

UNIVERSITY OF CALIFORNIA BULLETIN

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THIRD SERIES, VOLUME XXVIII, NUMBER 9, NOVEMBER 1, 1934

GENERAL CATALOGUE

1934-35

**UNIVERSITY OF CALIFORNIA
AT LOS ANGELES**

**FOR SALE BY THE STUDENTS' COOPERATIVE BOOK STORE,
LOS ANGELES**

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Administrative Bulletins of the University of California

1934-35

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.

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 Teachers College, and in the Branch of the College of Agriculture in Southern California, for the master's degree, and for teaching credentials; students' fees and expenses; and announcements of courses of instruction in the University of California at Los Angeles. Price, 80 cents.

The Bulletin of Information for Prospective Students of the University of California at Los Angeles: containing general information concerning admission, curricula, living conditions, and expenses.

The Announcement of Graduate Study at the University of California at Los Angeles.

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 half-year immediately following. Price, 10 cents.

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, Mining and Engineering; requirements for certificates in several curricula; students' fees and expenses, and announcements of courses of instruction in the departments at Berkeley. Price, 30 cents.

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 Courses in Forestry.

The Annual Announcement of the Farmers' Short Courses.

The Annual Report of the College of Agriculture and the Agricultural Experiment Station.

The Bulletins and Circulars of the Agricultural Experiment Station. Address the College of Agriculture, Berkeley.

The Circular of the California School of Fine Arts, San Francisco.

(Continued on third page of cover)

University of California Bulletin

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GENERAL CATALOGUE

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

FOR THE

ACADEMIC YEAR, 1934-35

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 NOVEMBER TO APRIL, AND TWICE A MONTH FROM MAY TO OCTOBER.

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.*

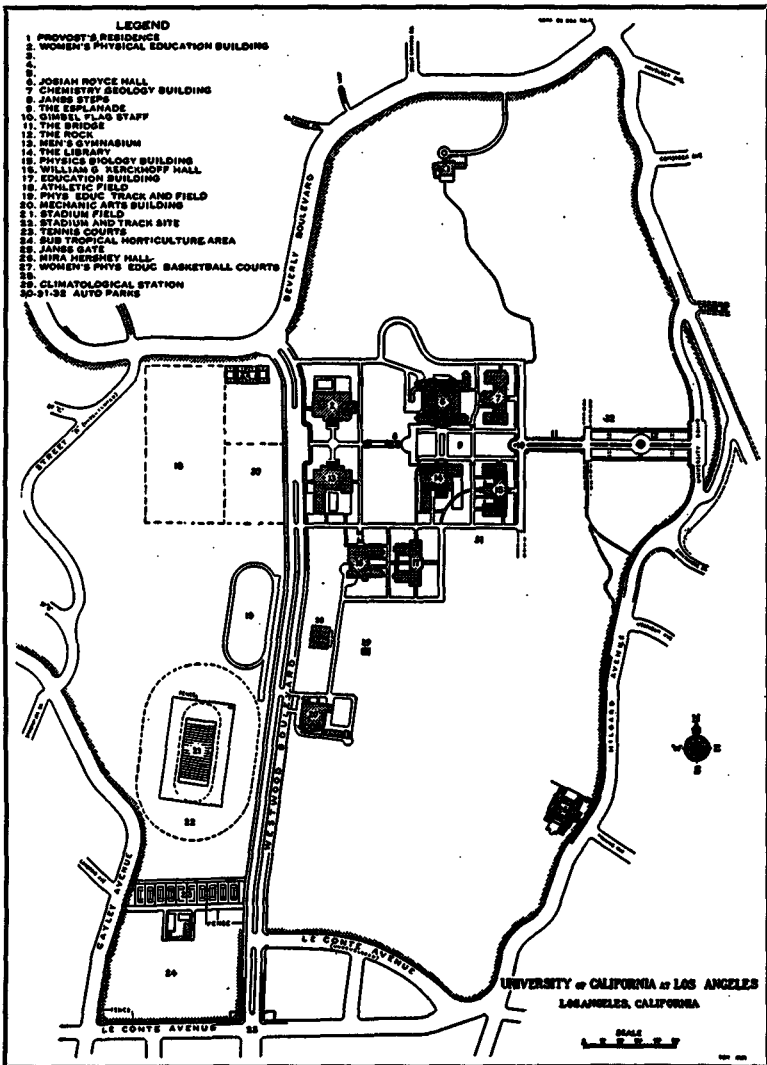
Letters of inquiry concerning the University in general should be addressed to the *Registrar, University of California, Berkeley.*

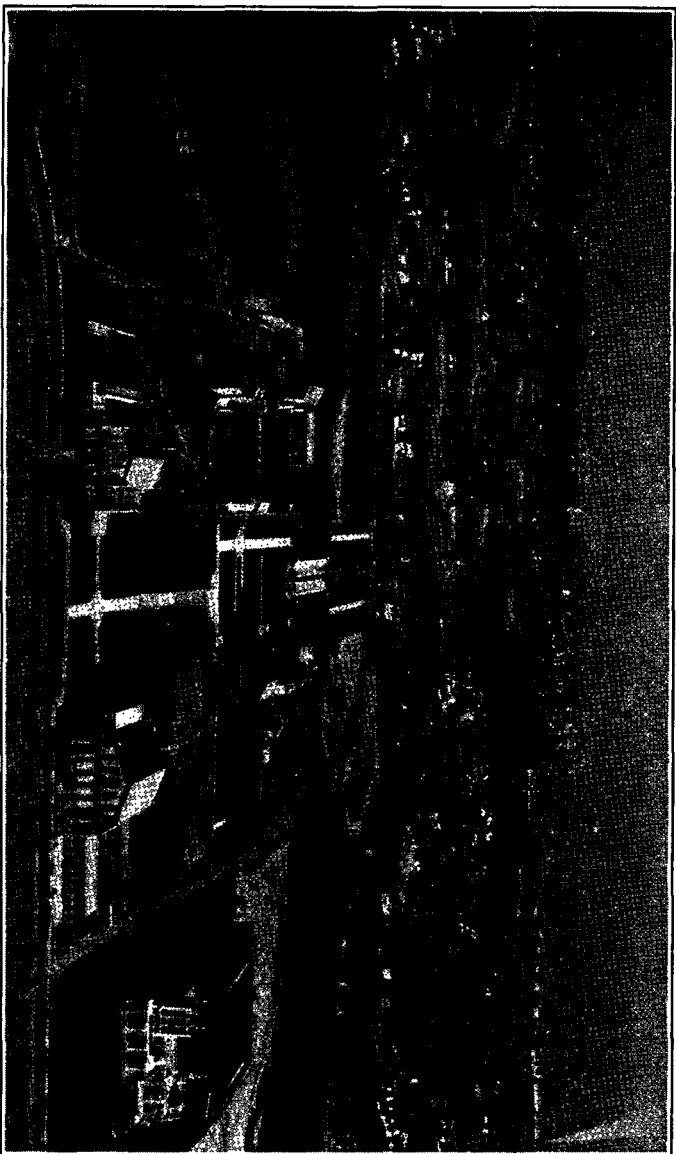
For the list of bulletins of information concerning the several colleges and departments see pages.2 and 3 of the cover.

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

LEGEND

1. PROVOST'S RESIDENCE
2. WOMEN'S PHYSICAL EDUCATION BUILDING
- 3.
- 4.
- 5.
6. JOSIAH ROYCE HALL
7. CHEMISTRY GEOLOGY BUILDING
8. JAMES STEPS
9. THE ESPLANADE
10. GIMBEL FLAG STAFF
11. THE BRIDGE
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13. MEN'S GYMNASIUM
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18. ATHLETIC FIELD
19. PHYS. EDUC. TRACK AND FIELD
20. MECHANIC ARTS BUILDING
21. STADIUM FIELD
22. STADIUM AND TRACK SITE
23. TENNIS COURTS
24. SUB TROPICAL HORTICULTURE AREA
25. JAMES GATE
26. NIRA HERSCHEY HALL
27. WOMEN'S PHYS. EDUC. BASKETBALL COURTS
- 28.
29. CLIMATOLOGICAL STATION
- 30-31-32 AUTO PARKS





THE EAST CENTRAL PORTION OF THE CAMPUS; LOS ANGELES IN THE BACKGROUND

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CALENDAR*

1934

- June 29-Aug. 10, incl. Summer Session in Los Angeles.
- Aug. 1, Wednesday Last day to receive applications for admission to graduate study in September, 1934.
- Sept. 1, Saturday Applications for admission to undergraduate study in September, 1934, with complete credentials, should be filed on or before this date to avoid penalty of late application fee.
- Sept. 12, Wednesday 8:30 a.m., Examination in Subject A.
- Sept. 13, Thursday Consultation with advisers by new students.
- Sept. 14, Friday 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.
- Sept. 15, Saturday Registration of new students (graduates and undergraduates):
 8:00 a.m.- 9:00 a.m.—A-L.
 9:00 a.m.-10:00 a.m.—M-Z.
 10:00 a.m.- 1:00 p.m.—All initials.
 Registration of any student, old or new:
 10:00 a.m.- 1:00 p.m.
- Sept. 17, Monday Instruction begins.
- Sept. 22, Saturday Special examinations in Subject A.
- Sept. 24, Monday Last day to file registration books or to change study-lists without fee.
- Oct. 1, Monday Last day to file application for admission to candidacy for the Master's degree or for the secondary teaching credentials in February, 1935.
- Oct. 1, Monday Instruction in Subject A begins.
- Oct. 5, Friday Last day to add courses to study-lists.
- Oct. 12, Friday Last day to drop courses from study-lists without penalty of grade F (failure).
- Nov. 9, Friday End of mid-term period.
- Nov. 11, Sunday Armistice Day; Nov. 12, Monday: Academic and Administrative holiday in all departments, after 12 noon.

* 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 half-year at Berkeley will begin August 16, 1934; in the second half-year, January 11, 1935.

Nov. 15, Thursday	Last day to file without fee, notice of candidacy for bachelor's degrees in February.
Nov. 29-Dec. 2, incl.	Thanksgiving recess.
Dec. 8, Saturday	Last day to file without fee applications for supervised teaching.
Dec. 13, Thursday	Christmas recess begins.
1935	
Jan. 3, Thursday	Instruction begins.
Jan. 12, Saturday	Final examination in Subject A.
Jan. 15, Thursday	Last day to receive applications for admission to graduate study in February, 1935.
Jan. 26-Feb. 6, incl.	Final examinations, first half-year, 1934-35.
Feb. 2, Saturday	Applications for admission to undergraduate study in February, 1935, with complete credentials, should be filed on or before this date to avoid penalty of late application fee.
Feb. 6, Wednesday	Last day of first half-year, 1934-35.
Feb. 13, Wednesday	8:30 a.m., Examination in Subject A.
Feb. 14, Thursday	Consultation with advisers by new students.
Feb. 15, Friday	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. 16, Saturday	Registration of new students (graduates and undergraduates): 8:00 a.m.- 9:00 a.m.—A-L. 9:00 a.m.-10:00 a.m.—M-Z. 10:00 a.m.- 1:00 p.m.—All initials. Registration of any student, old or new: 10:00 a.m.- 1 p.m.
Feb. 18, Monday	Instruction begins.
Feb. 19, Tuesday	Last day to file (at Berkeley) applications for fellowships and graduate scholarships for 1935-36, tenable at Berkeley.
Feb. 22, Friday	Washington's Birthday: Academic and Administrative holiday in all departments.
Feb. 23, Saturday	Special examination in Subject A.
Feb. 25, Monday	Last day to file registration books or to change study-lists without fee.
Mar. 1, Friday	Last day to file applications for scholarships at Berkeley (tentative).
Mar. 4, Monday	Last day to file application for admission to candidacy for the Master's degree or for the secondary teaching credentials in June, 1935.

Mar. 4, Monday	Instruction in Subject A begins.
Mar. 8, Friday	Last day to add courses to study-lists.
Mar. 15, Friday	Last day to drop courses from study-lists without penalty of grade F (failure).
Mar. 23, Saturday	Charter Day.
Apr. 1, Monday	Last day to file applications for scholarships for the academic year, 1935-36.
Apr. 12, Friday	End of mid-term period.
Apr. 27, Saturday	Last day to file without fee, applications for supervised teaching.
May 1, Wednesday	Last day to file without fee, notice of candidacy for bachelors' degrees in June.
May 20, Monday	Last day for filing in final form with the committee in charge, theses for the Master's degree to be conferred in June, 1935.
May 25, Saturday	Final examination in Subject A.
May 30, Thursday	Memorial Day: Academic and Administrative holiday in all departments.
June 7-June 17, incl.	Final examinations, second half-year, 1934-35.
June 19-July 16, incl.	Summer Course in Surveying (tentative).
June 21, Friday	Sixteenth Annual Commencement at Los Angeles.
June 28-Aug. 9, incl.	Summer Session at Los Angeles (tentative).

THE REGENTS OF THE UNIVERSITY

NOTE.—The regular meetings of the Regents are held as follows: on the second Friday in February, August, October, November, and December, in San Francisco; on the day preceding Charter Day in March in Berkeley; on the day preceding Commencement at Berkeley in May in Berkeley; on the second Friday of September, January, and April, and on the day preceding Commencement at Los Angeles in June in Los Angeles. The meetings are held at such places as may from time to time be determined, but ordinarily at the Governor's Office, State Building, San Francisco; and at Kerekhoff Hall in Los Angeles. The July meeting is usually omitted. Ordinarily committees meet at 901 Crocker Building, San Francisco.

REGENTS EX OFFICIO

His Excellency **FRANK F. MERRIAM, B.S.**
Governor of California and President of
the Regents
Sacramento

A. BLANCHARD MILLER
President of the State Board of Agriculture
Fontana

Lieutenant-Governor of California

JOSEPH MOORE CUMMING
President of the Mechanics Institute
85 Post st, San Francisco

Speaker of the Assembly

VIERLING KERSEY, M.A., LL.D.
State Superintendent of Public Instruction
Mull bldg, Sacramento

PRESTON HOTOHKIS, A.B.
President of the California Alumni Association
Pacific Finance bldg, Los Angeles

ROBERT GORDON SPROUL, B.S., LL.D.
President of the University
219 California Hall, Berkeley

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.

GARRET WILLIAM McENERNEY (1936)
2002 Hobart bldg, San Francisco

GEORGE I. COCHRAN, LL.D. (1946)
501 West Sixth st, Los Angeles

WILLIAM HENRY CROCKER, Ph.B. (1940)
Crocker First National Bank, San Francisco

MRS. MARGARET RISHEL SARTORI (1938)
725 W Twenty-eighth st, Los Angeles

JAMES KENNEDY MOFFITT, B.S. (1940)
41 First st, San Francisco

JOHN RANDOLPH HAYNES, Ph.D., M.D. (1938)
429 Consolidated bldg, Los Angeles

CHARLES ADOLPH RAMM, B.S. (1944)
1100 Franklin st, San Francisco

JOHN FRANCIS NEYLAN (1944)
Crocker First National Bank bldg, San Francisco

EDWARD AUGUSTUS DICKSON, B.L. (1942)
425 S Windsor blvd, Los Angeles

CHARLES COLLINS TEAGUE, LL.D. (1946)
Santa Paula

JAMES MILLS (1942)
8015 Garber rd, Berkeley

SIDNEY M. EHREMAN, B.L., LL.B. (1948)
700 Nevada Bank bldg, San Francisco

CHESTER HARVEY ROWELL, Ph.B., LL.D. (1936)
149 Tamalpais rd, Berkeley

JOHN GALLWEY, M.D., Ph.D., LL.D. (1948)
1195 Bush st, San Francisco

MORTIMER FLEISHHACKER (1950)
Anglo-California National Bank, San Francisco

AMADEO PETER GIANNINI (1950)
Bank of America, 1 Powell st, San Francisco

OFFICERS OF THE REGENTS

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President
Sacramento

William Henry Crocker, Ph.B.
Chairman
Crocker First National Bank, San Francisco

Robert M. Underhill, B.S.
Secretary, Treasurer and Land Agent
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. MacLise, B.S.
Assistant Secretary and Assistant Comptroller
48 Library, University of California at Los Angeles

Ira F. Smith, B.S.
Assistant Comptroller
University Farm, Davis

F. Stanley Durie
Assistant Comptroller
103 U. C. Hospital, San Francisco

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

STANDING COMMITTEES OF THE BOARD OF REGENTS
FOR THE YEAR 1984-85*

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Regents Mills, Miller, Teague, and Giannini

Educational Policy:

Regents Rowell, Moffitt, Ramm, Mrs. Sartori, Ehrman, Teague, and Hotchkis

Educational Relations:

Regents Kersey, Rowell, Ramm, Neylan, and Hotchkis

Endowments:

Regents Mrs. Sartori, Hotchkis, Cochran, McEnerney, Fleishhacker, Neylan, and Teague

Engineering:

Regents Ramm, Cumming, Mills, and Miller

Executive Committee:

This committee consists of the chairmen of all standing committees and the President of the California Alumni Association

Finance:

Regents Moffitt, McEnerney, Fleishhacker, Crocker, Neylan, Cochran, Ehrman, and Giannini

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Regents Fleishhacker, Dickson, Ramm, Cumming, Neylan, Teague, and Ehrman

Jurisprudence:

Regents McEnerney, Ehrman, and Cochran

Letters and Science:

Regents Ehrman, Ramm, Moffitt, Kersey, and Mrs. Sartori

Library, Research and Publications:

Regents Cochran, Gallwey, Moffitt, Rowell, Kersey, and Hotchkis

Lick Observatory:

Regents Neylan, Crocker, Cumming, Gallwey, and Fleishhacker

University of California Medical School:

Regents Crocker, Moffitt, Ramm, Haynes, Gallwey, Neylan, Giannini, and Ehrman

University of California at Los Angeles and Scripps Institution of Oceanography:

Regents Dickson, Teague, Cochran, Mrs. Sartori, Haynes, Kersey, and Hotchkis

Wilmerding School:

Regents Giannini, Cumming, and Moffitt

* The President of the Board of Regents and the President of the University are *ex officio* members of all committees of the Board. In each committee the name of the chairman is first and the name of the vice-chairman is second.

ADMINISTRATIVE OFFICERS
OF THE
UNIVERSITY OF CALIFORNIA AT LOS ANGELES

ROBERT GORDON SPROUL, B.S., LL.D., President of the University.

WILLIAM WALLACE CAMPBELL, Sc.D., LL.D., President Emeritus of the University.

ERNEST CARROLL MOORE, Ph.D., LL.D., Vice-President and Provost of the University of California at Los Angeles.

DEMING G. MACLISE, B.S., Assistant Comptroller of the University, and Assistant Secretary of the Regents.

HARRY MUNSON SHOWMAN, E.M., M.A., Registrar.

MERTON E. HILL, Ph.D., Director of Admissions.

CLARENCE HALL ROBISON, Ph.D., Associate Director of Admissions.

JOHN EDWARD GOODWIN, B.L., B.L.S., Librarian.

LILLIAN RAY TITCOMB, M.D., Physician for Women.

DONALD MACKINNON, M.D., Physician for Men.

M. BURNEY PORTER, Appointment Secretary.

VERN O. KNUDSEN, Ph.D., Dean of Graduate Study.

CHARLES HENRY RIEBER, Ph.D., LL.D., Dean of the College of Letters and Science.

MARVIN LLOYD DARSIE, Ph.D., Dean of the Teachers College.

HELEN MATTHEWSON LAUGHLIN, Dean of Women.

EARL JOYCE MILLER, Ph.D., Dean of Men.

HURFORD E. STONE, M.S., Assistant Dean of Men.

GORDON S. WATKINS, Ph.D., Dean of the Summer Session.

LEON D. BATCHELOR, Ph.D., Director of the Branch of the College of Agriculture in Southern California.

ROBERT W. HODGSON, M.S., Assistant Director of the Branch of the College of Agriculture in Southern California.

THE UNIVERSITY

The University comprises the following colleges, divisions, and departments:

I. AT BERKELEY

The Colleges of

Letters and Science,

Commerce,

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

Engineering (including the Surveying Camp at Fairfax),

Mining,

Chemistry.

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, providing lectures, recitals, motion pictures and other material for visual instruction).

The California Museum of Vertebrate Zoology.

The Museum of Paleontology.

The Museum of Anthropology, Archaeology, and Art.

The Institute of Child Welfare.

The Institute of Social Sciences.

The Institute of Experimental Biology.

II. AT MOUNT HAMILTON

The Lick Astronomical Department (Lick Observatory).

III. AT SAN FRANCISCO

California School of Fine Arts,
 Hastings College of the Law,
 Medical School (second, third, fourth, and fifth years, including Hospitals),
 The George Williams Hooper Foundation for Medical Research,
 College of Pharmacy,
 College of Dentistry.

IV. AT LOS ANGELES

University of California at Los Angeles:

College of Letters and Science,

Teachers College,

*The Branch of the College of Agriculture in Southern California, including the courses of instruction in Subtropical Horticulture and the Agricultural Experiment Station's activities at Los Angeles,

The Lower Division in Chemistry, Commerce, Engineering, and Mining,
 Graduate Study (in academic fields, and in agriculture),

The Summer School of Surveying.

Institute for Social Science Research.

Los Angeles Medical Department. Graduate instruction only.

V. AT DAVIS

The Branch of the College of Agriculture at Davis, and the University Farm, including a branch of the Department of Agriculture and the Agricultural Experiment Station.

VI. AT RIVERSIDE

*The Branch of the College of Agriculture in Southern California, including the Citrus Experiment Station and Graduate School of Tropical Agriculture.

VII. AT LA JOLLA

The Scripps Institution of Oceanography.

VIII. AT POMONA

W. K. Kellogg Institute of Animal Husbandry.

* The Branch of the College of Agriculture in Southern California includes all activities of the College of Agriculture at Riverside and Los Angeles.

ORGANIZATION AND GOVERNMENT

HISTORY OF THE UNIVERSITY

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 Rev. Henry Durant. In 1853, under the auspices of the Presbytery of San Francisco and of the Congregational Association of Oakland, Mr. Durant opened in Oakland the "Contra Costa Academy," but soon changed the name to that of "College School," in order to signify that the undertaking was only preparatory to a projected college. In 1855 such an institution was incorporated under the name of "College of California." In 1860 that college was formally opened, and classes were graduated from 1864 to 1869 inclusive. The instruction was given in buildings in Oakland, but in 1856 a tract of land five miles to the north was obtained, and the college buildings were begun. In 1866 the name of Berkeley was given to the townsite about the 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." A further impulse was given in 1862 by the passage of the Morrill Act for the establishment of an Agricultural, Mining, and Mechanical Arts College.

In 1867 these three forces began working together to one end—the establishment of a University of California. The private enterprise known as 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 the Governor on March 23, 1868, and the new institution opened its doors for instruction in September, 1869.

The first appointee to the Presidency 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-).

ORGANIZATION

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 the United States, and by private gifts, it conducts courses of instruction in literature, science, and the professions. The instruction in all of the colleges of the University is open to all qualified persons, without distinction of sex.

