   School of, 15
- Kant, 209  
 Kellogg Institute of Animal Husbandry,  
   16  
 Kindergarten-primary teaching credential,  
   101  
 Kindergarten teaching, 154  
 Kinesiology, 214, 218
- Laboratory fees, 49  
 Labor economics, 138, 150  
 Landscape, 125  
 Languages—credit in, for foreign students,  
   81  
   for admission, 24, 28  
   for junior certificate, Letters and  
   Science, 61, 62  
   for junior certificate—Business Admin-  
   istration, 93  
   for junior certificate, Teachers College,  
   97  
   requirements for master's degree, 108  
   requirements for doctor's degree, 109  
 Late registration, 33
- Latin, 72, 145  
 Latin America, 167  
 La Verne Noyes scholarship, 56  
 Law—courses, 225, 227  
   Hastings, College of the, 16  
   pre-legal curriculum, 82  
 Least squares, 128  
 Leave of absence, 45  
 Lectures, 58  
 Legislatures, 226  
 Letters and Science, College of, 15, 16, 60  
 Letters and Science list of courses, 64  
 Librarianship—curriculum, 91  
   School of, 15  
 Library, 22  
 Lick Astronomical Department, 16  
 Life class, 125  
 Life Sciences, 187  
 Light, 221, 222  
 Literature, English, 159  
 Living accommodations, 51, 52  
 Loans, 56  
 Lockers, 35  
 Logic, 208, 210  
 Los Angeles Medical Department, 16  
 Lower division, 60, 92, 96  
 Lucretius, 146
- Machine drawing, 193  
 Machine shop, 194  
 Major subjects—Letters and Science, 66  
   Business Administration, 94  
   Teachers College, 99  
   graduate study, 106, 109  
 Management and Industry, 94  
 Marketing, 94, 139  
 Marlowe, 161  
 Master's degrees, 106  
 Materials of construction, 191  
 Mathematics, 72, 188  
 Mathematics for admission, 24  
 Mathematics, business, 189  
 Mathematics, teaching of, 191  
 Matriculation examinations, 26  
 Measurement, educational, 154  
 Mechanical drawing, 192, 193  
 Mechanical engineering—courses, 192  
   pre-mechanical curriculum, 81  
 Mechanic arts, 192  
 Mechanic arts teaching credential, 100  
 Mechanics, analytic, 189, 221  
 Medical examinations, 33, 96, 111  
 Medical facilities, 34  
 Medical technicians, 73  
 Medicine—Medical School, 15, 16  
   pre-medical curriculum, 82  
 Medieval history, 178, 180  
 Medieval Latin, 146  
 Metabolism, 184  
 Metal craft, 126, 194  
 Metallurgy, 86

- Metaphysics, 208  
 Meteoritics, 129  
 Meteorology, 166, 167  
 Mexico, 167, 233, 236  
 Microbiology, 131  
 Micropaleontology, 172  
 Microtechnique, 132, 243  
 Middle ages, 178, 180  
 Military science and tactics—courses, 196  
     requirement, 34  
 Milton, 160, 161  
 Mineral grain analysis, 172  
 Mineralogy, 171  
 Mining—College of, 15  
     pre-mining curriculum, 85  
 Minors—Teachers College, 98  
     for credentials, 99, 100  
 Mira Hershey Hall, 51  
 Mira Hershey Hall scholarship, 56  
 Money and banking, 150, 151  
 Morphology, 134  
 Municipal government, 227  
 Museum of Paleontology, 15  
 Music—courses, 200  
     examination for kindergarten students,  
         37  
     teaching credentials in, 100  
 Music analysis, 201, 216  
 Music appreciation, 200  
 Music education, 202, 203  
 Musical events, 57  
 Mycology, 134
- Nautical astronomy, 128, 129  
 Naval science, 85, 204  
 Navigation, 128, 129  
 Neo-Classicism, 161  
 New Testament, 148  
 Nonresident students, tuition fee, 47, 48  
 Novel, 160  
 Nuclear physics, 228  
 Numbers, theory of, 190  
 Nursery School, 241  
 Nursing curricula, 86  
 Nursing education, 91  
 Nutrition, 184, 185
- Oath of allegiance, 116  
 Occupations, Bureau of, 54  
 Odyssey, 147  
 Officers of administration, 13  
 Opera, 202  
 Optics, 221, 222  
 Optometry, 89  
 Orbits, 129  
 Orchard practices, 120  
 Orchestra, 200, 201  
 Organic chemistry, 142, 143  
 Organization of the University, 17  
 Oriental art, 125  
 Ovid, 145, 146
- Pacific Coast history, 178, 181  
 Pageantry, 217  
 Painting, 122, 123, 125  
 Paleontology, 172, 245  
 Paragenesis of minerals, 171  
 Parasitology, 244  
 Penmanship, 140  
 Personnel management, 138  
 Petroleum engineering, 86  
 Petroleum geology, 170  
 Petrology, 170, 171  
 Pharmacy—College of, 15, 16  
     curriculum, 89  
 Philology, 145–148, 165  
 Philosophy, 73, 208  
 Phonetics, 162  
 Photography, 194  
 Physical chemistry, 143  
 Physical education—requirements, 34  
     credentials in, 100  
 Physical education for men, 100, 212  
 Physical education for women, 100, 215  
 Physical geology, 160, 170  
 Physics, 66, 73, 220  
 Physiography, 169, 170  
 Physiology, 245  
 Phytopathology, 134  
 Piano, 201, 202  
 Piano test, 37  
 Plane surveying, 191  
 Plant cytology, 133  
 Plant ecology, 134  
 Plant nutrition, 119  
 Plant pathology, 119  
 Plant physiology, 132, 133  
 Plant science curriculum, 103  
 Plato, 147, 148, 209  
 Playground administration, 208  
 Poetry, 160  
 Political geography, 168  
 Political parties, 226, 228  
 Political science, 73, 224  
 Pomology, 120  
 Pope, 160  
 Population problems, 152  
 Portugal, 179  
 Portuguese, 236  
 Pottery, 124  
 Practice teaching, 240  
 Pragmatism, 209  
 Pre-agricultural engineering curriculum,  
     81  
 Pre-chemistry curriculum, 78  
 Pre-civil engineering curriculum, 80  
 Pre-dental curriculum, 79  
 Pre-electrical engineering curriculum, 81  
 Pre-legal curriculum, 82  
 Pre-mechanical engineering curriculum,  
     81  
 Pre-medical curriculum, 82  
 Pre-mining curriculum, 85

- Preparation for University curricula, 27  
 Preventive medicine, 131  
 Primitive society, 233  
 Printing, 193  
 Private study, 44  
 Prizes, 57  
 Probation, 43  
 Program limitation, 41  
 Projective geometry, 190  
 Psychology, 74, 230  
 Pteridophytes, 133  
 Public administration, 228  
 Public Administration, Bureau of, 15  
 Public finance, 150  
 Public health, 91, 131  
 Public health nursing, 88, 131  
 Public service curriculum, 74  
 Public speaking, 161  
 Public utilities, 151
- Qualifying examinations, 110  
 Quantitative analysis, 142  
 Quantum theory, 223
- Refund of fees, 50  
 Regents, 11  
 Regional climatology, 167  
 Regional geography, 168  
 Registration, 33  
 Reinstatement, 44  
 Religion, 203, 209, 232  
 Religious Center, 59  
 Removal of admission deficiencies, 26, 30  
 Renaissance, 165, 179  
 Residence requirements, 39, 50, 63, 98, 106, 109, 111  
 Retail store management, 139  
 Romance philology, 165  
 Rome, 173  
 Rural education, 155  
 Russia, 179
- Sales management, 139  
 Sanitation, 184, 213  
 Schiller, 174  
 Scholarship—grades of, 41  
     minimum requirements, 43  
 Scholarships, 55  
 School administration, 155  
 School law, 155  
 Sciences—required in Letters and Science, 61  
     required in Business Administration, 93  
     required in Teachers College, 97  
 Scientific German, 174  
 Scott, 161  
 Scouting, 213  
 Scripps Institution of Oceanography, 16  
 Sculpture, 124, 126  
 Secondary education, 155, 156
- Secondary teaching credentials, 96, 101, 112  
 Self-support of students, 53  
 Shakespeare, 160, 161  
 Sheet metal, 194  
 Shop work, 193, 194, 195  
 Shorthand, 139, 140  
 Short story, 160  
 Silver Latin, 145  
 Site of the campus, 20  
 Smith-Hughes Act, 96  
 Social case work, 131  
 Social foundations of education, 154  
 Social institutions, 151  
 Social insurance, 150  
 Social psychology, 232  
 Social reform, 150  
 Social Science Research, Institute for, 16  
 Social Sciences, Institute of, 15  
 Social service, 91  
 Social studies, 180  
 Sociology, 75, 151  
 Soils, 119, 131  
 Solfeggio, 200  
 Sonata form, 202  
 Sophocles, 148  
 Sound, 221, 222  
 South America, 167  
*Southern Campus*, 58  
 Spanish, 76, 234  
 Spanish civilization, 236  
 Spanish literature, 236  
 Special examinations, 42  
 Special secondary teaching credentials, 101  
 Special students, 23, 30  
 Spectroscopy, 222  
 Spenser, 161  
 Stage craft, 122, 124, 125  
 Statistics, 138, 150, 190  
 Status of students, 23  
 Storage batteries, 193  
 Structural geology, 169, 171  
 Study-list limits, 37, 40  
 Subject A, 29, 36, 237  
 Subtropical horticulture, 102, 120  
 Summer Sessions, 21, 62  
 Supervision, 156, 240  
 Surplus matriculation credit, 29  
 Survey of curricula, 21  
 Surveying, 191  
 Surveying camps, 15, 16, 191  
 Suspension, 46  
 Swedish, 176  
 Swimming, 213, 216
- Tacitus, 146  
 Teachers College, 16, 96  
 Teaching credentials, 88, 96, 101, 111  
 Teaching experience, credit for, 29  
 Teaching practice, 240