GOVERNMENT

The government of the University of California is entrusted 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. To this corporation, by the provision of Article IX, Section 9, of the Constitution, the State has committed the administration of the University "with 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; but 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 Board of 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 Board of Regents all candidates for degrees in course and has general supervision of the discipline of students.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES

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; and the cornerstone of the first building was laid on December 17 of that year. Instruction began 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 moved into its new quarters in September, 1914; 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 the same 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 and eighty-four acres recently 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 began in the new buildings September 23, 1929.

By action of the Regents the Branch of the College of Agriculture in Southern California 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.

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 Certificates of Completion for the general secondary and junior college teaching credentials, was authorized by the Regents, to begin in September, 1933. Accordingly 150 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 granted in June, 1934. To the fields named above there have been added for 1934-35 agriculture (subtropical horticulture), chemistry, and Spanish.

The University of California at Los Angeles is administered by the President through the Vice-President and Provost, who is appointed by the Regents on the recommendation of the President of the University.

SITE OF THE CAMPUS

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 Beverly Boulevard from Hilgard Avenue to Veteran Avenue, and is bounded on the south by LeConte and Gayley Avenues; automobiles should turn south from Beverly 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 Beverly 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 Beverly Boulevards. From *Van Nuys*, Bay Cities Transit Co. bus via Beverly Glen Boulevard. From *Santa Monica*, Pacific Electric Co. bus via Wilshire Boulevard, and Bay Cities Transit Co. bus via Santa Monica Boulevard. From *Culver City*, William Thompson Transportation Co. bus via Motor and Overland Avenues.

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.

ADMISSION TO THE UNIVERSITY

ADMISSION TO UNDERGRADUATE STATUS

The rules concerning admission to undergraduate status are administered by the Board of Admissions. Prospective applicants for admission should communicate with the Board by addressing the Director of Admissions, who will furnish the necessary forms of application.*

1. The graduate of an accredited secondary school who has not attended an institution of collegiate rank may be admitted by certificate if he meets the requirements set forth under Plan I below.

Applicants unable to meet all the subject and scholarship requirements may not be admitted to the regular sessions until these deficiencies are removed by work successfully completed elsewhere as mentioned under *Removal of Admission Deficiencies* on page 28, or by examination as explained on page 30.

2. An applicant who has attended another institution of collegiate rank may be admitted on the basis of a satisfactory record made in the other institutions attended as set forth under Plan II (page 27).
3. Applicants may gain admission by examination as set forth under Plan III (page 28).
4. For admission to Special status, see page 31.

PLAN I—ADMISSION TO FRESHMAN STANDING BY CERTIFICATE

A graduate of an accredited high school may enter the University in freshman standing provided the conditions outlined below have been satisfied.

A. The 1933 Plan

1. Graduation from an accredited high school; this usually requires the completion of sixteen subject credits.

2. Completion of a high school program that will include:

(a) History.....	1 unit
(b) English.....	3 units
(c) Mathematics (elementary algebra and plane geometry)....	2 units
(d) Science: a third- or fourth-year subject with laboratory (chemistry, or physics, or biology, or zoölogy, or botany, or physiology).....	1 unit

* Beginning November 1, 1933, a fee of \$3 will be charged every applicant for admission to the University payable when the first application is filed. Remittances should be made payable to the Regents of the University of California.

- (e) Foreign language (in one language)..... 2 units
- (f) Advanced mathematics; or chemistry, or physics—if not offered under (d); or additional foreign language in the language offered under (e) (if in another foreign language, two units will be required)..... 1 (or 2) units

3. A "B" average in those subjects listed (a) to (f) taken during the tenth, eleventh, and twelfth years of high school. Any passing mark is accepted for work completed before the tenth year.

B. The 1931 Plan

According to this plan, in effect until September, 1935, inclusive, students may be admitted who have eight units of "A's" or "B's" in the subjects (a) to (f) listed above, and who have completed fifteen subject credits with no grade less than "C."

Subject Requirements

The requirement of one unit in history (a) may be met by any two semesters in history or by a semester of civics and a semester of history. With the consent of the principal of the school courses in social science may also be counted.

For the English requirement (b) courses in public speaking, dramatics, or journalism may be offered with the consent of the principal of the school concerned.

For mathematics (c) a course in second year algebra (algebraic theory) may be offered to make up a deficiency in first year algebra; solid geometry and trigonometry may be offered to make up a deficiency in plane geometry.

The science offered in satisfaction of requirement (d) must be an advanced laboratory course organized for third- or fourth-year students and undertaken after the second year. The requirement cannot be satisfied by one-half unit of each of two sciences.

The requirement of an advanced subject (f) amounts to two units only in case the applicant elects to offer four semesters of a foreign language other than that presented under requirement (e). In this case as stated above under (e) the entire four semesters must be in one language. The requirement of one unit may be met by any two semesters of one of the following subjects: advanced mathematics; chemistry; physics; foreign language, in the same language offered under (e).

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 rests primarily with the high school authorities. However, the University believes that the definitions of the College Entrance Examination Board are an adequate guide to the proper organization of college preparatory courses and recommends that they be followed.

Scholarship Requirements

Until September, 1935, inclusive, an applicant must satisfy the grade requirement of one of the following plans. Thereafter, all applicants must meet the requirements as set forth in the 1933 Plan.

The 1933 Plan.—In this plan the scholarship requirement is based on the record made in the tenth, eleventh, and twelfth years of the high school. In the junior high school or ninth year of the four-year high school any passing mark is acceptable for the work completed.

In the senior high school or in years ten, eleven, and twelve of a four-year high school, the applicant must have attained an average grade of "B" or above in the group of courses offered to complete the subject requirements (a) to (f), inclusive, a semester grade of "A" being used to offset a semester grade of "C" in any of the required courses. No subject in which the applicant has received grade "D" will be counted in reckoning the applicant's average grade for admission or in satisfaction of the specific subject requirements.

The 1931 Plan.—(Not effective after September, 1935.) In this plan the scholarship is based on the record made in the ninth to the twelfth grades inclusive. The applicant's record must show that he has attained "A" or "B" grades in at least eight units (or sixteen half units) of the subjects specified in requirements (a) to (f) inclusive. In the reckoning of grades in accordance with the foregoing requirement, not more than one unit of grade "A" or "B" may be counted in history, three units of such grades in English, etc. In the remaining seven units of subjects prescribed for admission, "A," "B," or "C" grades will be acceptable; but no subject in which the applicant has received the lowest passing grade (D) may be counted in the total of fifteen units required for admission.

Grade Regulations.—The requirement as to grades, for both plans, is based on a system of four passing marks: A (superior), B (better than average), C (average), and D (barely passing). Principals are requested to interpret all grades in accordance with this system.

In the reckoning of grades attained by the student, *semester grades will be counted* rather than year grades.

A grade earned by repeating a course may not be counted as higher than "C," even though a higher grade may be reported. This rule does not apply to grades earned in this manner prior to March, 1931.

Removal of Deficiencies.—For a statement of the various methods by which deficiencies in the subject and scholarship requirements for admission by Plan I may be removed, see pages 28, 29.

ADMISSION TO FRESHMAN STANDING BY CERTIFICATE AND
RECOMMENDATION OF THE PRINCIPAL

An applicant who graduated from an accredited high school in California February, 1931, or before, may be admitted to the University of California in freshman standing without examination provided he presents the unqualified recommendation of the principal (Principal's Recommendation, Form A) and *in addition* a statement of the principal of the school that he was entitled to the recommendation *at the time of his graduation from the school*. A blank form for the statement regarding the recommendation may be obtained from the Office of Admissions.

PREPARATION FOR UNIVERSITY CURRICULA

In the table on the following page there is shown for each of the principal University curricula to which freshman students may be admitted the high school preparation which, in the opinion of University authorities, is desirable. Each program includes the subjects which are required for admission to the University of California, so arranged as to permit the student in a California high school to combine with the subjects thus recommended the additional subjects required for high school graduation according to regulations of the State Board of Education.

Attention is called especially to the fact that physics and chemistry are recommended in the preparation for each curriculum (with a single exception) in the College of Letters and Science. This has been done 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 release the student from a portion of the requirements for the junior certificate in the college and thereby increase his opportunity for elective study in the freshman and sophomore years of the University course.

Especial care should be exercised by the high school student in choosing a foreign language. High school Latin is valuable in itself and will satisfy either the (b) or (c) requirements of the Junior Certificate in the College of Letters and Science; other languages satisfy only the (b) requirement. The study of a modern language is important not only from the standpoint of broad cultural preparation but also for the reason that a reading knowledge of foreign languages may be very useful in the pursuit of advanced work in many departments of the University.

The high school student who plans to enter the University of California but who at the outset of his high school course is uncertain as to which of the several University curricula he may wish to follow, should insure to himself a wide range of opportunities by completing in the high school a program of

HIGH SCHOOL SUBJECTS REQUIRED FOR THE SEVERAL UNDERGRADUATE CURRICULA AND SUGGESTED ELECTIVES

College and Curriculum	History	English	Mathematics			Lab. Sci.		Foreign Language						Freshman Draw.	Geometrical Draw.	Electives
			El. Alg. Pl. G.	Alg. Theory	Trigonom.	Solid Geom.	Chemistry	Physics	French	German	Greek	Italian	Latin	Spanish		
College of Letters and Science:																
aAnthropology.....	3	3	2				1	1	2	2						1
aArchitecture.....	1	3	2				1	1	3	4	*	*	*		1	1
abArt.....	1	3	2				1	1	4	*	*	*	*			3
Astronomy.....	1	3	2	1			1	1	2	2			*		1	-
Bacteriology.....	1	3	2				1	1	*	2			*			4
Botany.....	1	3	2				1	1	2	2			2			1
Chemistry.....	1	3	2				1	1		2						4
Economics.....	1	3	2				1	1	2	2						2
English.....	2	3	2				1	1	3	*	*					-
French.....	1	3	2				1	1	4				2			1
Geography.....	1	3	2				1	1	2	2			*		1	1
Geology.....	1	3	2				1	1	2	2			*			1
German.....	1	3	2				1	1		4			2			-
Greek.....	1	3	2				1	1		3			4			1
History.....	3	3	2				1	1	*	*	*	*	2	*		3
aHousehold Art.....	3	3	2				1	1	2	*	*	*	*	*		3
Household Science.....	1	3	2				1	1	*	2			*	*		5
aItalian.....	1	3	2				1	1	*	*		4	2			1
Latin.....	1	3	2				1	1	*	*			4			1
Mathematics.....	1	3	2	1			1	1	2	2						1
abMusic.....	1	3	2				1	1	2	2			*	*		3
abNursing (Five Year Course).....	1	3	2				1	1	2	*	*	*	*	*		5
aOriental Languages.....	1	3	2				1	1	2	2			*	*		3
aPaleontology.....	1	3	2				1	1	2	2			*	*		3
Philosophy.....	1	3	2				1	1	2	*	*	*	*	*		5
abPhysical Education & Hygiene.....	1	3	2				1	1	2	*	*	*	*	*		3
Physics (and abOptometry).....	1	3	2				1	1	2	2			*	*		2
Political Science.....	3	3	2				1	1	2	2						1
Pre-Dental.....	1	3	2				1	1		4						3
Pre-Legal.....	1	3	2				1	1				3	*			4
Pre-Medical.....	1	3	2				1	1	2	2		*	*	*		3
Psychology.....	1	3	2				1	1	2	2			*	*		3
aPublic Health (Hygiene).....	1	3	2				1	1	*	2		*	*	*		5
abPublic Speaking.....	1	3	2				1	1	2	2	*	*	*	*		3
aSemitic Languages.....	1	3	2				1	1	2	2	*	*	*	*		-
aSlavic Languages.....	2	4	2				1	1	2	2		*	4	*		3
aSocial Institutions.....	1	3	2				1	1	2	2	*	*	2	4		3
Spanish (and abPortuguese).....	1	3	2				1	1					2			1
Zoology.....	1	3	2				1	1	2	2			2			1
Teachers College:																
Art.....	2	3	2				1	1	4	*				*		2
Commerce.....	1	3	2	1			1	1	2	*			*	*		3
Education.....	3	3	2				1	1	4	*		*	*	*		1
Home Economics.....	1	3	2				1	1	*	2		*	*	*		5
Mechanic Arts.....	1	3	2				1	1	*	2		*	*	*	1	1
Music.....	1	3	2				1	1	2	2		*	*	*		3
Physical Education.....	1	3	2				1	1	2	*		*	*	*		5
College of Agriculture:																
Subtropical Horticulture.....	1	3	2				1	1	*	*			2			4
cForestry; Landscape Design.....	1	4	2				1	1	*	*			2		1	1
cOther Agricultural Curricula.....	1	3	2				1	1	*	*			2			4
abCollege of Chemistry.....	1	3	2				1	1	2	2				*	1	1
abCollege of Commerce.....	1	3	2	1			1	1	2	*			*	*		3
abCollege of Engineering.....	1	3	2				1	1	*	2			*	*	1	2
abCollege of Mining.....	1	3	2				1	1	*	2			*	*		4
cCollege of Pharmacy.....	1	3	2				1	1	*	2					1	1

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 and that unless this caution be observed the student, although admitted to the University, may find himself unable to proceed to the bachelor's degree in the normal period of four years.

In the table the amount of high school credit is shown in standard units, a unit representing the measure of a subject pursued throughout the school year of from 36 to 40 weeks and constituting approximately one-quarter of a full year's work in high school.

Under Foreign Language in the table specific recommendations are shown by numerals indicating the amount of credit. The asterisk (*) indicates an acceptable substitute for a language specifically recommended.

The letters prefixed to the title of college or curriculum have the following significance:

- a. Complete major offered only at Berkeley.
- b. The first two years may be taken at Los Angeles.
- c. The student may make up a program of one year's work at Los Angeles.

If no letter is prefixed, the complete curriculum is offered at the University of California at Los Angeles.

PLAN II—ADMISSION TO ADVANCED STANDING

An applicant for admission to the University in advanced standing, in order to be so admitted, must present evidence satisfactory to the Board of Admissions respecting the work completed by him at other collegiate institutions and the grades of scholarship attained therein. A thoroughly satisfactory scholarship record, as distinguished from a record which is poor or barely passing, is required for admission in all cases. An applicant is not at liberty to disregard his collegiate record and apply for admission in freshman standing but is subject without exception to the regulations regarding admission to advanced standing.

In addition, each applicant will be required to present evidence that he has completed in full the subject and grade requirements prescribed for the admission of high school graduates in freshman standing. For a statement regarding the removal of deficiencies in these requirements see page 29.

An applicant from a *junior college or state teachers college* in California, who, upon graduation from high school did not qualify for admission in freshman standing, must present evidence that he has removed all entrance deficiencies and that he has *in addition*

(a) Completed not less than sixty semester units of work acceptable for advanced standing in the college of the University of California to which admission is sought, with a satisfactory average as distinguished from a barely passing grade, or

(b) Completed not less than fifteen semester units of work in courses acceptable for advanced standing in the college of the University to which admission is sought, with a distinctly high average of scholarship.

Subject A: English Composition.—Credit for Subject A (English Composition) is given upon certificate only to those students who enter the University with at least 60 units of advanced standing, provided they present credentials showing the completion elsewhere of the required training in composition. In all other cases an examination by this University at Berkeley or Los Angeles, or under its jurisdiction elsewhere, is required.

PLAN III—ADMISSION BY EXAMINATION

An applicant for admission whose school work in California or elsewhere has not been such as entitles him in the opinion of the Board of Admissions to admission by certificate as described under Plan I, or to admission by examination in a limited number of subjects as described on page 30, may gain admission by passing examinations in from ten to fifteen units, including the required subjects of the high school program, (a) to (f). The precise number of examinations which each applicant must take will be determined by the Board of Admissions.

The University has discontinued the holding of matriculation examinations. All applicants who enter by examination will be required to take the examinations of the College Entrance Examination Board. These examinations are usually held during the third week in June (in 1935, June 17–22, inclusive) at the following centers in California: Los Angeles, Berkeley, San Rafael, Stanford University, Santa Barbara, Carpinteria, La Jolla, Ojai, Avalon (Catalina Island), and Claremont. A circular giving information concerning the examinations and the necessary application form may be obtained directly from the College Entrance Examination Board, 431 West 117 Street, New York City. Applications and the required fee (\$10.00) should reach the Board on or before May 20, 1935.

REMOVAL OF ADMISSION DEFICIENCIES

Deficiencies in the scholarship or subject requirements for admission in freshman standing by certificate may be removed in several ways as indicated in the following paragraphs.

In considering work done after high school graduation as a basis for admission of an applicant who did not meet the requirements, it is assumed that each one has done his very best and it remains to be determined whether this best is judged good enough to offer reasonable assurance that the applicant will successfully pursue work on the University level. Unless the work undertaken is of a substantial nature and unless satisfactory grades are made in subjects of fundamental importance, the applicant must expect his scholarship average to be subject to a discount.*

1. *Work Completed in the University of California.*—While applicants with deficiencies are not admitted into regular session work, they may remove scholarship and subject deficiencies by completion with satisfactory grades of appropriate courses in the intersession, summer and post-sessions or Extension Division (class or correspondence) of the University. The program of studies proposed for this purpose should be approved by the admission authorities before being undertaken.

2. *Work Completed in Other Four-Year Colleges.*—Matriculation deficiencies in scholarship and subjects may be removed by completing with satisfactory marks a proper amount of acceptable work in another approved four-year college in the same fields in which the deficiencies were incurred.

3. *By Courses in Junior Colleges or State Teachers Colleges.*—Deficiencies may be removed by the completion with satisfactory marks of a proper amount of acceptable college work in the fields in which the deficiencies were incurred. In addition, all requirements for admission to the University in advanced standing must be satisfied. See statement on page 27.

4. *By Junior College Non-Certificate Courses.*—Work taken after high school graduation not of University grade will be accepted for the removal of entrance shortages. The scholarship standards for these courses are those required in the case of work taken in the high school. Work that is clearly repetition may be offered to make up a subject but not a scholarship deficiency; other work must be completed with "A" or "B" grades in order to remove scholarship deficiencies.

5. *By Post Graduate Work in Accredited High Schools.*—These courses are accepted in the same manner as courses completed prior to high school graduation.

6. *By Examination.*—Admission by examination is explained on page 28.

* Work of college grade undertaken to remove deficiencies incurred in the high school program is usually accepted at the rate of three semester units for one matriculation unit; i.e., a year's work in a subject in the high school. Ordinarily no credit for advanced standing will be assigned for work of college grade employed in the removal of *subject deficiencies*, although the grades received in such courses will be considered in the determination of the applicant's scholarship standing for admission.

Normally full university credit will be assigned for work of college grade employed for the removal of deficiencies in the scholarship requirements for admission to freshman standing, subject to the usual rules regarding the acceptance of credit for advanced standing.

I. REMOVAL OF MATRICULATION DEFICIENCIES BY EXAMINATION

1. *Selected Examinations.*—Deficiencies in subject or grade requirements in not more than two units may be removed by passing the appropriate examinations of the College Entrance Examination Board.

2. *Three-Field Examinations.*—If all the required subjects are offered but with a deficiency of more than two units of scholarship, the required examinations may be chosen from any three of the following four fields: (1) English or history, (2) mathematics, (3) natural science, (4) foreign language. In the field used for matriculation requirement (*f*), the required examination is as follows: if in (2), only advanced mathematics, one unit; if in (3), no science other than the physics or chemistry used for requirement (*f*); if in (4), three units of one foreign language, or two units in each of two foreign languages.

3. *Complete Set Examination.*—A high school graduate unable to qualify by either of these methods must pass examinations in at least 10 of the specified units of *The High School Program*. This applies to graduates of unaccredited schools. Applicants unable to present other credits earned in a secondary school to bring the total to fifteen units must pass in additional College Board Examinations to make up the difference.

II. 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 record fails to show a satisfactory scholarship average may be admitted only when the deficiency has been removed by additional work completed with grades sufficient to offset the shortage of grade points. This may be accomplished (1) in the intersession, summer or post-session, or the Extension Division of the University, or (2) in other approved higher institutions.

ADMISSION FROM SCHOOLS AND COLLEGES IN FOREIGN COUNTRIES

Credentials from schools and colleges in foreign countries are evaluated in accordance with the regulations governing admissions, as stated in preceding sections of this circular.

An applicant whose education has been conducted in a language other than English must satisfy the Board of Admissions that his command of English is sufficient to permit him to profit by university instruction.

The College Entrance Examination Board conducts examinations in English for this purpose in numerous centers in Mexico, Central America, South America, Europe, and Asia in April of each year. Requests for examinations in other

places must reach the Secretary of the Board not later than December 1 of the preceding year. Applications and other communications should be addressed to the College Entrance Examination Board, 431 West 117th street, New York City. The cable address is Examboard, New York.

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 grade, or for upper division or graduate courses actually taken in the University of California or in another English-speaking institution of approved standing.

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 Directed Teaching upon the recommendation of the Director of the Training Department.

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 will be assigned by the Director of Admissions. A personal interview will in general be necessary before final action can be taken.

Transcripts of record from all schools attended beyond the eighth grade are required. Applicants for special status will be required to take an aptitude test and the examination in Subject A.

Applicants will not be admitted directly from the high schools to the status of special student. The graduates of such 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.

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

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. Special students may be admitted to those regular courses for which, in the judgment of the instructors, they have satisfactory preparation. *Special students will seldom be able to undertake the work of the engineering and professional colleges or schools until they have completed the prerequisite subjects.*

Instruction is not offered in such essential preparatory subjects as elementary English, United States history, elementary Latin and Caesar, elementary physics, nor, save in the summer sessions or in the Extension Division, in elementary algebra, plane geometry, algebraic theory, or elementary chemistry.

A special student may at any time attain the status of regular student by satisfying all the matriculation requirements for the class he desires to enter. Special students should, however, use for this purpose the facilities of the Extension Division, summer sessions, College Board examinations, or of the nearby junior and four-year colleges to make up these deficiencies, as admission to special status is not designed for this purpose.

Students over twenty-four years of age at the time of admission are excused from military science.

Special students must apply for reentry in a second or subsequent semester, as special status is intended for only a limited period of time.

Prospective applicants should communicate with the Director of Admissions who will furnish forms of application for admission and for transcripts of high school record.

ADMISSION TO GRADUATE STATUS

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 Certificates of Completion leading to the general secondary or junior college teaching credentials. For consideration completed applications with supporting documents must be in the hands of the Registrar not later than August 1, 1934, for the half-year beginning September, 1934, nor later than January 15, 1935, for the half-year beginning February, 1935. Applicants for September, 1935, should communicate with the Registrar as early as possible, since the last day for receiving such applications may be set at a date well in advance of August 1, 1935.

The number of applicants that can be admitted is strictly limited, both in the several departments and in the total number; the basis of selection is promise of success in the work to be undertaken, evidenced largely by the previous college record. Notification of acceptance or rejection will be sent to each applicant as soon as possible after the date set for closing the receipt of applications. *Applicants are warned not to make definite arrangements without such notice, on the assumption that they will be accepted for enrollment.*

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 \$3.00 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.

Attention is called 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. Unclassified students are in general admitted to any undergraduate course for which the prerequisites are had; they may not enroll in any graduate course, nor is any assurance of later admission to graduate status involved. In the event of such 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.

GENERAL INFORMATION

REGULATIONS CONCERNING STUDENTS

REGISTRATION

Each student registers in the University of California at Los Angeles on days appointed for this purpose, at the beginning of each half-year. Registration covers the following steps: (1) Filling out application, 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.

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 appointment with the University Physicians at the time of registration.

LATE ADMISSION AND REGISTRATION

The student or applicant for admission should consult the calendar of the University of California at Los Angeles (which differs from the calendar of the departments at Berkeley) and acquaint himself with the dates upon which students are expected to register and begin their work at the opening of the session. Failure to register upon the stated registration day 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.

The 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 in extenuation of such deficiency.

A fee of \$2.00 is charged for late registration; this fee applies both to old students and to new.

A qualified student or applicant who fails to register upon the stated registration day on 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 may be required to obtain the written approval of all the instructors in charge of his proposed courses, as well as of the dean of his proposed college, before his registration may be completed. The qualifications of an applicant for admission to the University after the first two weeks of instruction will be given special scrutiny by the Associate Director of Admissions and the dean of the college to which admission is sought.

Transfer to the University of California at Los Angeles in February.—It is of special importance that a student in another institution who is desirous of transferring to the University of California at Los Angeles after the stated registration day of the second half-year 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 indicate the college to which he wishes admission, and the advanced standing which he expects to offer at the time of transfer.

CLASSIFICATION OF STUDENTS

A *regular student* is an undergraduate who has complied with the requirements for matriculation, and who pursues, or is entitled to pursue, the established curriculum of a college.

A student who has attained junior standing is in the "upper division," which includes the third and fourth years of the course.

A *special student* is one who, though he does not meet the University matriculation requirements, is nevertheless allowed to register for a restricted program because of maturity and fitness to carry the special work elected. His fitness to carry the work may be attested to by official transcripts of preparatory studies and will normally be tested by formal examination covering his familiarity with the field prerequisite to the elected work. (See also page 31.)

A special student by virtue of his status is not a candidate for any degree. Permission to attend is granted only for one half-year; application must be again made for re-entry in a second or subsequent half-year.

A *graduate student* is one who has been admitted to pursue work leading to a master's degree or to a general secondary or junior college teaching credential. The number of graduate students is strictly limited. See page 32.

An *unclassified student* is one holding an academic degree from a recognized institution who enters for the purpose of taking undergraduate courses only; this status includes candidates for a second (and different) bachelor's degree, or holders of degrees working for a teaching credential in the Teachers College.

STUDENT'S 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.

The presentation of a study-list by a student and its acceptance by the college evidence an obligation on the part of the student to perform the designated work faithfully and to the best of his ability. Any student who discontinues, without formal notice, University exercises in which he is a regularly enrolled attendant, does so at the risk of having his registration privileges curtailed or entirely withdrawn.

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. No excuse to be absent will relieve the student from completing all the work of each course to the satisfaction of the instructor in charge.

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.

For regulations concerning withdrawals from the University see page 44 of this Catalogue.

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

UNITS OF WORK AND CREDIT: STUDY-LIST LIMITS

Both matriculation and university work are measured in "units." In the high school a *standard secondary unit* is the measure of a subject pursued throughout the school year of thirty-six to forty weeks and constitutes approximately one-fourth of a full year's work. A university *unit of registration* represents one hour of a student's time at the University, each week, during one half-year, in lecture or recitation, together with the time necessary for preparation; or a longer time in laboratory or other exercises not requiring preparation. Credit for 120 units in the College of Letters and Science and in the Teachers College, and 130 in the College of Agriculture, distributed according to the requirements of the college, is necessary for a bachelor's degree.

A student on scholastic probation, or subject to supervision of the Committee on Reinstatement, is limited to a program of 12 units per half-year, 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 per half-year without

special permission.* During his first half-year in residence a student may not receive credit for more than 16 units of work. After the first half-year a student may on petition carry a program of not more than 18 units, if in the preceding half-year he attained an average of at least two grade points per unit in his total program (of 12 units or more). A student whose record during the preceding half-year was free of all deficiencies, and who is in good academic standing, may without special permission submit a program of $\frac{1}{2}$ unit in excess, provided the $\frac{1}{2}$ unit be in required physical education. The student may not, however, count toward the degree more than the allowable study-list maximum of his college. All courses in military science and physical education and repeated courses are to be counted in study-list totals. Any work undertaken in the University or elsewhere at the same time with a view to credit toward a degree must also be included.

In the College of Agriculture regular freshmen and sophomores who are free from deficiencies in the work of the previous half-year, and who are in good academic standing may register for not more than 19 units of new work. Juniors and seniors are limited to 18 units of new work. Regular students with deficiencies will be limited to 16 units, including repeated work.

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, the College of Commerce, or the College of Mining, and who are free from deficiencies in the work of the previous half-year, may register for not more than 18 units of new work. Students with deficiencies will be limited to 16 units, including repeated work.

If they later transfer to a non-professional curriculum in 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*.

SUBJECT A: ENGLISH COMPOSITION

1. With the exceptions noted below, every undergraduate entrant must at the time of his first registration at the University of California at Los Angeles 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.

* 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.

2. The examination in Subject A will be given at the opening of each half-year and at the opening of the Summer Session (see Registration Circular to be obtained from the Registrar of the University of California at Los Angeles). A second examination for late entrants will be given two weeks after the first examination in each half-year; for this examination a fee of \$2.00 will be charged. Papers submitted in the examination will be rated as either "passed" or "failed." Any 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.

3. Every student who does not pass in the examination in Subject A will be required to take, immediately after his failure, a course of instruction known as the *Course in Subject A*, which gives no units of credit toward graduation, but which reduces the maximum program allowed the student by two (2) units. 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. The course in Subject A will be given each half-year, three hours a week.

4. If in the judgment of the instructor in the class in Subject A a student shows excellence in English composition through a period of at least two weeks, the instructor is authorized to give him a final grade of passing in Subject A, to permit him to withdraw from further attendance, and to drop the subject from his study-list (thereby making it possible for the student to add two units of work to his program), and to refund a portion of the \$10.00 fee.

5. A student who has not passed the examination or course in Subject A will not be admitted to any University course in oral or written composition; he will not be granted a junior certificate or given junior standing; he will not be granted a bachelor's degree.

6. A student who has failed in an examination in Subject A may not have the privilege of taking a subsequent examination; he must obtain credit in the subject through passing the course in Subject A.

7. A student who passes Subject A is not required, but is advised to continue his training in oral or written composition.

8. Failure in the examination does not prevent admission to the University of California.

Exemption:

A student who has received a grade of 60 per cent in the College Entrance Examination Board examination 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 of California at Berkeley or any other seat of the University, or given under the jurisdiction of the University at any junior college or other assigned place, if the papers are read by the Committee on Subject A, will receive credit for Subject A.

A student who enters the University of California at Los Angeles with 60 or more units of advanced standing, including a course in English Composition, will be exempt from the requirement in Subject A.

PIANO TEST

Every student entering the Kindergarten-Primary curriculum 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.

MILITARY SCIENCE AND PHYSICAL EDUCATION

Every undergraduate student, man or woman, shall, upon admission, report immediately to the proper officer for enrollment in physical education,* following 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, shall report immediately for enrollment in military science. The student shall list the courses in military science and physical education upon his study card with other University courses.

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 during the pendency of the petition.

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.

In case a student subject to these requirements shall list the prescribed course or courses on his study-list, and thereafter without authority shall fail to appear for work in such course or courses, the neglect will be reported to the dean of his college. With the approval of the Vice-President and Provost of the University of California at Los Angeles, the dean will suspend the student from the University for the remainder of the half-year,

* 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.

and will notify the Registrar. On recommendation of the professor in charge of the work, and with the approval of the Vice-President and Provost, the dean is authorized to reinstate the student and will notify the Registrar of such reinstatement.

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

AMERICAN INSTITUTIONS

Every candidate for a degree or teaching credential is required to present evidence of knowledge concerning the Constitution of the United States and American institutions and ideals. This is normally done by successful completion of the course American Institutions 101 or of certain other courses in the departments of History and Political Science, accepted by the Committee on American Institutions. The requirement may also be satisfied by an examination conducted each half-year by the Committee which covers essentially the material of the course American Institutions 101. 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 times, or may be had at the information desk of the Registrar's office.

AUTHORITY OF INSTRUCTORS

No student will be permitted to enter upon the study of any subject if the officer of instruction in charge of that subject is satisfied that by reason of lack of preparation he is not competent to undertake it.

Every student is required to attend all his class exercises and to satisfy the instructor in each of his courses of study, in such way 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 Vice-President and Provost of the University of California at Los Angeles, may at any time exclude from his course any student who, in his judgment, has neglected the work of the course. Any student thus excluded shall be recorded as having failed in the course of study from which he is excluded, unless the faculty shall otherwise determine.

EXAMINATIONS

Final examinations are required in all undergraduate courses except laboratory courses and such other courses as, 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 shall, so far as practicable, be conducted in writing. In advance of each, a maximum time shall be set which no candidate shall be allowed to exceed. The time for examination sessions shall not be more than three hours.

Any department may examine students, at the end of the half-year immediately preceding their graduation, in the major subject in which such department has given instruction.

No student will be excused from assigned examinations.

Any student tardy at an examination may be debarred from taking it, unless an excuse for such tardiness entirely satisfactory to the examiner be 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 "Conditions and Failures," below.

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 Associate Director of Admissions; fees are required for such validation examinations.

EXAMINATIONS FOR CREDIT FOR PRIVATE STUDY

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 given 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 below); no fees are required.

Arrangements must be made in advance with the dean of the student's college; his approval is necessary before an examination can be given.

GRADES OF SCHOLARSHIP: GRADE POINTS

The final result of the work of the students in every course of instruction will be reported to the Registrar in six grades, four of which are passing as follows: A, excellent; B, good; C, fair; D, barely passed; E, conditioned; F, failed.

Any student may be reported grade "E" (conditioned) in a course, if the work in an examination or other exercise of the course is either incomplete or unsatisfactory, and if in the judgment of the instructor the deficiency is sufficient to prevent a passing grade, without necessitating a repetition of the course. See heading below, "Conditions and Failures," for grades students may earn upon removing conditions.

No student will receive credit in any course in which he may have received grade "F," except upon successful repetition of that course.

The term "incomplete" will not be used in reporting the work of students. The instructor is required in every case to assign a definite grade (A, B, C, D, E, or F) based upon the work actually accomplished, regardless of the circumstances which may have contributed to the results achieved.

In all colleges and curricula grade points or quality units will be assigned as follows: A, 3 points per unit; B, 2 points per unit; C, 1 point per unit; D, no points per unit; E, minus 1 point per unit; F, minus 1 point per unit. Removal of grade E or F will entitle the student to as many grade points as may have been lost by the condition or failure, but no more. For exceptions permitted in certain cases in which grade E is assigned, see under "Conditions and Failures," below.

A candidate for the bachelor's degree in the College of Letters and Science, in the Teachers College,* in the College of Agriculture, in the College of Commerce, or in the College of Chemistry must have attained at least as many grade points or quality units as there are time units or quantity units in the credit value of *all courses undertaken* by him in the University of California in and after August, 1921; in the Colleges of Engineering and Mining this regulation also applies to candidates for the bachelor's degree for all courses undertaken after January, 1930.

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 peti-

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

tion 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 \$2.00 is charged, save that there is no fee for a reëxamination (final examination taken with a class), provided the final examination be 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 half-year will not exceed \$3.00. 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 not be removed, unless the student shall have 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 portions of the required work, or because of unsatisfactory performance in them, the instructor may require the satisfactory completion of that work before the condition in the course is removed. Such tasks shall count as a special examination, subject to the fee prescribed for a special examination.

Removal of grade "E" (conditioned) by reëxamination or otherwise shall entitle the student to receive grade "D" in the course and 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 a case the student may petition to have that grade assigned which he would have received had the work been completed in regular course, together with full 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 shall refer the petition to the dean of the college 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 repetition of the course.

Any student who is reported as having failed in any prescribed course in military 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.

SCHOLARSHIP RULES: DISMISSAL FOR FAILURE TO MEET MINIMUM 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 as to study list.

(2) *Probation.* Any student whose record at the close of either regular semester shows a total deficiency of 10 or more grade points shall be placed on probation.

(3) *Dismissal.* Any student whose record for any regular semester falls below a "D" average, regardless of his grade point standing, or any student who fails to maintain a "C" average while on probation, is 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 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.

HONORABLE DISMISSAL AND LEAVE OF ABSENCE

A *letter of honorable dismissal* is issued on request to a student in good standing who withdraws without the expectation of resuming his work in the same semester at Los Angeles. A *brief leave of absence* may be issued, as an exceptional privilege, to a student who finds it necessary to withdraw for two weeks or longer, but who wishes to retain his status in his classes and to resume his work before the close of the current half-year, upon a date to be fixed by the University.

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. A student who withdraws from the University before the end of the session without giving notice of withdrawal to the Registrar, may be debarred from subsequent registration.

DISCIPLINE

The University authorities expect all students to set and to observe among themselves a proper standard of conduct. It is therefore taken for granted that, when a student enters the University, he has an earnest purpose and studious and gentlemanly habits; and this presumption in his favor continues until, by neglect of duty or by unseemly behavior, he reverses it. But if an offense occurs, whether it be against good behavior or academic duty, the University authorities will take such action as the particular occurrence, judged in the light of the attendant circumstances, may seem to them to require. 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.

Grades of Discipline.—There are five grades 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. Expulsion is the most severe academic penalty, final exclusion of the student from the University.

The Vice-President and Provost of the University of California at Los Angeles is entrusted with the administration of student discipline with full power to act.

DEGREES; 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 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.

State Board Teaching Credentials.—The State Board of Education issues teaching credentials of a wider variety than those for which the University has especially designed curricula. In some cases, moreover, the State Board accepts teaching experience or other individual qualifications as a substitute for the standard requirements of University credit. If a student proposes to meet the State Board requirements directly, and is not a candidate for the University credentials, he should make direct application to the State Board

for a statement of the courses which he must still complete. His program of University study will then be based in part on his statement from the State Board, and in part upon the general University requirements in military science, physical education, Subject A, and American Institutions.

Senior Residence.—Every candidate for the bachelor's degree is required to enroll during 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 post-sessions as equivalent to one half-year; but in any event the student must complete in resident instruction either the fall or spring semester of his senior year. This regulation applies both to students entering this University from another institution and to students transferring from one college to another within the University.

FEES*

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, \$27.00, which must be paid each half-year by all undergraduates on 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 case 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 \$4.00; see page 55. This fee is not remitted in whole or in part for those who may not desire to make use of any or all of these privileges. In case a student withdraws from the University within the first three weeks of the semester, a portion of this fee will be refunded. The incidental fee for graduate and unclassified students is \$23.00 each half-year; it does not include membership in the Associated Students.

Non-resident Tuition Fee.—Non-residents of California† are charged a tuition fee of \$75.00 each half-year, which shall be paid on the day of registration. This fee is in addition to the incidental fee.

* 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, 42 Library. 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.

† EXCERPT FROM STANDING ORDER OF THE REGENTS RELATIVE TO NON-RESIDENCE MATTERS ADOPTED OCTOBER 10, 1933

"Each non-resident student at the University of California shall pay a tuition fee for each semester of his attendance at the University, provided that such fee may, with the approval of the President of the University, be remitted in whole or in part in the case of any graduate student in other than a professional college or school. Non-resident tuition fees shall be payable at the time of registration.

"The term 'non-resident student,' as used in this resolution, shall be construed to mean any person who has not been a bona fide resident of the State of California for more than

Every entering student and student returning to the University after an absence of a half-year or longer, is required to fill out a "Statement as to Residence" on the day of registration, and his status as to residence or non-residence will be determined by the Attorney for the University shortly after registration.

Old students are advised that application for reclassification as a resident of California must be filed within ten days after regular registration, or in the case of late registrants, within one week after registration. The Attorney will not consider applications for reclassification filed later than these dates. Application for a change in classification during some preceding semester will not be received under any circumstances.

If the student registers for less than 12 units the tuition fee is as follows: Minimum, \$25.00; \$5.00 per unit for work aggregating six to eleven units or fraction thereof.

Fine for delayed payment of any of the above fees or of departmental fees or deposits, \$1.00. Departmental fees and deposits must be paid within seven days after registration. Students will save time if all fees are paid when registering.

Application fee, \$3.00. This fee will be charged every applicant for admission to the University, payable at the time the first application is filed. Applicants for graduate status are charged this fee, even though it may have been paid once in undergraduate status; see page 33.

Late application for admission, \$2.00.

one year immediately preceding the opening day of a semester during which he proposes to attend the University.

"The residence of each student shall be 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 a semester during which he proposes to attend the University, shall be deemed to be a non-resident student.

"2. That no person shall be 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 non-resident 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 non-resident student and shall be reclassified as a non-resident 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 non-resident 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 non-resident 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."

Late registration, \$2.00. (After date set as registration day.)

Late filing of registration book, \$1.00. (More than seven days after registration.)

Late examination in Subject A, \$2.00.

For courses added or dropped after date set for filing registration book, \$1.00 per course.

For reinstatement of lapsed status, \$5.00.

For duplicate registration card, \$1.00.

For late application for teaching assignment, \$1.00.

Medical examination: original appointment, or deferment arranged in advance, no fee; fee for a second appointment, \$1.00.

Laboratory and Departmental Fees.—In laboratory and certain other courses, a charge is made to cover materials used. Students should refer to the latter part of this Catalogue, where such fees are listed for each department. The total charge for students in the elementary laboratories may amount to from \$5.00 to \$30.00 per year.

Deposit required of applicants for teaching positions who register with the Appointment Secretary: Persons registering with the Appointment Secretary will be required to make a deposit of \$5.00 to cover clerical cost of correspondence and copying of credentials.

SCHEDULE OF REFUNDS

Incidental Fee of \$27.00

Withdrawal within—	Refund
7 days from date of student's registration.....	\$20.00
14 days from date of student's registration.....	14.00
21 days from date of student's registration.....	9.50
28 days from date of student's registration.....	4.50
Thereafter, no refund.	

Refund on the non-resident fee of \$75.00 will be 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 after surrender to the Comptroller of his receipt. Students should preserve their receipts.

UNDERGRADUATE SCHOLARSHIPS

The Committee on Scholarships of the University of California at Los Angeles recommends for award a limited number of scholarships annually to students in the University of California at Los Angeles. On account of

the limited number of scholarships available, for the present the Committee must restrict award to students who have been in attendance at least a half-year. The Committee rates all candidates as 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 relating to them, should be filed with the Registrar on or before the 25th day of March 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 1934-35 are as follows:

University Scholarships: ten of \$160.00 each, and ten of \$120.00 each.

Charles N. and Jennie W. Flint Scholarships: four of \$75.00 each.

R. B. Campbell Scholarships: four of \$50.00 each, awarded to freshmen who have completed a half-year at the University of California at Los Angeles.

Lena De Groff Scholarships: eight of \$50.00 each.

Gerole François Scholarship of \$50.00.

Louis D. Beaumont Fellowship of \$250.00, awarded to a senior student whose major is economics.

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 scholarships are a number whose recipients are named by the donors; among them is the *American Legion Auxiliary Scholarship*, awarded to the child of a veteran of the World War.

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 Men or the Dean of Women.

PRIZES

The following prizes were awarded in the year 1933-34:

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.

The Ernest Dawson Prize.—Awarded to the senior or junior student owning the best book collection made during his college years.

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

Pi Delta Phi Prize.—Awarded for the best French essay.

Chi Omega Prize.—Awarded for the best essay on topics in the field of the social sciences.

A. E. Teague Prize.—Awarded for the best poetry of the year written by a student of the University of California at Los Angeles.

Alpha Kappa Psi Prize.—Awarded to the graduating senior with the highest average in economics.

Kappa Gamma Epsilon Prize.—Awarded on the basis of a competitive examination in chemistry, open to students who have had freshman chemistry.

MISCELLANEOUS

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 secured at her office, 116C Josiah Royce Hall. No woman is permitted to complete her registration if her living accommodations are not approved by 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 hall of residence maintained by the University. It is conveniently located on the campus and accommodates one hundred thirty-one women students. Board and room is furnished residents of this hall for \$45.00 per 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, furnish board and room for from \$35.00 to \$47.50 per month; others, with capacities ranging from twenty to ninety-nine, furnish housekeeping accommodations for from \$12.50 to \$20.00 per month. Fifteen dollars per month is suggested as a sufficient amount for food for housekeeping students. Private homes offer housekeeping accommodations for as low as \$10.00 per month, and board and lodgings for \$30.00 per month.

Self-supporting women students can usually obtain 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 in regard to their plans.

General University expenses which must be met by every student of the University may be found under "Fees," pages 46 to 48. The cost of books and stationery is estimated at \$18.00 to \$40.00 per year.

Extra-curricular expenses may be kept at a minimum. The expense of participating in general and honorary or professional organizations need not cost more than \$5.00 a semester. Membership in a social sorority may be estimated at from \$15.00 to \$20.00 per month, in addition to the cost of board and lodging.

The student living at home, although having no actual board and lodging expense, must plan for transportation and luncheon on the campus. While transportation varies according to the location of each student's home, \$10.00 per month is an average estimate. Luncheons may be estimated at \$5.00 to \$6.00 per month. However, some students reduce or eliminate this expense by bringing their luncheons from home.

Personal expenses, obviously, vary greatly according to the individual. The average woman student's estimate for clothing is from \$100.00 to \$300.00 per University year; for drugs and beauty shop, from \$15.00 to \$40.00; for recreation, from \$10.00 to \$50.00.

LIVING ACCOMMODATIONS AND GENERAL EXPENSES FOR MEN

The cost of attending the University varies greatly with different individuals, but the majority of men students living away from home spend between \$600.00 and \$800.00 a year. The incidental fee amounts to \$54.00 a year, and books and laboratory fees vary for most students from \$30.00 to \$60.00 a year depending upon the courses taken. This item will be higher for students specializing in fields which require much laboratory work. Students classified as non-residents of California must also pay the tuition fee of \$75.00 each half-year.

The cost of board and room varies from \$35.00 to \$45.00 a month. A list of rooming and boarding houses for men is prepared by the Dean of Men, and may be obtained at Room 212, Josiah Royce Hall. The University does not maintain 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 \$5.00 to \$12.00, and for social fraternities from \$50.00 to \$100.00. The dues for social fraternities average about \$5.00 a month and the cost of living in a fraternity house including dues ranges from \$45.00 to \$55.00 a month. This amount does not include the cost of social affairs which may be given by the fraternity during the year.

There are many students working for a part of their expenses and a few who are entirely self-supporting. It is difficult, however, to find suitable employment in the vicinity of the campus and it is unwise for a student to enter the University without adequate funds to complete the year or without a satisfactory combination of savings and prearranged employment.

EMPLOYMENT**BUREAU OF OCCUPATIONS**

Students desiring employment should register with the Bureau of Occupations, 308 Kerekhoff Hall.

Little can be done in securing employment for students who are not actually on the ground to negotiate for themselves. Since it is so difficult for a stranger to obtain remunerative employment, in general, no one 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 half-year.

Board and lodging can frequently be obtained 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 per hour. A student qualified to do tutoring and other specialized types of work can occasionally find employment on a more remunerative basis than in the fields mentioned above.

Only in rare instances can a student be entirely self-supporting. With reasonable diligence a student can devote from twelve to twenty-five hours per week to outside work without seriously interfering with a University course of from twelve to sixteen units. It should always be borne in mind, however, by students seeking employment that not every kind nor every amount of outside work is entirely compatible with the student's main purpose at the University, namely, his education.