- Tennis, 213, 216  
Test construction, 154  
Textiles, 125, 188  
Theater, 122, 124, 125  
Therapeutic gymnastics, 218  
Thermodynamics, 143, 222  
Theses, 107, 109, 110  
Thucydides, 148  
Tractors, 195  
Training department, 238  
Transportation, 151  
Trigonometry, 189  
Tuition for nonresidents of California,  
47, 48  
Typing, 139, 140  
Typography, 124
- Unclassified students, 23, 32  
United States history, 173, 179, 180, 181  
Units of work and credit, 39  
University Farm, 16  
University of California Press, 15  
University Religious Center, 59  
Upper division, 63, 94, 98
- Vaccination requirement, 33  
Vector analysis, 190, 191  
Vergil, 145, 146  
Vertebrate embryology, 243  
Vertebrate paleontology, 245  
Vertebrate zoölogy, 243, 244  
Visual instruction, 22  
Vocational arts credential, 96  
Vocational education, 155  
Voice, 200, 201  
Voltaire, 165
- Warning, 43, 46  
Wave motion, 222  
Weather and climate, 166  
Weaving, 125  
Westward movement, 180  
Woodwind, 201  
Woodwork, 193, 194  
World literature, 159
- Year-courses for junior certificate, 62, 97  
Y. W. C. A., 59  
Zoölogy, 77, 242

## ADMINISTRATIVE BULLETINS—(Concluded)

- The University of California—An Introduction to the Berkeley Campus: An illustrated circular of information.
- The Prospectus of the College of Agriculture: General information concerning the College of Agriculture at Berkeley, Davis, Los Angeles, and elsewhere; its organization, requirements for admission, degrees, etc.
- The Announcement of the Division of Forestry.
- The Announcement of the Nondegree Curriculum, College of Agriculture, Davis.
- The Annual Report of the College of Agriculture and the Agricultural Experiment Station.
- The Bulletins and Circulars of the Agricultural Experiment Station.
- The Annual Commencement Program containing the list of degrees conferred (at Berkeley), scholarships, prizes, and other honors.
- The Announcement of the College of Commerce.
- The Announcement of the School of Education.
- The Announcement of the College of Engineering.
- The Announcement of the Graduate Division.
- The Announcement of the School of Jurisprudence.
- The Announcement of the School of Librarianship.
- The Announcement of the Curriculum in Optometry.
- The Announcement of the Curriculum in Social Service.
- The Catalogue of Officers and Students, Section I (Berkeley Departments).  
Published in September and February. Price, 60 cents.
- The President's Biennial Report.
- The Annual Register. Price, \$1.00.
- The Announcement of the Summer Sessions, Berkeley.

---

### Bulletins Referring Primarily to Schools and Colleges of the University in San Francisco

- The Announcement of the College of Dentistry.
- The Announcement of the Medical School.
- The Announcement of the Curricula in Nursing.
- The Announcement of the College of Pharmacy.
- The Announcement of the Hastings College of the Law.
- The Announcement of the California School of Fine Arts.