APPOINTMENT OFFICE FOR TEACHERS

Applicants for employment in teaching or tutoring should apply at the office of the Appointment Secretary, 123 Education Building. Upon the request of school officials the Appointment Secretary recommends teachers who, in the opinion of the Faculty, are able to fill satisfactorily the positions for which teachers are being sought. To do this it is necessary that the Appointment Secretary have detailed information concerning the vacancies to be filled. The Secretary makes every endeavor to assist applicants to obtain positions of the kind for which they are best fitted. Students are urged to make occasional calls at the office of the Appointment Secretary throughout their entire course. There is no expense to the school officials seeking teachers for the service rendered by this office.

LIBRARY, GYMNASIUM, MEDICAL FACILITIES**THE LIBRARY**

The Library has 216,500 volumes that are accessioned; approximately 1700 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 900 students.

GYMNASIUM AND ATHLETIC FACILITIES

Separate gymnasiums for men and women were completed in the summer of 1932; each contains 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 located with respect to athletic grounds and to the tennis courts.

MEDICAL FACILITIES

The University of California at Los Angeles provides on the campus for the care of emergencies, medical service, 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.

LOCKERS

Lockers as available will be issued to registered students who have purchased standard locks. These are sold at \$1.00 each, and may be used by the purchaser as long as desired, or may be transferred by him to another student.

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 their student headquarters. This common center is always open to all students for counsel and for religious activities. Here 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, located near the eastern entrance to the campus.

PUBLIC LECTURES, CONCERTS, AND ART EXHIBITIONS

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

The musical cultivation of the University body is served by numerous concerts, free to the public as well. The University Organ, installed in 1930 as the gift of an unnamed donor, makes possible the offering of a regular series of programs, in 1933-34 comprising seventy week-day noon recitals, and thirty-eight weekly Sunday concerts, besides special concerts, and much music incidental to other gatherings. Besides the organ, there are special concerts which in 1933-34 included recitals in the fall and spring semesters by John Crown, Marguerite Lamar Stearns, the Bartlett-Frankel Quartet, Dr. George Liebling, and a presentation of "The Messiah," programs of Christmas and Easter Music by the University A Cappella Choir and recitals by the Reher Quartet and by Marcel Dupre.

The Department of Fine Arts schedules a series of exhibitions of painting, design and craft-work in its exhibition hall, each usually for two weeks. These have illustrated the work of students, local artists, national exhibitors, and occasionally old masters.

THE ASSOCIATED STUDENTS

The extra-curricular activities are administered and controlled by the Associated Students, in which all undergraduates hold membership by virtue of paying at registration the full 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; while the Council coordinates the work of these boards and administers the general business of the Association.

The athletic interests of the Associated Students are administered by the Graduate Manager of the Associated Students; the financial affairs are administered by the Assistant Comptroller of the University.

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 reduction to all other athletic contests, as well as dramatic, social, and similar events that are 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 year-book; it contains a record of the college life of the year, and is edited, managed, and financed by the students.

SUMMER SESSIONS

The Summer Session of six weeks is designed for teachers and other persons who are unable to attend the University during the fall and spring sessions, as well as for students in the regular sessions who are desirous of shortening 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 grade, 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, regardless of the number of courses taken.

The Announcement of the Summer Session, issued in January of each year, may be obtained by addressing University of California at Los Angeles Summer Session, 405 Hilgard Avenue, Los Angeles.

Summer Sessions are conducted by the University in Berkeley, in Los Angeles, and in Davis. In addition, the Intersession of six weeks, immediately preceding the Summer Session, is given in Berkeley.

UNIVERSITY EXTENSION DIVISION

For those who desire instruction of University grade and can devote to it only the leisure hours after performance of their business or professional duties, the Extension Division offers large opportunity. Classes cover a wide range of subjects and meet at times and places convenient to the students. The Los Angeles office is at 801 Hillstreet Building.

UNDERGRADUATE CURRICULA

There are established at the University of California at Los Angeles: (a) The College of Letters and Science, with a curriculum leading to the degree of Bachelor of Arts and curricula of the earlier years of the College of Dentistry, of the Medical School, of the College of Commerce, of the College of Engineering, of the College of Mining, of the College of Chemistry, and of the Training School for Nurses; (b) the Teachers College, with curricula leading to the degree of Bachelor of Education; and (c) the Branch of the College of Agriculture in Southern California, with a curriculum in subtropical horticulture, leading to the degree of Bachelor of Science in Agriculture.

COLLEGE OF LETTERS AND SCIENCE

The curriculum of the College of Letters and Science is divided into three essential parts:

1. *Requirements to secure breadth of culture.* The student is asked to select courses within certain groups representing the fundamental types of intellectual endeavor. Although these requirements are limited to the lower division, the student may continue liberal studies of his own choice during the last two years.

2. *Requirements to provide for intensive study.* The student normally carries work in his major subject throughout the entire four-year course.

3. *Elective courses.* Freedom of election gives the student an opportunity to develop initiative and power. The College seeks to encourage a wise selection of courses by requirements assuring distribution and concentration.

Each student is assigned a faculty adviser to assist him in the choice of courses.

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.

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. A student whose major is not yet determined has a general adviser, under whose supervision he remains until the junior year, or until the major is determined. 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.

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 half-year, including the prescribed work in military science and physical education. The junior certificate will be granted on the completion of not less than 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, 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 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 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).

† 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 37.

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

Astronomy 1, 11.

Bacteriology 1,* 6.

Biology 1, 12.

Botany 1,* 2.*

Chemistry 1A,* 1B,* (2A-2B),* 5,* 6A,* 6B,* 8.

Geography 3.

Geology 1A, 1B, 1C, 1D.

Paleontology 1.

Physics (1A-1B),* (1C-1D),* 1AD,* 1BC,* (2A-2B),* 4A-4B.

Physiology (1, 2).*

Zoölogy 1A,* 1B.*

(e) *Year Courses.*—A year course in each of *three* of the following groups. This requirement may not include courses other than those specified below, nor may courses of the Summer Session be counted on this requirement.

(1) English, public speaking.

(2) Foreign language (additional to b). This may be satisfied in whole or in part by high school Latin.

(3) Mathematics.

(4) Social sciences.

(5) Philosophy.

Group 1—English and Public Speaking

English 1A-1B; Public Speaking 1A-1B.

Group 2—Foreign Languages

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, 6A-6B.

Greek 1AB-2AB, 1A-1B, or 101, 102.

Latin: two consecutive courses from the following: A, B, C, D; 1, 5, 102, 106. Two years of high school Latin are accepted as the equivalent of a year course.

Spanish: any two consecutive courses from the following: A, B, C, D, CD, 50A-50B.

Group 3—Mathematics

A total of six units chosen from the following courses: C, F, 2, 5, 6, 8, 9A, 9B, 3A, or 3B.

Group 4—Social Sciences

Economics 1A-1B.

Geography 1A-1B.

History 4A-4B.

History 5A-5B.

History 8A-8B.

Political Science 3A-3B.

Political Science 51A-51B.

Psychology 1A-1B.

Group 5—Philosophy

Philosophy 1A-1B.

Philosophy 2A-2B.

Philosophy 3A-3B.

Summer Session Courses.—Students who desire to satisfy the specific subject requirements for the junior certificate in the intersession or summer sessions, may use only those courses which are the equivalents of courses offered in the fall or spring sessions listed as acceptable in meeting junior certificate requirements and which are designated by the same numbers with the prefix "S."

Requirements (b) and (d) may be met in whole or in part by the completion of acceptable courses in the summer sessions. For a list of such courses, see the announcements of the summer sessions. The requirements in units must be met in full. Courses offered in fulfillment of requirement (e) may not be taken in the summer sessions.

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

Duplication of credit in modern foreign language.—No credit is allowed for duplication of high school work, either in units toward graduation or in the specific subject requirement for the junior certificate. Thus, a student who has credit for two years of French in the high school will receive no credit for French A. If, however, the amount of duplication is less than two high school years, this rule does not apply save as to the specific requirement in foreign language for the junior certificate.

The following outline shows the correct sequence of courses:

<i>The student who has credit for</i>	<i>takes</i>	<i>with credit for that course of</i>
1 year of high school work	A	5 units*
2 years of high school work	B	5 units
3 years of high school work	C or CD	3 units 5 units
4 years of high school work	D	3 units

* Only 2 units will be allowed toward junior certificate requirements (b) or (e).

Honorable mention with the junior certificate.—Honorable mention will be granted with the junior certificate in accordance with the regulations on Honors, page 71.

UPPER DIVISION

Only those students who have been granted the junior certificate signifying their completion of lower division requirements, 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 in the lower and upper divisions 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 62). Not more than six units in courses numbered in the 300 and 400 series will be accepted toward the degree.

2. The student must attain a C average (one grade point per unit) in all courses in which he has received a final report on the basis of work undertaken by him in the University in and after August, 1921. See also regulations concerning negative grade points, page 42.

3. At least 54 units of college work must be completed after the receipt of the junior certificate.

4. At least 36 units of work must be completed in upper division courses selected from the Letters and Science List of Courses (see page 62).

5. A major of 24 upper division units in one of the following subjects must be completed according to the rules given below under the heading "Majors for the Degree of Bachelor of Arts."

Astronomy	Geography	Mathematics
Bacteriology	Geology	Philosophy
Botany	German	Physics
Chemistry	Greek	Political Science
Economics	History	Psychology
English	Household Science	Spanish
French	Latin	Zoölogy

All students are required to take at least 6 units in their major (either 3 units each half-year or 2 units one half-year and 4 units the other) during their 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 are required to have been enrolled during the senior or final year of residence in the College of Letters and Science. At

least the final 24 units of work must have been completed in the College of Letters and Science. It is permissible to offer a total of twelve weeks of inter-sessions, summer sessions, or post-sessions as equivalent to one half-year; but in any event the student must complete in resident instruction either the fall or spring semester of his senior year. The 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. No student is permitted to transfer from one major department to another after the opening of the last semester of his senior year.

9. 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 an average of one grade point for each unit of work taken 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 department, together with a statement of the basis for this opinion, and the probable cause of the lack of success. In such case the Dean may permit a change in the major, or may, with the approval of the Vice-President and Provost, require the student to withdraw from the college.

10. 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 at the time of admission, must complete at least 18 units of work in upper division courses, including at least 12 units in their major department.

MINORS

No minors are required for the degree of Bachelor of Arts, but students preparing for teaching credentials should consult the announcements of the proper departments in this Catalogue for the minors required for credentials.

LETTERS AND SCIENCE LIST OF COURSES

At least 108 units offered for the degree of Bachelor of Arts must be in courses chosen from the Letters and Science List of Courses, and the 36 units in upper division courses 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 in the Letters and Science List of Courses.

The following list refers to the courses as given in the departmental offerings for the year 1934-35.

Agriculture. Entomology 1, Plant Nutrition 110, Plant Pathology 120.

Art. 1, 2A-2B, 4A-4B, 11, 32A-32B, 101, 121A-121B, 131A-131B, 134A-134B, 152A, 154, 161, 175, 177.

Astronomy. All undergraduate courses.

Biological Sciences. All undergraduate courses.

Chemistry. All undergraduate courses except 10.

Classical Languages. All undergraduate courses.

Economics. All undergraduate courses except those under the heading "Commerce—Teachers' Courses."

Education. 103, 121, 122, 150, 170.

English:

English. All undergraduate courses.

Public Speaking. All undergraduate courses.

French. All undergraduate courses.

Geography. All undergraduate courses.

Geology. All undergraduate courses.

German. All undergraduate courses.

History. All undergraduate courses except 11.

Home Economics. 1A-1B, 11A-11B, 110, 118A-118B, 120, 125, 159, 162A-162B, 164, 168, 199A-199B.

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. 1A-1B, 2A-2B, 9ABCD, 10ABCD, 55A-55B, 101A-101B, 105A-105B, 110, 111A-111B, 118ABCD.

Philosophy. All undergraduate courses.

Physical Education for Men. 1 and 3.

Physical Education for Women. 2, 4, 44, 104, 114A-114B, 180B.

Physics. All undergraduate courses.

Political Science. All undergraduate courses.

Psychology. All undergraduate courses except 119.

Spanish. All undergraduate courses.

MAJORS FOR THE DEGREE OF BACHELOR OF ARTS

A major consists of a substantial group of coördinated upper division courses. The 24 upper division units required in the major may represent courses in one or more departments.

Majors may be offered for the degree in any of the subjects listed on page 61. The general outline of the content of these majors may be found under the respective department headings below. The details of the program must be approved by a representative of the department chosen.

Special attention is called to the courses listed under the departmental announcement as preparation for the major. In most cases it is essential that these courses be completed before upper division major work is undertaken. In any case 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.

The 24-unit major must, in its entirety, consist (1) of courses taken in *resident instruction* at this or another university (fall, spring, and summer sessions), and (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 per unit) in all courses offered as a part of the 24-unit major.

Courses numbered in the 300 series or 400 series will not be accepted as part of the major.

See further under Regulations for Study-Lists on page 36.

DEPARTMENTAL MAJORS IN THE COLLEGE OF
LETTERS AND SCIENCE

ASTRONOMY

Preparation for the Major.—Required: General lower division physics (Physics 1A-1B-1C-1D, or in meritorious cases, Physics 2A-2B, or their equivalents); plane and spherical trigonometry, plane analytic geometry, and differential and integral calculus (Mathematics C, F, 5, 9A-9B, or their equivalents). Recommended: A reading knowledge of French and German.

The Major.—(1) Astronomy 103A-103B, 104, 117A-117B; (2) at least three units chosen from 125 or 199A-199B; and (3) from six to 12 upper division units in either physics or mathematics, selected according to some definite plan approved by the Department of Astronomy.

BIOLOGICAL SCIENCES

Preparation for the Major in Bacteriology.—Bacteriology 1, Chemistry 1A-1B, Zoölogy 1A-1B, Botany 2, Physics 2A-2B, French or German. Recommended: Chemistry 8, 9, 5; Zoölogy 4.

The Major in Bacteriology.—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: Zoölogy 101, 105, 106, 107, 107C, 111, 111C, Botany 105A, 120, Chemistry 107A–107B, Home Economics 159, Entomology 124, Plant Nutrition 110, Plant Pathology 120. Courses are to be chosen with the approval of the department.

Preparation for the Major in Botany.—Botany 1 and 2, and elementary chemistry.

The Major in Botany.—Of the 24 units of upper division work required, 15 units should include courses in taxonomy, morphology, and physiology in botany, and the remaining nine units should consist of courses in botany or in related courses—bacteriology, chemistry, geology, paleontology, and zoölogy—to be chosen with the approval of the department.

Preparation for the Major in Zoölogy.—Zoölogy 1A–1B, and high school chemistry or Chemistry 2A. French and German are recommended.

The Major in Zoölogy.—Eighteen units of upper division work in zoölogy and six units chosen from zoölogy or from related courses in bacteriology, biochemistry, botany, entomology, genetics, microscopic anatomy, paleontology, physiology, psychology, or physical chemistry.

CHEMISTRY

Preparation for the Major.—Required: Chemistry 1A–1B (10), which must be passed with a grade of C or better before any further work in chemistry is taken: Physics 1A–1C (6); trigonometry, Mathematics 8, 3A–3B (9), and a reading knowledge of German. Recommended: a second course in chemistry, Physics 1B–1D, Mathematics 4A–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), 110 (3), 110B (3), 111 (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.

CLASSICAL LANGUAGES

Preparation for the Major.

A. Latin.—Required: Four years of high school Latin, or two years of high school Latin and Latin C and D; Latin 1 and 5; Latin 3A–3B. Recommended: Greek, German, French.

B. Greek.—Required: Either 1A–1B and 101 or 102; or 1AB–2AB; or two years of high school Greek and 101 or 102. Recommended: Latin, German, French.

The Major.

A. Latin.—All courses offered in Latin except 199A–199B, and Ancient History 112A–112B. Six units of upper division courses in Greek may be substituted for Ancient History 112A–112B.

B. Greek.—All courses offered in Greek except 117A–117B, 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.

ECONOMICS

Preparations for the Major.—Required: Economics 1A-1B, Economics 14A-14B, and at least one other sequence chosen from the Social Science list (Junior Certificate requirement *c*₁) or Philosophy 1A-1B.

The Major.—Twenty-four upper division units in economics including courses 100 and 140; or 18 upper division units in economics including courses 100 and 140, and 6 upper division units in history, political science, philosophy, geography, or mathematics, or Botany 103, the program to be approved by a departmental adviser.

Curriculum in Sociology.—Students specializing in sociology are referred to page 70 of this catalogue.

ENGLISH

Preparation for the Major.—Course 1A-1B and 56A-56B or the equivalent with an average grade of C.

Recommended: History 5A-5B; ancient and modern foreign languages. A reading knowledge of French or German is commonly required for graduate work toward a higher degree.

The Major.—1. Students must present, in the first term 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 the restricted junior course, to be taken in the junior year.

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 French 101A-101B, 109A-109B, 112A-112B.

Any of the remaining upper division courses except 140A-140B and 109A-109B, Sec. 2, may be applied on the major. With the permission of the department four units of the 24 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, Geology 1C or 1A, and in addition, two of the following courses: Geography 3, 5B, 8. Recommended: Botany 1, Economics 1A-1B, one year of history, Physics 1A-1B, Political Science 3A-3B, Geology 1B, and at least one modern foreign language.

The Major.—The minimum requirement for the major is 18 or 21 units of upper division work in geography, including courses 101 and 113, plus 6 or 3 units selected, with the approval of the department, from some one of the following departments: botany, economics, geology, history, political science.

GEOLOGY

Preparation for the Major.—Required: Chemistry 1A-1B; elementary physics; Civil Engineering 1A-1B; 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 (6), 103 (4), 199A-199B (4), and at least 10 units of other upper division courses in the department which may include paleontology. Certain allied courses in chemistry, physics, 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: Courses A, B, C, D, (16) and 6A-6B (4) 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, 118A-118B, and at least 4 units made up from the senior courses 111A-111B and 119. Students looking forward to the secondary credential should take also 106C-106D.

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 courses: Political Science 3A-3B, Political Science 51A-51B, 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, or German, or Latin, or Spanish, or Italian, or a Scandinavian language.

For upper division work in history a reading knowledge of French or German, or both, is highly advisable; for graduate work, indispensable.

The Major.—Twenty-four units of upper division work in history. In certain cases 2 to 6 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: 121A-121B, 142A-142B, 153A-153B or Ancient History 112A-112B) and a year course in American history (one of the following: 162A-162B, 171A-171B).

At least one advanced course must follow a general course in the same field, chosen within one of the following sequences: History 121A-121B, or 142A-142B, or 153A-153B, followed by 199A-199B in European history; 162A-162B, or 171A-171B, followed by 199A-199B in American history. Only one advanced course need be taken.

Recommended Courses in Other Departments.—The following course will be accepted in partial fulfillment of the major in history: Ancient History 112A-112B.

HOUSEHOLD SCIENCE

Preparation for the Major.—Home Economics 11A–11B, 43A; Chemistry 1A–1B, 8; Economics 1A–1B; Physiology 1.

The Major.—Eighteen units in home economics are required, including 162A–162B, at least six units chosen from 110, 118A, and 120, and five to eight units chosen from 118B, 125, 159, 164, 168, 199A, 199B; and six additional units to be selected with the approval of the department from upper division courses in chemistry, economics, psychology, or zoölogy.

MATHEMATICS

Preparation for the Major.—Required: Mathematics C (or the equivalent), 8, 5, 6, 9A and 9B with an average grade of C, except that students who have completed two years of high school algebra and also trigonometry may be excused, upon examination, from course 8. Courses 5, 9A, 9B, 109, may be replaced, by permission, by the equivalent courses 3A, 3B, 4A, 4B respectively. Recommended: physics, astronomy, and a reading knowledge of French and German.

The Major.—Mathematics 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 in upper division courses in mathematics.

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

PHILOSOPHY

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

The Major.—Twenty-four units of work are required for the major. Of these, at least eighteen units must be completed in upper division courses of this department. At the option of the student and with the consent of the departmental adviser, as many as six units may be applied toward the major from certain allied courses in other departments.

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, 5, 9A–9B, or their equivalents. Recommended: a reading knowledge of German and French.

The Major.—Eleven units of upper division physics, consisting of 105, 107A, 108B, and 110A; and thirteen units chosen from other upper division courses in physics, Mathematics 119, 122A, 122B, 124, Chemistry 110, and (upon the recommendation of the Department of Astronomy and the approval of the Department of Physics) Astronomy 117A–117B. At least nine of these latter thirteen units shall be courses in the Department of Physics.

POLITICAL SCIENCE

Preparation for the Major.—Political Science 3A–3B, or its equivalent, and one of the following: Political Science 51A–51B, Political Science 52, Political Science 74, 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 six of which may be taken in courses approved by the department in history, economics, philosophy, psychology, or geography. Major programs must be approved by the departmental adviser.

PSYCHOLOGY

Preparation for the Major.—Required: Psychology 1A and 1B, and Zoölogy 1A and either Zoölogy 1B or Physiology 1. Recommended: French, German, chemistry, physics.

The Major.—Required: Psychology 106A, 107A, and 12 other units in upper division courses in psychology. The remaining 6 units may be chosen from other upper division courses in psychology, or from the following, subject to the approval of the department: any upper division courses in philosophy; Zoölogy 103; Education 103; Economics 185A–185B.

SPANISH

Preparation for the Major.—(1) Spanish A, B, C, D, and 50A–50B or 50AB, or other 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, or Latin A and B, or the equivalent, is required. 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.

The Major.—Required: Spanish 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 101, 104, 105, 108, 109, and 110.

NOTE.—Students who have not completed course 50A–50B or 50AB in the lower division must take 101A–101B.

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 literature; (3) French, German, and Greek language and literature; (4) the history of philosophy.

SPECIAL CURRICULA

In addition to the departmental majors, the College of Letters and Science offers, subject to the requirements for the junior certificate and for the degree, the following curricula.

Curriculum for Medical Technicians

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

Required:

1. The pre-medical curriculum (see page 76).
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, Elementary Organic Laboratory.....	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

Curriculum in Sociology

(with the major in Economics)

Required:

LOWER DIVISION

- | | |
|--|---------|
| Economics 1A-1B, Principles of Economics..... | 6 units |
| Economics 14A-14B, Principles of Accounting..... | 6 |
| Psychology 1A-1B, General Psychology..... | 6 |

Recommended:

- | | |
|---|---|
| Geography 1A-1B, Elements of Geography..... | 6 |
| Geography 8, Geographic Basis of Human Society..... | 3 |
| Political Science 3A-3B, American Government..... | 6 |
| Jurisprudence 18A-18B, Commercial Law..... | 6 |
| Philosophy 2A-2B, Introduction to Philosophy..... | 6 |
| Philosophy 3A-3B, History of Philosophy..... | 6 |
| Philosophy 50, Problems of Ethics and Religion..... | 2 |
| History 4A-4B, History of Modern Europe..... | 6 |
| Biology 1, Fundamentals of Biology..... | 3 |
| Biology 12, General Biology..... | 3 |

Required:

UPPER DIVISION

- | | |
|---|---|
| Economics 100, Advanced Economic Theory..... | 2 |
| Economics 185A-185B, Social Institutions..... | 4 |
| Economics 186, Population and Race Problems..... | 3 |
| Economics 187, Social Problems..... | 3 |
| Economics 140, Statistics..... | 4 |
| (or Psychology 107A-107B, Psychological Measurement and the Use of Statistics, 6 units) | |
| Psychology 145A-145B, Social Psychology..... | 4 |

20 or 22 units

Remaining units to complete the major selected from:

Economics 199, Special Problems in Economics.....	2
Economics 106, Economic Reform.....	3
Economics 150, Labor Economics.....	3
Home Economics 168, Family Relationships.....	2
Philosophy 121, Social and Political Philosophy.....	3
Philosophy 112, Philosophy of Religion.....	3
Philosophy 173, The Social Mind.....	2
Education 121, Philosophy of Education.....	3
Education 122, History of Education.....	3

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 2 grade points per unit undertaken.
2. The list of students who receive honorable mention with the junior certificate is sent to the chairman 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 honor list is prepared in the fall semester, and also in the spring semester if the Committee on Honors so decides, and is published in the Catalogue of Officers and Students. The department of the student's major is named in this list.
2. The honor 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 2 grade points per unit undertaken for 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), what 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 shall consider departmental recommendations and shall 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 in the case of 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 program.

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 department offers the first two years of the curriculum of the College of Chemistry, leading to the B.S. degree. To complete this curriculum, the student must transfer to the University of California at Berkeley at the end of the second year. Before entering upon this program, the student 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 (one year), chemistry (one year), mathematics, including trigonometry (three years), German (two years), and geometrical drawing (one year). 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.

PRE-COMMERCE

In addition to the major in economics in the College of Letters and Science, the department of economics supervises the work of the first two years of a curriculum in commerce. Students may obtain the junior certificate in the University of California at Los Angeles and then transfer to the College of Commerce of the University (at Berkeley) for the remaining two years of the cur-

riculum in commerce leading to the degree Bachelor of Science. A student who holds the junior certificate in Commerce may transfer to a major in economics in the College of Letters and Science without serious difficulty.

The requirements for the junior certificate in Commerce are as follows:

Foreign languages: Students must pass an examination (designated Subject B) designed to test their ability to read one of the following languages: Greek, Latin, German, French, Spanish, Italian, Russian, Japanese, Chinese, or the Scandinavian languages. Students who complete with a satisfactory grade 15 units of French, German, Italian, Latin, or Spanish are excused from the Subject B examination. (Each year of language in the high school counts as three units on this requirement.) If the requirement has not been met by the end of the freshman year, enrollment in a course in foreign language will be required during the sophomore year.

English Composition: Subject A.[†] In addition a year course of 6 units chosen from the following: English 1A-1B or Public Speaking 1A-1B..... 6 units

History or Political Science:

History 4A-4B, or History 8A-8B, or Political Science 3A-3B, or any combination of the foregoing courses..... 6

Geography:

Geography 1A-1B..... 6

Natural Sciences..... 9

Courses in physics and chemistry taken in high school may be applied toward the satisfaction of the science requirement, each year course to count for 3 units, but they may not be included in the total of 64 units.

The following college courses are accepted on this requirement:

Astronomy 1, 11	Mineralogy 3A-3B
Bacteriology 1	Paleontology 1
Biology 1	Physics 1A-1B, 1C-1D,
Botany 1, 2	2A-2B, 4A-4B
Chemistry 1A-1B	Physiology 1
Geology 1A, 1B, 1C	Zoology 1A-1B

Mathematics:

Elementary Algebra and Plane Geometry (matriculation requirement).

*Mathematics 2 (Mathematics of Finance)..... 3

* Mathematics 2 requires as a prerequisite Mathematics 8 (3 units) or two years of high school algebra and plane trigonometry.

[†] An examination in Subject A (English Composition) is required of all undergraduate entrants at the time of their first registration in the University. For further regulations concerning Subject A see pages 37 and 38 of this Catalogue.

Economics:

Economics 1A-1B.....	6 units
Military Science, Physical Education, } Electives.....	28
Total.....	64 units

PRE-DENTAL CURRICULA

The College of Dentistry provides the following curricula: (A) a five-year program leading to the degree of Doctor of Dental Surgery (the first year's work to be taken in the College of Letters and Science at Los Angeles or Berkeley and the remainder in the College of Dentistry at San Francisco); (B) a six-year academic and professional curriculum leading to the degree of Bachelor of Science at the end of five years (two years in the College of Letters and Science at Los Angeles or Berkeley, followed by three years in the College of Dentistry), and to the degree D.D.S. in one additional year; (C) a curriculum of two years (at San Francisco) for the training of Dental Hygienists, leading to a Certificate of Graduation. The requirements for admission to these curricula are identical with the requirements for admission to the academic departments of the University.

CURRICULUM A: FIVE YEARS

PROGRAM OF FIRST YEAR

(At Los Angeles or Berkeley)

General University requirements: Subject A, Military Science, Physical Education.

Chemistry 1A-1B, 10 units.

At least 4 units selected from the following: Biology 1, Chemistry 5, Chemistry 9, Physics 2A, 2B, Zoölogy 1A, 1B. In special cases engineering physics may be offered.

A year-course acceptable toward Requirement (e) for the junior certificate (see page 59), or a foreign language (at least 5 units).

Electives from the Letters and Science List of Courses (page 62).

The minimum total number of units required for admission to the College of Dentistry under this curriculum is 30. The second, third, fourth, and fifth years are devoted to work in San Francisco. See the Announcement of the College of Dentistry to be obtained from the Dean of the College of Dentistry, Parnassus Avenue and Arguello Boulevard, San Francisco.

CURRICULUM B: SIX YEARS

FIRST AND SECOND YEARS

(At Los Angeles or Berkeley)

The combined six-year curriculum leading to the degrees of Bachelor of Science and Doctor of Dental Surgery in the College of Dentistry includes two years in the College of Letters and Science at Berkeley or Los Angeles and four years in the College of Dentistry at San Francisco.

This curriculum presupposes the completion of the following subjects in the high school: English, two years; history, one year; mathematics, two years (algebra and plane geometry); chemistry, one year; physics, one year; foreign language, two years. The language begun in the 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 the high school.

In obtaining the junior certificate the following specific requirements must be met in order that the curriculum be completed in the normal time:

Chemistry 1A-1B.

Six additional units in chemistry including three units of laboratory in either organic chemistry or quantitative analysis.

At least 4 units chosen from the following list: Biology 1, Physics 2A, Physics 2B, Zoölogy 1A, Zoölogy 1B. In special cases engineering physics may be offered.

The program of the first two years, including the above, must meet the requirements for the junior certificate in the College of Letters and Science (see page 57).

Information concerning the third, fourth, fifth, and sixth years in this curriculum will be found in the Announcement of the College of Dentistry. Address the Dean of the College of Dentistry, Parnassus Avenue and Arguello Boulevard, San Francisco.

PRE-ENGINEERING CURRICULA

CIVIL ENGINEERING

FRESHMAN		Units	SOPHOMORE		Units
† Subject A.....		1½	Mil. 2A-2B.....		1½
Mil. 1A-1B.....		1½	Physical Education.....		1½
Physical Education.....		3	Mathematics 3C-4B.....		6
Mathematics 8-8A.....		3	Mech. Engineering 2.....		3
Physics 1A-1B.....		3	Astronomy 3.....		1
Chemistry 1A-1B.....		5	Civil Engineering 8.....		2
Civil Engineering 1LA-1LB.....		2	Physics 10-1D.....		3
Civil Engineering 1FA-1FB.....		1	Geology 1A.....		3
Civil Engineering 3 (s.s.).....		(3)			
		16			

RAILROAD AND IRRIGATION

Mech. Engineering 1.....	8	.....
Elective.....	.....	.....
	*	*

SANITARY AND MUNICIPAL

Chemistry 5.....	3	.....
Elective.....	.....	.....
	*	*

* Normal total, 16 units.

† An examination in Subject A (English Composition) is required of all undergraduate entrants at the time of their first registration in the University.

MECHANICAL, ELECTRICAL, AND AGRICULTURAL ENGINEERING					
FRESHMAN			SOPHOMORE		
Subject A	Units			Units	
Mil. 1A-1B.....	1½	1½	Mil. 2A-2B.....	1½	1½
Physical Education.....	½	½	Physical Education.....	½	½
Mathematics 8, 8AB.....	3	6	Mathematics 4A-4B.....	3	3
Physics 1A-1B.....	3	3	Mathematics 10A-10B.....	2	2
Chemistry 1A-1B.....	5	5	Physics 1C-1D.....	3	3
Civil Engineering 11A.....	2	.....	Mech. Engineering 10A-10B.....	2	2
Civil Engineering 1FA.....	1	.....	Mech. Engineering 2, 6.....	3	3
	16	16	Electives.....	.....	.....
				*	*

PRE-LEGAL 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 those 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 57.

PRE-MEDICAL CURRICULUM: THREE YEARS

It is assumed that in this curriculum the student will have completed in the high school the following subjects: English, three years; history, one year; mathematics, two years (elementary algebra and plane geometry); chemistry, one year; physics, one year; foreign language, two years. The junior certificate requirements will be more easily met if the foreign language has been pursued four years in the high school.

It is very important that students remember that the class entering the Medical School is at present limited, the basis of selection being scholarship during the pre-medical years; in the past there have been a great many more applicants than could be admitted. Pre-medical students who, upon the conclusion of their third or junior year, find themselves thus excluded from the Medical

* Normal total, 16 units.

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

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 pre-medical requirements, or include in their pre-medical 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 student must be eligible for admission to senior standing in the College of Letters and Science. This requires the attainment of the junior certificate and the subsequent completion of a minimum of 22 units, of which at least 4 units must be in upper division courses. The total number of college units presented must be at least 92. The following tabulated curriculum represents the most satisfactory arrangement of work to meet the entrance requirements for the Medical School:

PRE-MEDICAL PROGRAM

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

First Year

	Units first semester	Units second semester
Subject A (examination or course in Subject A).....	----	----
Military Science (for men)	1½	1½
Physical Education.....	½	½
Chemistry 1A-1B.....	5	5
¹ English 1A-1B.....	3	3
² Foreign language.....	5	3 or 5
Electives as necessary to make up units.....	----	----
	16	16

Second Year

Military Science (for men)	1½	1½
Physical Education.....	½	½
Zoology 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 5.....	----	3
	16	16

¹ 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. The student is advised to substitute in the interim one of the year courses which are required for the junior certificate under requirement (e) in the place of English 1A-1B.

² 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.

Third Year

	Units first semester	Units second semester
American Institutions 101.....	2	....
Physics 2A-2B.....	4	4
Electives.....	10	12
	16	16

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

First Year

Subject A (examination or course in Subject A).....	....	....
Military Science (for men)	1½	1½
Physical Education.....	½	½
Chemistry 1A-1B.....	5	5
¹ 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

Second Year

Military Science (for men)	1½	1½
Physical Education.....	½	½
Zoölogy 1A-1B.....	5	5
Chemistry 8.....	3	....
Chemistry 5.....	....	3
Electives (Foreign language if necessary to complete 15 units for junior certificate).....	6	6
	16	16

Third Year

American Institutions 101.....	2	....
Physics 2A-2B.....	4	4
Electives.....	9	11
	15	15

PRE-MINING

NOTE.—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.

¹ See footnote on page 77.

FRESHMAN		Units		SOPHOMORE		Units	
†Subject A.....	.....	.....	.....	Mil. 2A-2B.....	1½	1½	1½
Mil. 1A-1B.....	1½	1½	1½	Physical Education.....	6	3	3
Physical Education.....	3	3	3	Mathematics 3C-4B.....	3	3	3
Mathematics 3-3A.....	5	5	5	Physics 1C-1D.....	3	3	3
Chemistry 1A-1B.....	2	2	2	Mineralogy 3A-3B.....	3	3	3
Civil Engineering 11A-11B.....	1	1	1	Geology 1A.....	3	3	3
Civil Engineering 1FA-1FB.....	(1)	(1)	(1)	MINING			
‡Mining 5.....	8	8	8	||Metallurgy 2.....	(8)	8	8
Physics 1A-1B.....	8	8	8	||Mining 1A-1B.....	3	3	3
Civil Engineering 3 (s.s.).....	16	16	16	Mech. Engineering 1.....	*	*	*
				METALLURGY			
				Chemistry 6A-6B.....	3	3	3
				Mech. Engineering 1.....	3	3	3
					*	*	*
				ECONOMIC GEOLOGY			
				Chemistry 6A-6B.....	3	3	3
				Paleontology 1.....	2	2	2
					*	*	*
				PETROLEUM ENGINEERING			
				Chemistry 5.....	3	3	3
				Chemistry 8.....	3	3	3
				Chemistry 9.....	3	3	3
					*	*	*

CURRICULA IN NURSING

The Training School for Nurses, in connection with the University Hospital at Berkeley, offers a five-year curriculum leading to the degree of Bachelor of Science in addition to the Certificate of Graduation from the School. Normally the work of the first two years is taken in the College of Letters and Science at Los Angeles or Berkeley, the next two years in the Training School, and the final year in the Undergraduate Division at Berkeley. For further information concerning this curriculum and concerning a three-year curriculum leading to the Certificate of Graduation alone, see the Announcement of the California Training School for Nurses, Parnassus and Third avenues, San Francisco.

Registered nurses may receive the degree Bachelor of Science in three years upon completing with an average grade of not less than "C" the work for the junior certificate in the College of Letters and Science at Los Angeles or at Berkeley. The program at Los Angeles is suggested below; for definite junior certificate requirements see page 57. The third year is to be taken at Berkeley.

See also page 81 of this Catalogue concerning curricula in Public Health, Public Health Nursing, and Nursing Education.

* Normal total, 18 units.

† An examination in Subject A (English Composition) is required of all undergraduate entrants at the time of their first registration in the University.

‡ Mechanical Engineering D is the nearest substitute for Mining 5 offered at the University of California at Los Angeles.

|| Mining 1A-1B and Metallurgy 2 are not offered at the University of California at Los Angeles. It is suggested that Chemistry 5 be taken in lieu of Metallurgy 2.

CURRICULUM AT LOS ANGELES
(Combined College and Nursing Course)

Suggested program for the first two years in the College of Letters and Science.

FIRST YEAR		Units	SECOND YEAR		Units
Subject A (see p. 37)	.....	.....	Physical Education	.....	$\frac{1}{2}$
Physical Education	.....	$\frac{1}{2}$	Physiology 2	.....	$\frac{1}{2}$
Physiology 1	.....	3	Economics 1A-1B	.....	3
Chemistry 1A-1B	.....	5	Psychology 1A-1B	.....	3
†Electives	.....	.....	Zoology 35	.....	3
			Bacteriology 1	.....	4
			†Electives	.....	.....

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 57).

First Year

	Units first semester	Units second semester
Subject A (see page 37).		
Military Science 1A-1B	1½ or 0	1½ or 0
Physical Education	$\frac{1}{2}$	$\frac{1}{2}$
Chemistry 1A-1B	5	5
English 1A-1B	3	3
Physiology 1	.....	3
Physics 2A-2B	3	3
Electives	.....	.....
Normal total	16	16

Second Year

	Units first semester	Units second semester
Military Science 2A-2B	1½ or 0	1½ or 0
Physical Education	$\frac{1}{2}$	$\frac{1}{2}$
Mathematics 5	3	.....
Psychology 1A	.....	3
Physics 3A-3B	1	1
Physiology 2	2	.....
Foreign Language	5	5
Electives	.....	.....
Normal total	16	16

* Normal total, 16 units.

† Suggested electives for the completion of the junior certificate: First year: German A, B, or French A, B; English 1A-1B, or Public Speaking 1A-1B. Second year: Philosophy 1A-1B.

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 a four-year program leading to the degree of Bachelor of Arts; students desiring this program may take only academic courses in the College of Letters and Science of the University of California at Los Angeles, and are consequently 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.

Pharmacy.—Two curricula in pharmacy are available; one of three years leading to the Certificate of Graduation in Pharmacy is given in the College of Pharmacy in San Francisco; a four-year curriculum leads to the degree Bachelor of Science in Pharmacy. The first two years of this latter curriculum are given in Berkeley (one year may be taken at Los Angeles); the last two years are given in San Francisco.

Public Health.—In Berkeley a program of seven years is offered, 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. However, in the case of students of medicine in the University of California, a year of the Public Health Curriculum will be accepted in lieu of the fifth year of the Medical Curriculum, reducing the time required for the degree of Doctor of Public Health to six years.

Public Health Nursing.—The College of Letters and Science in Berkeley offers to regular students of the College who have been certified as registered nurses, a course of one and one-half years in the Department of Hygiene, leading to the Certificate in Public Health Nursing.

Nursing Education.—The College of Letters and Science in Berkeley offers to regular students of the College who have been graduated from approved schools of nursing, a course of one and one-half years in the Department of Hygiene, leading to the Certificate in Nursing Education.

Social Service.—The College of Letters and Science in Berkeley offers a one-year program subsequent to the bachelor's degree, leading to a Certificate of Completion of the Curriculum in Social Service in the Department of Economics. The bachelor's degree may be obtained in the College of Letters and Science of the University of California at Los Angeles.

JOURNALISM

The University of California at Los Angeles does not offer a curriculum in journalism; a student who desires to prepare himself for this field of endeavor 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 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 Credential, valid in the junior high school.
4. The Secondary Special 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 89 to 91.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF EDUCATION

- I. Completion of 120 units of credit with corresponding 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, including:

- (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. Each year of high school work in a foreign language will count in satisfaction of 3 units of this requirement but will not reduce the number of units required for the junior certificate or the degree.
- (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, at least 2 units of which must include laboratory work. (Courses marked with an asterisk meet the laboratory requirement.) 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 1, 11.

Bacteriology 1.*

Biology 1, 12.

Botany 1,* 2.*

Chemistry 1A,* 1B,* 2A,* 2B,* 5,* 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.*

- (e₁) English 1A-1B or Public Speaking 1A-1B or 2A-2B.

- (e₂) Psychology 1A-1B.

- (e₃) 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—6 units chosen from the following: C, F, 2, 5, 6, 8, 9A, 9B, 3A or 3B. 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 54 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 taken 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 24 to 30 units of approved upper division courses, must be completed in one of the following departments:

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 school 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 junior high school credential. Requirements for both special secondary and 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. The requirements for minors appear under the respective departments in the latter part of this Catalogue.

* In case the candidate for a teaching credential is the holder of 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.

MAJORS IN THE TEACHERS COLLEGE

ART

Preparation for the Major.—Art 1, 2A, 2B, 4A, 4B, 8A, 8B, 9, 12, 32A.

The Major, leading to the Secondary Special Teaching Credential in Art.—The major in Art consists of 25 units of upper division courses; this program is to follow 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.—Economic 1A, 1B, 14A, 14B, 15A, or 15B; Commerce 16, 17, 18A, 18B; Political Science 18A, 18B; Geography 5A, 5B; History 75 or 76.

The Major, leading to the Secondary Special Credential in Commerce.—24 units of advanced work approved by the department, including Economics 135 and at least one of the following: Economics 123, 173, 195.

The Minor in Education.—Education 103, 170; Directed Teaching, 10 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 121 or 122

Education 104 or 105* or 150

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 pages 88–91.

HOME ECONOMICS

Preparation for the Major.—Home Economics 1A, 1B, 2, 11A, 11B, 43A; Art 22; Chemistry 2A, 2B, 10; Physiology 1; Economics 1A.

The Major, leading to the Secondary Special Credential in Home Making.—Home Economics 108, 110, 118A, 120, 162A, 162B, 164, 168, and 5 units of advanced home economics approved by the department.

The Minor in Education.—Education 103, 170; Teaching, 6–10 units; Home Economics 147A, 147B.

* Required for the Kindergarten-Primary Credential.

Vocational Home Economics.—A two and one-half year vocational curriculum in home economics is maintained under the provisions of the Smith-Hughes Act. This curriculum leads to recommendation for the secondary special teaching credential in home making. It is open to mature students who are high school graduates and who have had practical experience in the administration of a home. All applicants must be approved by the Department of Home Economics.

MECHANIC ARTS

Preparation for the Major.—Mechanical Engineering D; Mechanic Arts 10, 11, 40, 51, 65A, 65B, 75A, 80A; recommended, mathematics and physics.

The Major, leading to the Secondary Special Credential in Industrial Arts Education.—30 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.

Secondary Special Credential in Vocational Arts.—A two-year curriculum leading to the secondary special teaching credential in vocational arts is maintained under the provisions of the Smith-Hughes Act. This course is open to experienced journeymen workmen who have had two years of schooling beyond the eighth grade. All applications must be approved by the Assistant Director of the Division of Vocational Education. A statement of the requirements for the Limited Credential in Industrial Arts Education will be found in Bulletin H-2 published by the State Board of Education.

MUSIC

Preparation for the Major.—Music 1A, 1B, 2A, 2B, 7A, 7B, 9A, 9B, 10A, 10B, 55A, 55B.

The Major, leading to the Secondary Special Credential in Music.—Music 101A, 101B, 105A, 105B, 108A, 108B, 109, 111A, 111B, 114A, 114B.

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

PHYSICAL EDUCATION FOR MEN

Preparation for the Major.—High school chemistry or Chemistry 2A or Zoölogy 1A; Physiology 1; Biology 1; Zoölogy 35; Physical Education 1, 3 (2 units), 5, 29A-B-C-D.

The Major, leading to the Secondary Special Credential in Physical Education.—Physical Education 120, 130A-B-C-D, 131, 140 149, 156A, 156B, 182, 190, 192A, 192B.

The Minor in Education.—Education 100, 103, 170; Directed Teaching, 6 units, Physical Education 154, 155A, 155B.

PHYSICAL EDUCATION FOR WOMEN

Preparation for the Major.—Physical Education 50A, 50B, 55, 62A, 62B, 63A, 63B, 72A, 72B, 73A, 73B, and one of the following sequences: (1) Chemistry 2A, 2B, or Physics 4A, 4B; Biology 1; Zoölogy 35; Physiology 1; Home Economics 32. (2) Zoölogy 1A, 1B, 106; Physiology 1; Home Economics 32.

The Major, leading to the Secondary Special Credential in Physical Education.—Physical Education 120, 140, 149, 151A, 151B, 175, 180A, 180B, 181A, 181B, 182, 183, 190, 192, 199.

The Minor in Education.—Education 103, 170; Teaching 6–10 units; Physical Education 121A, 121B.

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 pages 71, 72.)

REQUIREMENTS FOR TEACHING CREDENTIALS

1. *The Elementary Credential*

- a. The degree of Bachelor of Education with a major in Education.
- b. Completion of Art 22, 30; Mathematics 19; Music 60A, 60B; Physical Education 111A, 111B. History 39 and English 50 are recommended but not required.
- c. Education 390 and Supervised Teaching.

2. *The Kindergarten-Primary Credential*

- a. The degree of Bachelor of Education with a major in Education.
- b. Completion of Art 22, 30; Education 306, 105; Music 60A, 60B; Physical Education 111A, 111B.
- c. Examination in piano.*
- d. Education 390ABC, Supervised Teaching.

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.

* 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 Kohlsaat and Baker, and music for rhythmic interpretation of the type in Robinson's "School Rhythms.")

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 86 to 88.

5. The General Secondary Credential

The Certificate of Completion leading to the General Secondary Credential is granted to students who qualify for admission to graduate study, under the following conditions:

- a. Completion of 24 units of resident study subsequent to the receipt of the bachelor's degree.
- b. Eighteen units of courses in Education, including
 - 1) Education 170
 - 2) Six units chosen from Education 100, 103, 121, 122, 150, Psychology 110
 - 3) Education 320A-320B, Supervised Teaching (Restricted to graduate students)
 - 4) Electives to total 18 units. (Any upper division courses in Education or departmental courses for secondary teachers [300 series].)
- c. Completion of a teaching major of not less than 24 units of upper division and graduate courses in one of the following fields:

Agriculture

Biological Sciences

Students completing a major in Botany or Zoölogy must offer a minor in a field other than Biological Science.

Chemistry

Economics

Students completing a major in Economics must offer a minor in a field other than Political Science.

English

Students completing a major in English must offer a minor in a field other than Public Speaking.

Geography

Students completing a major in Geography must offer a minor in a field other than Geology.

Geology

Students completing a major in Geology must offer a minor in a field other than Geography.

History

Mathematics

Physics**Political Science**

Students completing a major in Political Science must offer a minor in a field other than Economics.

Spanish

- d. Completion of a teaching minor (not less than 18 units, of which 9 to 12 must be upper division or graduate courses) in any of the foregoing fields, or in art, astronomy, classical languages, French, German, home economics, mechanic arts, music, physical education, public speaking, under the limitations specified in the preceding section. A minor in a modern foreign language must include 12 units of upper division courses.
- e. A scholastic average of 1.75 must be maintained for all work undertaken after receipt of the bachelor's degree and for the upper division and graduate courses comprising the teaching major. A grade of C or better must be presented in Education 320A and 320B.
- f. At least 6 units of graduate courses (200 series) must be completed in the fields of the teaching major and (or) minor.
- g. A knowledge of the United States Constitution as attested by examination or an approved course.
- h. Certificate of fitness by the medical authorities of the University of California.
- i. Evidence of a satisfactory command of spoken English.

6. The Junior College Credential

The Certificate of Completion leading to the Junior College Credential is awarded to students who hold, or who have completed all requirements for, the Master's (or Doctor's) degree upon completion of the following requirements:

- a. Ten units of courses in Education approved by the Department of Education. Education 179 and 320A-320B are required. Education 320A-320B is restricted to graduate students.
- b. Completion of a graduate major (not less than 12 units of graduate courses) 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
Bacteriology
Botany
Chemistry
Economics

English
Geography
Geology
History
Mathematics
Philosophy

Physics
Political Science
Psychology
Spanish
Zoölogy

- c. Completion of a teaching minor (not less than 18 units of which 9 to 12 are upper division or graduate courses) in any of the foregoing fields or in art, astronomy, classical languages, French, German, home economics, mechanic arts, music, physical education, public speaking. A minor in a modern foreign language must include 12 units of upper division courses.
- d. A knowledge of the United States Constitution as attested by examination or an approved course.
- e. Certificate of fitness by the medical authorities of the University of California.
- f. Evidence of a satisfactory command of spoken English.

THE BRANCH OF THE COLLEGE OF AGRICULTURE IN SOUTHERN CALIFORNIA—LOS ANGELES

The College of Agriculture of the University of California, through its Branch in southern 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—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. Those students intending 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 requirements stated below are obligatory for all students entering the College of Agriculture.

1. Four years of residence. (The senior year must be spent in this University.)
2. One hundred and thirty semester units of university work in addition to matriculation and in addition to Subject A.* These 130 units must be chosen in accordance with the provisions set forth hereinafter. In addition to the 130 units the student must have attained at least as many grade points or quality units as there may be time units or quantity units in the credit value of all courses undertaken by him in the University of California. For further information concerning grade point requirements see page 42.

* An examination in Subject A (English Composition) is required of all undergraduate intrants at the time of their first registration in the University. For further regulations concerning Subject A, see page 37.

3. Including matriculation,† all students must have completed—ordinarily before the end of the sophomore year—mathematics, including trigonometry, 9 units.

4. Among the 54 or more units normally taken in the junior and senior years, there must be 36 units in upper division courses, i.e., those numbered 100 to 199.

5. In addition to requirement 3 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.....	4
Entomology	4
Zoölogy	4
American Institutions.....	2
Military and Physical Education.....	8

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(b) In addition students must take a major with the minimum of twelve (12) units of upper division work in Subtropical Horticulture.

(c) A summer course may be prescribed in addition to the above as a major requirement.

FRESHMAN AND SOPHOMORE YEARS

During the freshman and sophomore years the following schedule will normally be followed. Example of the program in the Plant Science curriculum at Los Angeles only is given herein. For example 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.

† One year of high school work in a given subject is here counted as the equivalent of three units of university work.

EXAMPLE OF PROGRAM—PLANT SCIENCE CURRICULUM

FRESHMAN YEAR			SOPHOMORE YEAR		
	Fall	Spring		Fall	Spring
Military Science.....	1½	1½	Military Science.....	1½	1½
Physical Education.....	½	½	Physical Education.....	½	½
Botany 1, 2.....	4	4	Botany 109, 101.....	8	8
Chemistry 1A-1B.....	5	5	Chemistry 5.....	8	---
Physics 4A-4B.....	3	3	Chemistry 8.....	3	---
Economics 1A.....	3	---	Zoölogy 1A.....	5	---
Geology 1A.....	---	3	Bacteriology 1.....	---	4
			Economics 1B.....	---	8
			Entomology 1.....	---	4
			Subtropical Horticulture 2.....	---	3
			Elective	8 or 8	---
	17	17		18 or 19	19

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 during 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 1, Zoölogy 100A (Genetics), Plant Nutrition 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. For elective courses in other departments the latter pages of this Catalogue should be consulted.

Students should consult the major adviser relative to the 12 units required for the major in Subtropical Horticulture. Certain courses are required—100, 104 and 106—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 (i.e., those who have completed 64 units in their freshman and sophomore years).

1. Honorable mention shall be granted with junior standing to students who attain at least an average of 2 grade points per unit undertaken. Such students shall remain in honors status unless their average for all work at the end of any semester falls below 2 grade points per unit undertaken.
2. The list of students who receive Honorable Mention shall be 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 shall be published in the Catalogue of Officers and Students.

II. Honors with the Bachelor's Degree.

1. Honors shall be 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, display 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 shall be published in the Commencement program.

GRADUATE STUDY

REQUIREMENTS FOR THE MASTER'S DEGREE

Preliminary Preparation.—The preliminary training for 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 course is found to be in any serious respect deficient as to breadth or fundamental training, or 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 devote some time to 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 Agri-

culture; in this field 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 Bachelor of Science, may be awarded the degree Master of Science.

Major Fields. The major fields for graduate study for 1934-35 are

Agriculture (Subtropical Horticulture)	Geography	Political Science
Botany	Geology	Psychology
Chemistry	History	Spanish
Economics	Mathematics	Zoology
Education	Philosophy	Zoölogy
English	Physics	

Residence. The minimum period of academic residence required is one year, of which at least one half-year shall 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 student is not regarded as a student in residence unless he is actually attending regularly authorized university exercises amounting to at least 4 units of upper division or graduate grade during a regular session, or of at least 2 units of similar work during a Summer Session. 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.

Application for Advancement to Candidacy. Advancement to candidacy shall take place not later than one semester prior to the date of completion of requirements for the degree. Attention of students is called 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.

Plan I: Thesis Plan. There are required 20 semester units and in addition 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 will ordinarily amount to not less than half of the entire work presented

for the degree. Provided the foregoing general and the special departmental requirements be 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 in addition require such examination as may be necessary to satisfy it as to the candidate's knowledge in the field of his work.

Plan II: Comprehensive Examination Plan. There are required 24 units of upper division and graduate courses, 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 per unit of work undertaken) in all courses elected at the University subsequent to the Bachelor's degree. Three points per unit are assigned to grade "A"; two points to grade "B"; one point to grade "C"; none to grade "D"; negative one to grades "E" and "F."

Foreign Language. A reading knowledge of a modern foreign language (other than that of the major subject, if 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, and conducts the examination.

Acceptance of Work Completed in Graduate Status Elsewhere. The following regulation governs the acceptance of work completed in graduate status at other institutions: It is required that the entire program for the master's degree be completed in residence at this institution. 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 case, however, will more than 4 units be allowed, and then only in cases 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 the 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 four units.

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.

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 per week for each half-year, in order to satisfy the minimum residence requirement in candidacy for any higher degree or certificate issued by the University. Students establishing residence in this manner cannot complete the requirements for higher degrees on the basis of the minimum residence requirement unless they give their whole time to study and research.

REGISTRATION REQUIRED OF CANDIDATES FOR THE MASTER'S DEGREE

Every candidate for a higher degree is required to register at the University at the beginning of each half-year so long as *any portion* of the *degree* requirement, including the thesis, is in process of fulfillment, until the degree shall have been awarded or the candidate shall have received a formal certificate of leave of absence or of honorable dismissal from the University. Failure to observe this rule will result in the loss of all university privileges.

ANNOUNCEMENT OF COURSES

CLASSIFICATION AND NUMBERING OF COURSES

I. Undergraduate Courses.

1. *Lower Division Courses* (numbered 1-99, or indicated by letters if in subjects usually given in a high school). A lower division course is designed primarily for freshmen and sophomores and does not count as upper division credit.

2. *Upper Division Courses* (numbered 100-199). An upper division course is an advanced course in a department of study that has been pursued in the lower division, or an elementary course in a subject of such difficulty as to require the maturity of upper division students.

II. *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.

III. *Graduate Courses* (numbered 200-299). Graduate courses are open only to students who have been admitted to graduate status. As a condition for enrollment in a graduate course the student must submit to the instructor in charge of the course satisfactory evidence of preparation for the work proposed. Adequate preparation consists normally in the completion of at least 12 units of upper division work basic to the subject of the course, irrespective of the department in which such basic work has been completed.

IV. A course designated by a double number (i.e., Economics 1A-1B) is continued through two successive half-years. At the end of each half-year a final report will be made by the instructor. The student may discontinue the course at the end of the first half-year with final credit for the portion completed.

V. The credit value of each course in units is indicated by a numeral in parentheses following the title. A unit of registration is one hour of the student's time at the University, weekly, during one half-year, in lecture or recitation, together with the time necessary in preparation therefor; or a longer time in laboratory or other exercises not requiring preparation.

VI. The period during which a course is given is shown as follows: I, first half-year; II, second half-year; Yr., throughout the year; I, II indicates that the course is repeated each half-year.

AGRICULTURE

LEON D. BATCHELOR, Ph.D., Professor of Orchard Management and Director of the Branch of the College of Agriculture in Southern California, Riverside.

SMUEL H. BECKETT, Engr., Professor of Irrigation Investigations and Practice.

HOWARD S. FAWCETT, Ph.D., Professor of Plant Pathology, Riverside.

HENRY J. QUAYLE, M.S., Professor of Entomology, Riverside.

ROBERT W. HODGSON, M.S., Professor of Subtropical Horticulture, and Assistant Director of the Branch of the College of Agriculture in Southern California.

IRA J. CONDIT, Ph.D., Associate Professor of Subtropical Horticulture.

ALFRED M. BOYCE, Ph.D., Assistant Professor of Entomology, Riverside.

SIDNEY H. CAMERON, Ph.D., Assistant Professor of Subtropical Horticulture.

PIERRE A. MILLER, M.S., Associate in Plant Pathology.

DAVID APPLEMAN, B.S., Research Assistant in Subtropical Horticulture.

Letters and Science List.—Entomology 1, Plant Nutrition 110, and Plant Pathology 120 are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

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 93, 94 of this Catalogue or the Prospectus of the College of Agriculture).

The Major in Subtropical Horticulture.—Twelve units of upper division courses including 100, 104, and 106.

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.—The fee for Entomology 1 is \$2; for Entomology 134, \$3; for Irrigation 105, \$2; for Plant Nutrition 110, \$2; for Plant Pathology 120, \$2; for Plant Pathology 130, \$3; for Subtropical Horticulture 100, \$3; and for Subtropical Horticulture 106, \$2.

ENTOMOLOGY

LOWER DIVISION COURSE

1. General Entomology. (4) II.

Mr. BOYCE

Lectures, M W F, 8; laboratory, W, 2-5. Fee, \$2.

Prerequisite: Zoölogy 1A.

Fundamentals of the study of insects: anatomy, physiology, classification, life history and economic relationships. Laboratory: collection and preservation, comparative morphology, taxonomy, and biological and economic considerations of representative species.

UPPER DIVISION COURSE

134. Insects Affecting Subtropical Fruit Plants. (4) II.

Mr. BOYCE, Mr. QUAYLE

Lectures, Tu Th, 8; laboratory, Tu Th, 1-4. Fee, \$3.

Prerequisite: Entomology 1 or 124.

Principles of entomology from the economic viewpoint. Detailed consideration of the identity, nature of injury, biology and control of the more important insects affecting citrus and other subtropical fruit plants. Laboratory: anatomy, life history and habits, and fumigation, spray, dust, and biological methods of control of the major pests.

GRADUATE COURSES

(Given at Riverside)

200A-200B. Seminar in Entomology. (1-1) Yr.

The STAFF (Mr. QUAYLE in charge)

201A-201B. Research in Entomology (1-6; 1-6) Yr.

Mr. QUAYLE, Mr. SMITH, Mr. BOYCE

IRRIGATION INVESTIGATIONS AND PRACTICE

UPPER DIVISION COURSE

105. Principles of Irrigation Practice. (4) II.

Mr. BECKETT

Lectures, M F, 10; laboratory, M F, 1-4. Fee, \$2.

Prerequisite: Physics 2A-2B or the equivalent; Botany 1 and 2 or the equivalent.

Sources of water supply; irrigation methods and practices; movement of irrigation water in the soil; and the irrigation requirements of crops with special emphasis on the relation of soil moisture to the growth of citrus and other subtropical plants.

PLANT NUTRITION

UPPER DIVISION COURSE

110. The Soil as a Medium for Plant Growth. (4) I.

Mr. CAMERON, Mr. APPLEMAN

Lectures, M W F, 10; laboratory, W, 2-5. Fee, \$2.

Prerequisite: Chemistry 1A-1B, 5, 8.

Composition and properties of soils; soil and plant interrelations; culture solution studies; current theory of the soil solution; effects on the soil and plant of the addition of fertilizers and soil amendments.

GRADUATE COURSES

(Given at Riverside)

202A-202B. Research in Soils. (1-6; 1-6) Yr.

Mr. KELLEY

203A-203B. Research in Plant Physiology. (1-6; 1-6) Yr.

Mr. REED

205A-205B. Seminar in Plant Physiology. (1-1) Yr.

The STAFF (Mr. REED in charge)

237A-237B. Seminar in Soils. (1-1) Yr. The STAFF (Mr. KELLEY in charge)

PLANT PATHOLOGY

UPPER DIVISION COURSES

120. Plant Diseases. (4) I. Mr. FAWCETT, Mr. MILLER
Lectures, Tu Th, 8; laboratory, M F, 2-5. Fee, \$2.
Prerequisite: Botany 1 and 2 or the equivalent and Bacteriology 1.
A general fundamental course treating of the nature, cause, and control of plant diseases.
130. Diseases of Subtropical Fruit Plants. (3) I. Mr. FAWCETT, Mr. MILLER
Lectures, M F, 10; laboratory W, 2-5. Fee, \$2.
Prerequisite: Plant Pathology 120.
The pathology of citrus and other subtropical fruit plants. The distribution, economic importance, nature, cause and control of the principal diseases.

GRADUATE COURSES

(Given at Riverside)

- 201A-201B. Seminar in Plant Pathology. (1-1) Yr.
The STAFF (Mr. FAWCETT in charge)
- 230A-230B. Research in Plant Pathology. (1-6; 1-6) Yr.
Mr. FAWCETT, Mr. HORNE

SUBTROPICAL HORTICULTURE

LOWER DIVISION COURSE

2. Elements of Fruit Production. (3) II. Mr. HODGSON
Lectures, M W F, 11.
Prerequisite: Botany 1 and 2 or the equivalent.
This course is equivalent to Pomology 2A, given at Berkeley and 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.

UPPER DIVISION COURSES

100. Systematic Subtropical Horticulture. (3) I. Mr. CONDIT
Lecture, Tu, 1; laboratory, Tu Th, 2-5. Fee, \$3.
Prerequisite: Subtropical Horticulture 2, or the equivalent.
The botanical classification and relationships of the principal fruits; horticultural races and groups; growth and bearing habits; bud and fruit morphology; varietal characters.
102. Advanced Fruit Production. (3) II. Mr. CAMERON
Lectures, M W F, 8.
Prerequisite: Chemistry 1A-1B, Subtropical Horticulture 2 or the equivalent, Botany 101 or equivalent, and Subtropical Horticulture 100.
An analysis of the knowledge concerning the responses of fruit trees to environmental and cultural influences, with special reference to subtropical regions.

- 103A. Pro-seminar. (2) I. The STAFF (Mr. HODGSON in charge)
F, 10-12.

Open only to senior students majoring in Subtropical Horticulture.

A critical review and discussion of reading assignments.

104. Special Field Studies. (3) The STAFF (Mr. HODGSON in charge)

A four weeks' course following the spring semester of the Junior year.

Required of all students majoring in subtropical horticulture.

Prerequisite: Subtropical Horticulture 2 and 100, or the equivalent, and 106.

The principal purposes of the course are (1) to develop in the student (a) facility and accuracy in making and interpreting field observations, (b) ability to observe independently and to analyze field experiments, (c) capacity for applying the results of experimental procedure to the analysis and solution of problems in the field, and (2) to acquaint him with certain important relations, conditions, problems, and practices which can best be learned by directed personal observation in the field (climatic regions and special reactions and adaptations, frost and wind protection, fruit harvesting and preparation for market, etc.).

106. Citriculture. (4) II. Mr. HODGSON, Mr. CAMERON

Lectures, M W F, 9; laboratory, W, 2-5. Fee, \$2.

Prerequisite: Chemistry 1A-1B, Subtropical Horticulture 2 or the equivalent, and Botany 101 or the equivalent. May be taken concurrently with Botany 101. Subtropical Horticulture 100 is advised.

The characteristics of the citrus fruits and their responses to environmental influences and cultural practices; the economics of the citrus fruit industry.

- *108. History of Fruit Culture. (2) I. Mr. CONDIT

Lectures, M W, 9.

Prerequisite: Subtropical Horticulture 2 or the equivalent. Subtropical Horticulture 100 (concurrently) is advised.

The origin and spread of fruit plants. The history of fruit culture and its relation to the development of civilization.

- 199A-199B. Special Study for Advanced Undergraduates. (2-4; 2-4) Yr.

The STAFF (Mr. HODGSON in charge)

GRADUATE COURSES

- 201A-201B. Research in Subtropical Horticulture. (1-6; 1-6) Yr.

Mr. HODGSON in charge

- 205A-205B. Seminar in Subtropical Horticulture. (1-1) Yr. M, 4-6.

Mr. HODGSON in charge

(Given at Riverside)

- 201A-201B. Research in Subtropical Horticulture. (1-6; 1-6) Yr.

Mr. BATCHELOR, Mr. WEBBER

* Not offered in 1984-85.

ART*

GEORGE JAMES COX, R.C.A., Professor of Art.

NELLIE HUNTINGTON GERE, Associate Professor of Fine Arts.

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.

OLIVE NEWCOMB, Associate in Fine Arts.

BELLE H. WHITICE, Associate in Fine Arts.

HELEN M. HOWELL, Ed.B., Associate in Fine Arts and Supervisor of Art Training.

VIRGINIA VAN NORDEN WOODBRIDGE, Ed.B., Associate in Fine Arts.

LOUISE GUTHRIE THOMPSON, Ed.B., Associate in Fine Arts.

CLARA BARTRAM HUMPHREYS, M.A., Associate in Fine Arts.

MARJORIE HARRIMAN, Ed.B., Associate in Fine Arts.

ANNITA DELANO, Associate in Fine Arts.

ADELAIDE MORRIS, M.A., Associate in Fine Arts.

BERYL KIRK SMITH, Associate in Fine Arts.

LAURA F. ANDRESON, Ed.B., Associate in Fine Arts.

ANNIE C. B. MCPHAIL, Associate in Fine Arts.

ADRIAN D. KELLER, B.S. in E.E., Associate in Mechanic Arts.

THE TEACHERS COLLEGE

Preparation for the Major.—Art 1, 2A, 2B, 4A, 4B, 8A, 8B, 9, 12, 21, 32A.

The Major in Art consists of 25 units of upper division courses; this program is to follow 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.

The Minor in Art.—

1. (Kindergarten and Elementary) 2B, 4B, 21, 22, 30, and 6 units of upper division courses as approved by the Art Department.
2. (Home Economics) 1, 2A, 9, 21, 32B, 101, 156A, 183B.

THE COLLEGE OF LETTERS AND SCIENCE*

Art 1, 2A–2B, 4A–4B, 11, 32A–32B, 101, 121A–121B, 131A–131B, 134A–134B, 152A, 154, 161, 175, and 177 are included in the Letters and Science List of Courses.

* The University of California at Los Angeles does not offer a major in art in the College of Letters and Science. Students wishing to satisfy the requirements for a major in art are referred to the General Catalogue of the Departments at Berkeley.

Laboratory Fees.—The following fees are required: Courses 19, 30, 39A, 39B, 330, \$2; courses 134B, 164, \$5.

Instruction is offered by the department in the following fields:

Appreciation and History of Art: Courses 1, 11, 21, 121A-121B, 101, 131A-131B, 161, 191.

Art Education: Courses 160A-160B, 180, 190, 330.

Costume: Courses 183A-183B.

Crafts: Courses 9, 19, 29A-29B, 39A-39B, 119, 179.

Design: Courses 2A-2B, 12, 22, 32A-32B, 152A-152B.

Drawing, Painting, and Sculpture: Courses 4A-4B, 134A-134B, 137, 154, 164, 177, 198, 199.

House Design and Decoration: Courses 156A-156B, 186A-186B.

Illustration: Courses 135, 165A-165B, 175.

Theatre: Courses 8A-8B, 168.

For majors and minors in Art, courses 1 and 2A (or 22) are prerequisite to all other courses in the department except certain courses which may be taken concurrently with them.

LOWER DIVISION COURSES

1. Esthetics. (2) I, II.

Mr. COX, Miss GERE

The nature, origin, and development of art. Need of appreciation in personal and civic life. Interrelation of the visual arts, their qualities, elements, and principles. Nomenclature and criteria.

2A-2B. Art Structure. (2-2) Yr.

Miss HARRIMAN, Mrs. THOMPSON

(A) Fundamental course upon which all other courses are based. Principles of design. Development of appreciation of harmony produced through the organization of the art elements.

(B) Composition of naturalistic forms.

2A is not open to students who have taken or are taking 22.

4A-4B. Drawing and Painting. (2-2) Yr.

Mrs. SMITH and the STAFF

(A) Principles of perspective and the development of feeling for fine quality in line and mass drawing of still-life, buildings, interiors, and furniture.

(B) The study of form, and interpretation through the medium of water color.

8A. Art of the Theatre. (1) II.

Miss ANDERSON and the STAFF

The technique of the visual art of the theatre. Study of the materials and equipment of the modern stage. Construction of experimental models. Mechanics of lighting.

8B. Art of the Theatre. (1) II.

Miss ANDERSON and the STAFF

Comprehensive study of the various processes of textile decoration. Practice in dyeing; draping and modelling of period styles. Experiments in new uses of materials in the theatre.

9. Elementary Construction. (2) I. Miss WHITICE, Miss NEWCOMB
Prerequisite: Art 1, 2A.

A course designed to familiarize students with the major crafts and to provide sufficient techniques and skills to enable them to use a variety of materials as effective media of expression.

11. Art and Civilization. (2) I, II. Mr. Cox
Prerequisite: Art 1.

A survey of the art centers of the old and new world with particular reference to the function of art in the modern state, city, and community.

12. Typographical Composition. (2) I. Mrs. SMITH, Miss MCPHAIL
Prerequisite: 1, 2A-2B.

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.

19. Ceramics. (2) I. Miss NEWCOMB
Prerequisite: 1, 2A-2B. Fee, \$2.

Historical survey of the art and craft of pottery; its cultural and economic significance. Preparation and use of clays. Different methods of construction and decoration. Use of engobes and glazes. Mold making, casting, and pressing.

21. Art Appreciation: Costume and House Furnishing. (2) I. Mrs. SOOY and the STAFF
Prerequisite: Art 1 or 2A or 22.

Part 1: Study of the structural harmony of modern dress; its relation to the figure, its suitability and expressiveness. Part 2: 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.

22. Art Structure. (3) I, II. Mrs. HUMPHREYS and the STAFF
For Teachers College students.

Fundamental course in design and appreciation. Application in the modern school curriculum. Laboratory problems in the organization of the art elements. Lectures in esthetics and pedagogy.

Not open to students who have taken or are taking 2A.

- 29A-29B. The Art of the Book. (2-2) Yr. Miss WHITICE
Prerequisites: Art 1, 2A-2B, 9.

(A) Study of the book: its history and development, its materials, construction, and esthetic possibility; binding and re-binding, exemplifying types of sewing and forwarding, and illustrating appropriate uses of various binding materials.

(B) Study of the work of noted binders and of famous presses. Fine or "extra" binding. Finishing, including the decoration of books forwarded in leather in 29A.

32A-32B. Art Structure. (2-2) Yr.

Miss DELANO, Mrs. THOMPSON

Prerequisite: for 32A, 2A, 2B, 4B; for 32B, 4A, 32A.

(A) The development of imaginative insight in dealing with subject matter and the ability to create with line, notan, space, and color in unified relations.

(B) Original design in its relationship to various fields—ceramics, furniture, textiles, jewelry, and books. A search for qualities which will unify material and functional elements with line, notan, color, texture, and space relations.

39A-39B. Weaving. (2-2) Yr.

Miss WHITICE

Prerequisite: Art 1, 2A-2B, and (for 39B) junior standing. Fee, \$2 per half-year.

(A) Study of weaving; its history and development. Such experience in the techniques and processes of weaving as will enable the artist-craftsman to produce fabrics characterized by both technical excellence and fine esthetic qualities.

(B) Study of weaves; the materials of textiles; dyes. Harness, tapestry, and Egyptian card or tablet weaving; dyeing of yarns and fabrics; analysis of patterns and writing of original drafts.

UPPER DIVISION COURSES**101. History of Costume and Furniture. (2) II.**

Mrs. SOOY

Prerequisite: junior standing.

119. Advanced Ceramics. (2) I.

Miss NEWCOMB

Prerequisite: 19A-19B.

A technical study of the nature and properties of clays, colored bodies, and pastes; glaze materials; formulae; mixing and application. Operation of the kiln.

121A-121B. History of Art. (2-2) Yr.

Miss GERE

Required of all major students in Art.

Prerequisite: Art 1.

(A) Occidental architecture and allied arts from Paleolithic times to the present (exclusive of sculpture and painting from the 13th century).

(B) Occidental sculpture and painting. Oriental architecture and allied arts.

131A-131B. History of Art, Advanced. (2-2) Yr.

Miss GERE

Prerequisite: Art 1 and junior standing.

(A) Italian painting and sculpture.

(B) Spanish, Flemish, Dutch, German, French, British, and American painting. Recent sculpture and painting.

134A-134B. Drawing and Painting. (2-2) Yr. Miss CHANDLER, Mrs. SMITH

Prerequisite: Art 2A-2B, 4A-4B. Fee, \$5 for 134B.

(A) Study of the fundamental principles controlling form, light, color, and space as a basis for the interpretation of observed facts. The development of understanding and esthetic feeling by creating new and expressive forms.

(B) Life Class. Organization of the significant rhythm of the human figure aiming at direct expression of character, movement, and form.

135. Illustration. (2) I.

Mr. COX, Miss CHANDLER

Prerequisite: 32A, 134A.

Study of the art of book illustration with exercises in original composition, leading to the complete illustration of a book, poem, fable, or legend, offering scope for imaginative design.

137. Landscape Painting. (2) II.

Miss DELANO

Prerequisite: 32A, 134A.

The development of personal vision and independent expressions as applied to the essentials of landscape painting. Survey of modern and traditional schools.

152A-152B. Art Structure. (2-2) Yr.

Miss CHANDLER, Miss DELANO

Prerequisite: for 152A: 134A; for 152B: 32B.

(A) Advanced composition. Imaginative interpretation of naturalistic subject matter with emphasis upon harmony and simplicity in the design. Oil paint is the medium.

(B) Advanced industrial design.

154. Advanced Drawing and Painting. (2) I, II.

Miss DELANO

Prerequisite: 137, 152A.

A search for individual ways of seeing and expressing what is of moving interest in the contemporary scene. Line, space, color, and light studied as related factors in creative expression.

156A-156B. House Planning and Decoration. (2-2) Yr.

Prerequisite: 32B, 21.

Mrs. SOOY, Mrs. WOODBRIDGE

(A) A general cultural course, considering the home as a unit of beauty. Laboratory, lectures, and demonstrations. The arrangement of garden, house, floor plan, and furniture are studied as functional and decorative problems.

(B) This course consists of a study of architectural forms and design applied to interior decoration. A general research is made into the essentials of the historic periods. Emphasis is put upon original adaptation and creation.

160A-160B. Principles of Art Education. (2-2) Yr.

Miss HOWELL

Prerequisite: junior standing.

(A) A study of objectives, child growth and development, and principles of education as related to art education.

(B) A study of method and the curriculum in art education.

161. Oriental Art. (2) II.

Miss GERE

Prerequisite: Art I.

Architecture, sculpture, painting, and handicrafts: Mogul, native Indian styles, Indonesian, Chinese, Korean, and Japanese. Comparison of Oriental and Occidental art.

164. Advanced Life Class. (2) II.

Mr. COX

Prerequisite: 134A-134B. Fee, \$5.

Study of the figure with a view to its employment in original composition. A brief survey of its place in the history of art, and the proper function of anatomical studies. Objective drawing and expressive interpretation.

165A-165B. Advertising Illustration. (2-2) Yr.

Miss MCPHAIL

Prerequisite: 32A-32B, 134A-134B.

The graphic expression of the selling thought. The practical and economic possibilities of reproduction. The selection, simplification, and organization of telling pictorial or visual ideas.

The creative employment of modern techniques and mechanical processes directed toward the development of versatility and power in conception and expression, with economy of means.

168. Stage Directing. (1) II.

Mrs. SOOY

Prerequisite: 8A-8B and senior standing.

Lectures on stage direction: duties of staff, crew, and actors; conduct of rehearsal, casting, etc. Emphasis upon esthetic unity of the many elements of the theater, with special reference to the visual factors of costume, setting, lighting, gesture, and ensemble movement. Original production.

175. Advanced Composition. (2) II.

Mr. COX, Miss CHANDLER

Prerequisite: 152A, 134B.

Original work, as applied to wall painting and other forms of contemporary decoration.

177. Landscape Painting. (2) II.

Miss CHANDLER

Prerequisite: 137, 152A.

Part 1: Study of the structural harmony of modern dress; its relation to scape.

179. Metal Craft. (2) II.

Miss WHITICE

Prerequisites: Art 1, 2A-2B, 32A-32B, and junior standing.

Metal craft demonstrates the techniques and processes peculiar to a specific medium. Original work in copper, brass, and silver emphasizes values of good design and of fine simple forms well executed.

180. Theory and Philosophy of Art Education. (2) II.

Mrs. SOOY

Prerequisite: 160A-160B.

Summary of the function of art education directed toward an understanding and appreciation of the economic and social significance of esthetic development. Comparative study of existing theories and practices.

183A-183B. Costume Design. (2-2) Yr.

Mrs. SOOY, Mrs. WOODBRIDGE

Prerequisite: 32A-32B, 8A-8B.

(A) Costume design for the theater. A study of the possibilities of the drama as an inspiration for beauty of design, psychological interpretation, and historical adaptation. Actual plays are used as laboratory material.

(B) This is a study of design applied to modern clothes. Careful research, fine technical expression, and the charting of fashion trends are emphasized through laboratory work in shops and studio.

186A-186B. Interior Design. (2-2) Yr.

Mrs. SOOY, Mrs. WOODBRIDGE

Prerequisite: 156A-156B.

(A) 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.

(B) This course develops the technique of interior decoration. Shop practice is given the student through actual problems in interior design in stores and homes.

190. The Organization and Supervision of Art Education. (2) II.

Prerequisite: 160A-160B, 180.

Miss HOWELL

A study of principles, problems, and procedure in organizing and supervising art education.

191. Civic Art Seminar. (2) I.

Mr. COX

Prerequisite: Art 1 and 11, and approval of the instructor.

This course provides an opportunity for experimental and research work upon the subject-matter of Art 11.

198. Clay Modeling. (2) I.

Mr. COX

An examination of the theory and practice of the sculptor in traditional and modern works. Exercise in original plastic expression in relief and the round. Plaster casting, moulding and carving.

199. Advanced Studio Work. (2) I. Mr. COX, Mrs. SOOY, Miss CHANDLER

Open only to specially qualified students with the approval of the instructor. This course is designed to give an opportunity for advanced individual work upon specific problems connected with art and education.

PROFESSIONAL COURSE

330. Fine and Industrial Art Education. (3) I, II.

Mrs. HUMPHREYS, Miss MORRIS, Mr. KELLER, Miss WHITE

Prerequisite: Art 2A or 22, and sophomore standing. Fee, \$2.

Not open to students who took Art 30 prior to September, 1934.

The place of fine and industrial arts in kindergarten-primary and elementary education; the place of art appreciation in constructive activities; individual and group activities in the study of industrial art subject matter.

ASTRONOMY

FREDERICK C. LEONARD, Ph.D., Associate Professor of Astronomy.

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 62.

Preparation for the Major.—Required: General lower division physics (Physics 1A-1B-1C-1D, or, in meritorious cases, Physics 2A-2B, or their equivalents); plane and spherical trigonometry, plane analytic geometry, and differential and integral calculus (Mathematics C, F, 5, 9A-9B, or their equivalents). Recommended: A reading knowledge of French and German.

The Major.—(1) Astronomy 103A-103B, 104, 117A-117B; (2) at least three units chosen from 125 or 199A-199B; and (3) from six to twelve upper division units in either physics or mathematics, selected according to some definite plan approved by the Department of Astronomy.

The Minor in Teachers College.—Twelve units of astronomy, at least six of which must be in upper division courses, including Astronomy 103A-103B.

LOWER DIVISION COURSES

1. Elementary Astronomy. (3) I, II. M W F, 8.

Mr. LEONARD

A cultural, non-technical course in the general principles and the fundamental facts of astronomy. Small sections for discussion and questions also are held.

3. Elementary Practical Astronomy for Engineering Students. (1) II. Th, 1-3.

Mr. LEONARD

Prerequisite: sophomore standing; Civil Engineering 1FA and credit or registration in Civil Engineering 1FB, or the consent of the instructor.

A course intended primarily for civil engineering students; the principles of elementary 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.

11. Modern Astronomy. (3) II. M W F, 11.

Mr. LEONARD

Prerequisite: Astronomy 1.

The sidereal universe; the results of the latest researches in stellar astronomy and astrophysics, and progress through the use of modern methods, especially the spectroscopic and the photographic. This course is a continuation of Astronomy 1.

UPPER DIVISION COURSES

A year of college physics and plane analytic geometry are prerequisite to all the upper division courses in astronomy except 125. Lower division courses in astronomy are not necessarily prerequisite to any of the upper division courses.

103A-103B. The Solar System. (3-3) Yr. M W F, 9.

Mr. LEONARD

The general principles and the fundamental facts of astronomy, pertaining primarily to the solar system, are developed and discussed in detail.

For observational work in connection with this course, students may elect course 104, subject to the prerequisites announced.

104. Practical Astronomy. (3) I. M W F, 11.

Mr. LEONARD

An observing period, Tu, 7-10 p.m., may be substituted each week for any one of the regular class periods.

Prerequisite: Spherical trigonometry, differential calculus, and either Astronomy 3 or 103A (103A may be taken concurrently with 104).

The elements of practical astronomy, including the theory and the application of the equatorial telescope, the micrometer, the transit instrument, the astronomical clock, and the sextant; the reduction of observations; and the use of star maps, star catalogues, and the *Almanac*.

*117A-117B. Astrophysics and Stellar Astronomy. (3-3) Yr. M W F, 11.

Mr. LEONARD

A general review of the underlying principles and the current problems of astrophysics and stellar astronomy, with reference particularly to the application of the spectroscope to the solution of those problems. Open to upper division students whose major subject is astronomy, some other physical science, or mathematics.

*125. History of Astronomy. (3) I. M W F, 11.

Mr. LEONARD

Prerequisite: Astronomy 1 and 11, or one upper division course in astronomy.

199A-199B. Special Study for Advanced Undergraduates. (2-2) Yr.

Mr. LEONARD

Prerequisite: The consent of the instructor.

Investigation of special problems, or presentation of special topics, to be selected according to the preparation and the requirements of the individual student.

* Not to be given, 1934-35.

BIOLOGICAL SCIENCES

- LOYE HOLMES MILLER, Ph.D., Professor of Biology.
 BENNET M. ALLEN, Ph.D., Professor of Zoölogy.
 OLENUS L. SPONSLER, Ph.D., Professor of Botany.
 THEODORE DAY BECKWITH, Ph.D., Professor of Bacteriology, and Research Associate in the Experiment Station.
 ALBERT W. BELLAMY, Ph.D., Associate Professor of Zoölogy, and Research Associate in the Experiment Station.
¹GORDON H. BALL, Ph.D., Assistant Professor of Zoölogy.
 CARL C. EPLING, Ph.D., Assistant Professor of Botany.
 ARTHUR W. HAUPT, Ph.D., Assistant Professor of Botany.
 ARTHUR M. JOHNSON, Ph.D., Assistant Professor of Botany.
 ORDA A. PLUNKETT, Ph.D., Assistant Professor of Botany.
 FLORA MURRAY SCOTT, Ph.D., Assistant Professor of Botany.
 EDGAR L. LAZIER, Ph.D., Assistant Professor of Zoölogy.
 RAYMOND B. COWLES, Ph.D., Assistant Professor of Biology.
 RUTH ANDERSON, Ph.D., Assistant Professor of Biology.
 SARAH ROGERS ATSAIT, Ph.D., Assistant Professor of Biology.
 EMILY M. BARTLETT, Ph.D., Instructor in Biology.
 WALTER MOSAUER, M.D., Ph.D., Instructor in Zoölogy.
 A. MANDEL SCHECHTMAN, Ph.D., Instructor in Biology.
 MARTHA H. KINSEY, M.A., Associate in Botany.
 WALTER B. WELCH, M.A., Associate in Botany.
 BORIS KRICHESKY, M.A., Associate in Biology.
 LEIGH MARION DODSON, M.A., Associate in Biology.

At the University of California at Los Angeles a student may take a major in bacteriology, botany or zoölogy. Those wishing to major in other phases of the work included in this department are referred to the General Catalogue of the departments at Berkeley, or to the departmental adviser for personal conference. Students in the Teachers College looking toward the special teaching of nature study will be advised individually.

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 62.

Curriculum for Medical Technicians.—For details see page 70.

Preparation for the Major in Bacteriology.—Bacteriology 1, Chemistry 1A-1B, Zoölogy 1A-1B, Botany 2, Physics 2A-2B, French or German. Recommended: Chemistry 5, 8, 9; Zoölogy 4.

¹ In residence first half-year only, 1934-35.

The Major in Bacteriology.—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: Zoölogy 101, 105, 106, 107, 107c, 111, 111c, Botany 105A, 120, Chemistry 107A–107B, Home Economics 159, Entomology 124, Plant Nutrition 110, Plant Pathology 120. Courses are to be chosen with the approval of the department.

Preparation for the Major in Botany.—Botany 1 and 2 and elementary chemistry. Recommended: German, Chemistry 1A–1B, Physics 2A–2B, Bacteriology 1, Zoölogy 1A.

The Major in Botany.—Of the 24 units of upper division work required, 15 units should include courses in taxonomy, morphology, and physiology in botany, and the remaining nine units should consist of courses in botany or in related courses—bacteriology, chemistry, geology, paleontology, and zoölogy—to be chosen with the approval of the department.

The Minor in Botany in Teachers College.—1, 2, 104A, 104B, or 105A–105B.

Preparation for the Major in Zoölogy.—Zoölogy 1A–1B, and high school chemistry or Chemistry 2A. French and German are recommended.

The Major in Zoölogy.—Eighteen units of upper division work in zoölogy and six units chosen from zoölogy or from related courses in bacteriology, biochemistry, botany, entomology, genetics, microscopic anatomy, paleontology, physiology, psychology, or physical chemistry.

The Minor in Zoölogy in Teachers College.—1A, 1B, 112, 113.

Laboratory Fees.—The fee for Bacteriology 1 is \$12.50; Bacteriology 103 is \$15; Bacteriology 199A, 199B is \$8; Botany 109, 111, 120, Zoölogy 1c, 112 is \$2; Zoölogy 113D is \$2.50; Botany 10, 101, Physiology 1, 2, Zoölogy 1A, 1B, 35, 100A, 100c, 105, 111c, 199A, 199B is \$3; for Zoölogy 4 is \$5; for Zoölogy 106 is \$7.50; and Zoölogy 107c is \$5.

BACTERIOLOGY

LOWER DIVISION COURSES

1. General Bacteriology. (4) I, II.

Mr. BECKWITH

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.

6. General Bacteriology. (2) II.

Mr. BECKWITH

A cultural course for non-technical students.

UPPER DIVISION COURSES

103. Advanced Bacteriology. (4) I.

Mr. BECKWITH

Prerequisite: Bacteriology 1.

Fee, \$15.

The more advanced principles of the life activities, growth and morphology of bacteria. The etiology of disease.

199A–199B. Problems in Bacteriology. (2–2) Yr.

Mr. BECKWITH

Open to qualified students by special arrangement.

Fee, \$8.00 per half-year.

BIOLOGY

LOWER DIVISION COURSES

1. Fundamentals of Biology. (3) I, II.

Mr. BELLAMY, Mr. COWLES, Mr. HAUPT, Miss BARTLETT

Not open to students who have taken or are taking Botany 1 or Zoölogy 1A.

Important principles of biology illustrated by studies of structure and activities of living organisms, both plants and animals. One field trip is required.

- *1c. Fundamentals of Biology: Laboratory and Field. (1) I, II.

Prerequisite or concurrent: Biology 1.

12. General Biology. (3) II. M W F, 10.

Mr. COWLES, Mr. MILLER

Prerequisite: Biology 1, Botany 1, or Zoölogy 1A.

A course in systematic and ecologic biology with emphasis on the local environment.

Lectures, readings, reports on materials and field observations.

Three lectures and one demonstration hour each week with two required field trips.

BOTANY

LOWER DIVISION COURSES

1. General Botany. (4) I, II.

Mr. SPONSLE and the STAFF

Lectures, Tu Th, 12; six hours laboratory.

A survey of the science of plant life: how plants live, multiply, and inherit; their families and communities; their economic relation to man. Three afternoon trips will be made by bus to nearby localities; a Saturday trip will be made to the San Fernando Valley and another to Mt. San Jacinto.

2. General Botany. (4) I, II.

Mr. PLUNKETT and the STAFF

Lectures, M W, 12; six hours laboratory.

A continuation of course 1, dealing with the comparative morphology of all of the great plant groups.

10. Botanical Microtechnique. (3) I.

Mr. HAUPT

Lecture, one hour; laboratory, six hours.

Prerequisite: Botany 1 and 2. Fee, \$3.

Preparation of plant material for microscopic study involving methods in fixing, embedding, sectioning, and staining.

UPPER DIVISION COURSES

General Prerequisite: Botany 1 and 2 are prerequisite to all upper division courses.

101. Plant Physiology. (3) II.

Mr. SPONSLE

Lecture, one hour; laboratory, six hours.

Prerequisite: Botany 109, and chemistry. Fee, \$3.

Experimental work designed to demonstrate various activities of the plant.

* Not to be given, 1934-35.

103. Economic Botany. (2) I.

Mr. JOHNSON

Lectures, two hours.

Prerequisite: Botany 1, or its equivalent.

Designed for students in economics and geography. The lectures deal with the growth, distribution, and development of plants which form the basis of a few of the larger industries, such as those concerned with cereals, sugar, fibers, lumber, pulp and paper, cellulose products, etc.

104A-104B. Taxonomy of the Seed Plants. (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 seed plants involving a study of the principles of phylogenetic classification and geographical distribution. Designed for botany majors, teachers of nature study, and students in the College of Agriculture.

105A. Morphology of Thallophytes and Bryophytes. (4) I. Mr. PLUNKETT

Lecture, two hours; laboratory, six hours.

A study of the structure, development and phylogenetic relationships of the principal orders of fresh water and marine algae, of fungi, and of liverworts and mosses.

105B. Morphology of Pteridophytes and Spermatophytes. (4) II. Mr. HAUPT

Lecture, two hours; laboratory, six hours.

Structure, development and phylogenetic relationships of the principal orders of ferns and their allies, and of the gymnosperms and the angiosperms.

109. Plant Anatomy. (3) I.

Miss SCOTT

Lecture, one hour; laboratory, six hours.

Prerequisite: Botany 1, 2. Botany 10 is recommended. Fee, \$2.

The microscopic structure of the higher plants with particular reference to the development and differentiation of vegetative tissues.

111. Plant Cytology. (3) II.

Miss SCOTT

Lecture, one hour; laboratory, six hours.

Prerequisite: Botany 10, 109, and 105A or 105B. Fee, \$2.

Structure and physiology of the cell.

114. Advanced Plant Physiology. (3) I.

Mr. SPONSLER

Conferences and laboratory.

Prerequisite: Botany 101 and 109, chemistry, and physics.

Experimental work on certain functions of the plant.

120. Phytopathology. (3) II.

Mr. PLUNKETT

Lecture, one hour; laboratory, six hours. Fee, \$2.

A study of bacterial and fungous diseases of plants.

152. General Plant Ecology. (3) II.

Mr. JOHNSON

Lecture, one hour; laboratory and field, six hours.

Prerequisite: Botany 104A-104B.

Field and laboratory studies of plant communities and their relation to the environment.

- 199A-199B. Problems in Botany. (2-2) Yr. Mr. SPONSLEER and the STAFF
Prerequisite: senior standing.

GRADUATE COURSES

- 253A-253B. Seminar in Botany. (1-1) Yr. Mr. SPONSLEER, Mr. BECKWITH
*258A-258B. Seminar in Microbiology. (2-2) Yr. Mr. BECKWITH
278A-278B. Research in Botany. (2-5 units each half-year)
Mr. SPONSLEER, Mr. BECKWITH

PALEONTOLOGY†

LOWER DIVISION COURSE

1. General Paleontology. (2) I. Tu Th, 8, 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 COURSE

1. General Human Physiology. (3) II. Miss ATSATT
Lectures, Tu Th, 11; laboratory, three hours. Fee, \$3.
Prerequisite: Chemistry 2A-2B or high school chemistry.
Majors in zoölogy and students in the pre-medical and pre-dental curricula are admitted only upon the request of their advisers.

2. General Physiology. (2) I. Miss ATSATT
Continuation of course 1.
Lecture, W, 8; laboratory, three hours. Fee, \$3.
The physiology of growth and metabolism, as affected by nutrition and glands of internal secretion.

* Not to be given, 1984-85.

† Courses in Invertebrate Paleontology are offered by the Department of Geology (p. 152).

‡ 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.

ZOOLOGY**LOWER DIVISION COURSES**

- 1A. General Zoölogy. (5) I.** Mr. BALL, Mr. KRICHESKY
 Lectures, M W, 8; 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
 Lectures, M W, 8; quiz, one hour; laboratory, six hours. Fee, \$3.
 Prerequisite: Zoölogy 1A.
 An introduction to vertebrate morphology, physiology, and embryology.
- 1C. Embryology. (2) II.** Mr. LAZIER
 Fee, \$2.
 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.
 Not open to students who have taken Zoölogy 1B at this University.
- 4. Microscopical Technique. (2) I, II.** Miss BARTLETT
 Laboratory, six hours; assigned readings.
 Prerequisite: Zoölogy 1A and high school chemistry. Fee, \$5.
 The preparation of tissues for microscopical examination.
- 35. General Human Anatomy. (3) I.** Miss ATSATT
 Lecture, Tu Th, 11; laboratory, three hours. Fee, \$3.
 Prerequisite: sophomore standing; Zoölogy 1A or Biology 1.

UPPER DIVISION COURSES

- 100A. Genetics. (4) I.** Mr. BELLAMY
 Lectures, two hours; seminar, one hour; laboratory, six hours.
 Prerequisite: Zoölogy 1B or Botany 2 or equivalent, and junior standing.
 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. May not be taken without 100B.
 Fee, \$3.
- 101. Physiological Biology. (2) I.** Mr. BELLAMY
 Prerequisite: Chemistry 8 and 9, or the equivalent.
 Lectures, readings, and demonstrations of certain physico-chemical processes and the principles of living matter.

103. Experimental Zoölogy. (2) I. Mr. ALLEN
Prerequisite: Zoölogy 1A.
Lectures, reports on articles in scientific journals and special problems.
105. Mammalian Embryology. (3) I, II. Mr. ALLEN
Lecture, one hour; laboratory, six hours.
Prerequisite: Zoölogy 1A and either 1B or 35. Fee, \$3.
106. Comparative Anatomy of the Higher Vertebrates (4) I. Mr. LAZIER
Lecture, two hours; laboratory, six hours.
Prerequisite: Zoölogy 1A-1B (including embryology) and junior standing. Fee, \$7.50.
A study of the structural relationships of the higher vertebrates. Dissection of the cyclostome, elasmobranch, amphibian, and mammal.
107. Cytology. (2) II. Mr. ALLEN
Prerequisite: Zoölogy 1A.
Lectures and recitations.
The structure and activities of the cell, especially in development, in sex determination, and in heredity.
- 107c. Cytology Laboratory. (2) II. Mr. ALLEN
May be taken only concurrently with course 107, or subsequently thereto. Fee, \$5.
- *111. Parasitology. (2) II. Mr. BALL
Prerequisite: Zoölogy 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: Zoölogy 111, or may be taken concurrently with course 111. Fee, \$3.
112. Advanced Invertebrate Zoölogy. (4) II. Mr. LAZIER
Lectures, two hours; laboratory and field, six hours.
Prerequisite: Zoölogy 1A. Zoölogy 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: Zoölogy 1A-1B.
Emphasis will be placed 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: Zoölogy 1A-1B. Fee, \$2.50.
Ecology, life history, and systematics of the cold-blooded vertebrates.

* Not to be given, 1934-35.

199A-199B. Problems in Zoölogy. (2-2) Yr. Mr. MILLER and the STAFF

Prerequisite: Zoölogy 1A-1B and junior standing, with such special preparation as the problem may demand. Fee, \$3 per half-year.

GRADUATE COURSES

251A-251B. Seminar in Zoölogy. (1-1) Yr.

Mr. ALLEN, Mr. BELLAMY, Mr. MILLER

274A-274B. Research in Zoölogy. (2-5 units each half-year)

Mr. ALLEN, Mr. BELLAMY, Mr. MILLER

CHEMISTRY

WILLIAM CONGER MORGAN, Ph.D., 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.
HOSMER W. STONE, Ph.D., Assistant Professor of Chemistry.
WILLIAM G. YOUNG, Ph.D., Assistant Professor of Chemistry.
FRANCIS E. BLACET, Ph.D., Instructor in Chemistry.
C. ERNST REDEMANN, A.B., Associate in Chemistry.
JAMES D. MCCULLOUGH, A.B., Associate in Chemistry.
SAUL WINSTEIN, A.B., Teaching Assistant in Chemistry.
JACK GLYNDON ROOF, A.B., Teaching Assistant 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 62.

Preparation for the Major.—Required: Chemistry 1A-1B (10), which must be passed with a grade of C or better before any further work in chemistry is taken; Physics 1A-1C (6); trigonometry, Mathematics, 8, 3A-3B (9), and a reading knowledge of German. Recommended: a second course in chemistry, Physics 1B-1D, Mathematics 4A-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), 110 (3), 110B (3), 111 (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.

The Minor in Teachers College.—1A, 1B, or 2A, 2B; 6 units chosen from 5, 8, 9, 10.

Curriculum for Medical Technicians.—For details see page 70.

Pre-Chemistry.—The University 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 per semester are as follows: Courses 2A-2B, 10, 107A-107B, \$10; 1A-1B, \$14; 199, \$15; 5, 6A, 6B, 120, \$17; 111, \$22; 9, 101, \$27.

LOWER DIVISION COURSES

Students who have not had high school chemistry may take Chemistry 2A in preparation for Chemistry 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).

1A-1B. General Chemistry. (5-5) Beginning either half-year.

Mr. MORGAN and the STAFF

Lectures, M W F, 10 (for those beginning in September); M W F, 8 (for those beginning in February); laboratory, six hours.

Prerequisite: high school chemistry, or physics and trigonometry. Fee, \$14 per semester.

Required in the Colleges of Engineering, Chemistry, Agriculture, and of pre-medical and pre-dental students and of majors in chemistry and household science.

2A-2B. General Chemistry. (4-4) Yr.

Mr. DUNN

Lectures, M W F, 11; laboratory, three hours.

No prerequisite; high school chemistry is recommended. Fee, \$10 per 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.

5. Quantitative Analysis. (3) I, II.

Mr. CROWELL

Lecture, Th, 9; laboratory, six hours.

Prerequisite: Chemistry 1A-1B. Fee, \$17 per semester.

A course in gravimetric and volumetric analysis, shorter than 6A-6B. Required of pre-medical students, of petroleum engineers, and of sanitary and municipal engineers.

6A-6B. Quantitative Analysis. (3-3) Yr.

Mr. CROWELL

Lecture, Tu, 9; laboratory, six hours.

Prerequisite: Chemistry 1A-1B. Fee, \$17 per semester.

Required of economic geologists, chemistry majors, and College of Chemistry students. 6A is required of metallurgy students.

8. Organic Lectures. (3) I, II. M W F, 9.

Mr. MORGAN, Mr. ROBERTSON

Prerequisite: Chemistry 1A-1B or 2A-2B.

This course is required of pre-medical and pre-dental students, sanitary and municipal engineers, petroleum engineers, chemistry and household science majors, and College of Chemistry students.

9. Elementary Organic Laboratory. (3) I, II. Mr. ROBERTSON, Mr. YOUNG

Lecture, Tu, 8; quiz, Th, 8; laboratory, six hours.

May be taken only concurrently with or subsequently to Chemistry 8.

Required of petroleum engineers, pre-medical and pre-dental students, chemistry majors, and College of Chemistry students. Fee, \$27.

✓10. Organic and Food Chemistry. (4) I.

Mr. ROBERTSON

Lectures, M W F, 8; laboratory, three hours.

Prerequisite: Chemistry 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: Chemistry 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. M W F, 9. Mr. MORGAN
 Prerequisite: Chemistry 8.
 Recommended for pre-medical students and majors in chemistry.
- 107A-107B. Biological Chemistry. (3-3) Yr. Mr. DUNN
 Lectures, Tu Th, 8; laboratory, three hours.
 Prerequisite: Chemistry 5, 8, and 9. Fee, \$10 per semester.
110. Physical Chemistry. (3) I. Mr. RAMSEY
 M W F, 10.
 Prerequisite: Chemistry 5 or 6A; Physics 1A, 1C.
 Required of chemistry majors and College of Chemistry students. Pre-
 requisite to all later work in physical chemistry.
 Lectures and problems.
- 110B. Advanced Physical Chemistry. (3) II. Mr. RAMSEY
 M W F, 10.
 Prerequisite: Chemistry 110.
 Required of chemistry majors.
 Lectures and problems. A continuation of course 110.
111. Physical Chemistry Laboratory. (4) II. Mr. RAMSEY
 Lecture, one hour; laboratory, nine hours.
 Prerequisite: Chemistry 110 and calculus. Fee, \$22.
 Physico-chemical problems and measurements.
120. Advanced Inorganic Chemistry. (3) I. Mr. STONE
 Lecture, one hour; laboratory, six hours.
 Prerequisite: Chemistry 6A-6B and 110. 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) 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 prob-
 lem may demand. Fee, \$15.

GRADUATE COURSES

203. Thermodynamics from the Standpoint of Chemistry. (3) I.
 Mr. RAMSEY
- 251B. Seminar in Chemistry. (3) II. Mr. ROBERTSON
- 280A-280B. Selected Problems in Chemistry. (3-6 units each half-year).
 Mr. DUNN, Mr. RAMSEY, Mr. ROBERTSON, Mr. YOUNG

CLASSICAL LANGUAGES

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.

² HERBERT BENNO HOFFLEIT, Ph.D., Assistant Professor of Latin and Greek.

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 62.

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 Latin C and D; Latin 1 and 5; Latin 3A–3B. Recommended: Greek, German, French.

B. *Greek.*—Required: Either 1A–1B and 101 or 102; or 1AB–2AB; or two years of high school Greek and 101 or 102; and Ancient History 112A–112B. Recommended: Latin, German, French.

The Major.

A. *Latin.*—All courses offered in Latin except 199A–199B, and Ancient History 112A–112B. Six units of upper division courses in Greek may be substituted for Ancient History 112A–112B.

B. *Greek.*—All courses offered in Greek except 117A–117B, 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.

The Minor in Teachers College.—Latin 1, 5, 102, 106.

LATIN

LOWER DIVISION COURSES

A. Beginning Latin. (3) I. Mrs. WOODWORTH, —

M W F, 10, 12.

Not open to students who have matriculation credit in Latin.

B. Latin Readings. (3) II. Mr. HOFFLEIT, Mrs. WOODWORTH

M W F, 8, 10.

Prerequisite: course A or one year of high school Latin.

C. Third Year Latin: Review of grammar; Ovid. (3) I. —

M W F, 9.

Prerequisite: course B or two years of high school Latin.

² In residence second half-year only, 1984–85.

- D. Fourth Year Latin: Vergil. (3) II. Mr. MCKINLAY
M W F, 9.
Prerequisite: course C or three years of high school Latin; or B with special permission of the instructor.
1. Plautus and Cicero. (3) Either half-year. Mr. CAREY, Mr. HOFFLEIT
I, M W F, 11; II, M W F, 12.
Prerequisite: four years of high school Latin.
- 3A-3B. Latin Prose Composition. (2-2) Yr. Mrs. WOODWORTH
Tu Th, 11.
Prerequisite: four years of high school Latin.
5. Horace: Odes and Epodes. (3) II. Mrs. WOODWORTH
M W F, 11.
Prerequisite: Latin 1.

UPPER DIVISION COURSES

Latin 102 and 106 are prerequisite to Latin 117, 120, 140, 191, and 199.

102. Catullus and Livy. (3) I. M W F, 2. Mrs. WOODWORTH
Prerequisite: Latin 5.
- 104A-104B. Latin Composition. (1-1) Yr. Tu, 1. Mrs. WOODWORTH
Prerequisite: Latin 3A-3B.
Ciceronian Prose—104A, Narration; 104B, Exposition.
- *104C-104D. Latin Composition. (1-1) Yr. Tu, 1. Mrs. WOODWORTH
Prerequisite: Latin 3A-3B.
Ciceronian Prose—104C, Exposition; 104D, Argumentation.
106. Tacitus: Annals. (3) II. M W F, 2. Mrs. WOODWORTH
Prerequisite: Latin 102.
117. Lucretius: Selections; Vergil: Eclogues and Georgics. (3) II.
Mr. CAREY
120. Roman Satire. (3) I. M W F, 9. Mr. CAREY
140. Ovid: Carmina Amatoria and Metamorphoses. (3) II. Mr. CAREY
191. Cicero: Life and Letters. (3) I. M W F, 2. Mr. MCKINLAY
- 199A-199B. Problems in Classical Philology. (2-2).
Mr. MCKINLAY and the STAFF
Not open to students who have credit for Greek 199A-199B.
- 196A-196B. Readings in Medieval Latin. (2-2) Yr. Mr. MCKINLAY
Tu Th, 8.
Prerequisite: 1934-35, two years of high school Latin; 1935-36, Latin D; 1936-37, Latin 5.
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.

* Not to be given, 1984-85. Courses 104A and 104B are given in alternation with 104C and 104D. 104C and 104D will be offered in 1985-86. Two units required of Latin majors.

GREEK**LOWER DIVISION COURSES**

1AB-2AB.—Greek for Beginners, Attic Prose. (5-5) Yr. Mr. MCKINLAY
M Tu W Th F, 10.

50. Greek Roots. (1) II. Tu, 11. Mr. MCKINLAY
Knowledge of Greek not required. For scientific majors and others interested in an understanding of the terms they meet.

UPPER DIVISION COURSES

Greek 101 and 102 are prerequisite to Greek 103, 104, 105, and 114.

100A-100B. Prose Composition. (1-1) Yr. Th, 10. Mr. CAREY
Prerequisite: Greek 1AB.

101. Homer: *Odyssey*; Herodotus. (3) I. M W F, 11. Mrs. WOODWORTH
Prerequisite: Greek 1AB-2AB or Greek 1A-1B.

102. Plato: *Apology* and *Crito*; Lyric Poets. (3) II. M W F, 11. Mr. HOFFLEIT
Prerequisite: Greek 101.

103. Greek Drama: Euripides and Aristophanes. (3) II. M W F, 8. Mr. CAREY

*104. Historical Prose: Herodotus and Thucydides. (3) I. M W F, 8. Mr. CAREY

*105. Greek Drama: Aeschylus and Sophocles. (3) II. M W F, 8. Mr. CAREY

114. Plato: *Republic*. (3) I. M W F, 8. Mr. CAREY

*117A. Greek New Testament. (1) I. Mr. HOFFLEIT
Prerequisite: Greek 1A or 1AB.

117B. Greek New Testament. (1) II. Mr. HOFFLEIT
Prerequisite: Greek 1A or 1AB.

199A-199B. Problems in Classical Philology. (2-2) Yr. Mr. MCKINLAY and the STAFF
Not open to students who have credit for Latin 199A-199B.

ANCIENT HISTORY†**UPPER DIVISION COURSES**

112A. History of Greece to the Fall of Corinth. (3) I. M W F, 12. Mr. CAREY

112B. History of Rome to the Death of Justinian. (3) II. M W F, 12. Mr. MCKINLAY

* Not to be given, 1984-85. Greek 103 and Greek 114 will ordinarily be given in alternation with Greek 104 and Greek 105 respectively. Greek 104 and Greek 105 will be offered in 1985-86.

† Knowledge of Greek and Latin not required. Required of majors in classical languages. Open to properly prepared majors in philosophy, history, political science, English, and foreign language.

ECONOMICS

GORDON S. WATKINS, Ph.D., Professor of Economics and Dean of the Summer Session.

EARL JOYCE MILLER, Ph.D., Professor of Economics and Dean of Men.

THOMAS NIXON CARVER, Ph.D., Professor of Economics.

HOWARD SCOTT NOBLE, M.B.A., C.P.A., Associate Professor of Economics.

IRA N. FRISBEE, M.B.A., C.P.A., Associate Professor of Economics.

LEWIS A. MAVERICK, Ed.D., Ph.D., Associate Professor of Economics.

FLOYD F. BURCHETT, Ph.D., Assistant Professor of Economics.

DUDLEY F. PEGRUM, Ph.D., Assistant Professor of Economics.

MARVEL M. STOCKWELL, Ph.D., Assistant Professor of Economics.

CONSTANTINE PANUNZIO, Ph.D., Assistant Professor of Economics.

GEORGE W. ROBBINS, M.B.A., Assistant Professor of Economics.

*PAUL A. DODD, Ph.D., Assistant Professor of Economics.

EVA M. ALLEN, Associate in Commercial Practice.

ESTELLA B. PLOUGH, Associate in Commercial Practice.

CAROL FORD, M.A., Teaching Assistant in Economics.

EDWIN M. HALL, M.A., Teaching Assistant in Economics.

REX J. MORTHLAND, M.A., Teaching Assistant in Economics.

Letters and Science List.—All undergraduate courses except those under the heading "Commerce—Teachers' Courses" are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

Preparation for the Major.—Required: Economics 1A-1B, Economics 14A-14B, and at least one other sequence chosen from the Social Science list (Junior Certificate requirement *e*₁) or Philosophy 1A-1B.

The Major.—Twenty-four upper division units in economics including courses 100 and 140; or 18 upper division units in economics including courses 100 and 140, and 6 upper division units in history, political science, philosophy, geography, or mathematics, or Botany 103, the program to be approved by a departmental adviser.

Curriculum in Sociology.—Students specializing in sociology are referred to page 70 of this catalogue.

The Major in Commerce in the Teachers College.

Preparation for the Major.—Economics 1A, 1B, 14A, 14B, 15A or 15B; Commerce 16, 17, 18A, 18B; Political Science 18A, 18B; Geography 5A, 5B; History 75 or 76.

The Major, leading to the Secondary Special Credential in Commerce.—Twenty-four units of advanced work approved by the department, including Economics 135, and at least one of the following: Economics 123, 173, 195.

* In residence second half-year only, 1934-35.

The Minor in Education.—Education 103, 170; Directed Teaching, 10 units; Commerce 197, 198.

The Minor in Economics.—Economics 1A, 1B, 6 units of elective credit in upper division economics.

Pre-Commerce Curriculum.—The University at Los Angeles offers the first two years of the curriculum of the College of Commerce in the University at Berkeley. Students intending to pursue their studies in this college should consult the Pre-Commerce adviser before making out their programs.

Fees.—Commerce A, \$6; Commerce B, \$10; Commerce 16, \$2.50.

LOWER DIVISION COURSES

1A-1B. Principles of Economics. (3-3) Beginning either half-year.

Mr. MILLER, Mr. STOCKWELL

Two hours lecture, and one hour quiz.

14A-14B. Principles of Accounting. (3-3) Beginning either half-year.

Mr. NOBLE, Mr. FRISBEE

Two hours lecture, and two hours laboratory.

15A-15B. Accounting Laboratory. (1-1) Yr.

Mrs. ALLEN

Should be taken only concurrently with course 14A-14B.

UPPER DIVISION COURSES

Economics 1A-1B is a prerequisite to all upper division courses in economics.

Economic Theory

Group I—Unrestricted Courses

123. Principles of Marketing. (3) I, II.

Mr. ROBBINS

A general survey of principles and practices of marketing from the standpoint of manufacturer, middleman, and consumer. Emphasis is given to the analysis of problems of choosing channels of distribution, advertising, brands and trademarks, coöperative marketing, installment selling, price policy, research, and marketing costs.

131. Public Finance. (2) I, II.

Mr. STOCKWELL

The principles underlying the proper raising and spending of public money. Property, income, corporation, inheritance taxes, and other sources of revenue. Budgeting of public expenditures. Economic, social, and financial significance of our fiscal structure and policies.

✓ 132. Trust Problems. (3) I, II.

Mr. PEGRUM

A study of the forms of business organization from the functional point of view. Fundamental factors lying behind the use and development of the various forms of business enterprise, industrial combinations and monopolies. An analysis of the agencies for the control of business activities; corporation laws; anti-trust laws; the Federal Trade Commission.

✓ 135. Money and Banking. (3) I, II.

Mr. BURCHETT

A study of the functions of money and the development of credit institutions; the nature of the banking business, the development of the American banking system, and the significance of commercial banking in the financial organization of society.

140. Elementary Statistics. (4) I, II.

Mr. FRISBEE and the STAFF

Tu Th, 8, and laboratory periods.

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 applications of statistical methods in business problems.

Recommended for the first half of the junior year.

150. Labor Economics. (3) II.

Mr. WATKINS

An introduction to the problems of industrial relations. The rise of modern industrialism. An examination of the principal problems of industrial relations and the most prominent agencies and methods of improvement. The basis of industrial peace.

173. Economics of Transportation. (3) II.

Mr. PEGRUM

A general historical and contemporaneous survey of transportation agencies in the United States. An analysis of the functions of the different transportation agencies; rate structures, problems of state and federal regulations; coordination of facilities. Present status of the transportation problem.

Group II—Senior Courses

(Limited to students having senior standing.)

100. Advanced Economic Theory. (2) I, II.

Mr. MAVERICK

An advanced study of the principles of economics, including an analysis of such fundamental concepts as value, price, cost, rent, interest, wages, and profits. The relation of these to the current problems of production, distribution and exchange.

101. History of Economic Doctrine. (2) I.

Mr. WATKINS

A general study of the development of economic thought. The forerunners and founders of the science. The contributions of the classical school. The emergence of critical schools. Recent changes in economic theory.

106. Economic Reform. (3) II.

Mr. MILLER

The concept, criteria, and agencies of economic and social progress. A statement and critical analysis of the theories and programs of modern economic reform movements. The essentials of social readjustment.

133. Corporation Finance. (3) I.

Mr. BURCHETT

Prerequisite: course 14A-14B.

A study of the financial structures and financial problems of large business corporations. The instruments and methods of financing a corporation will be considered in their social and economic effects as well as in their effect on the corporation and the shareholders.

134. Investments. (3) II.

Mr. BURCHETT

Prerequisite: 14A-14B.

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.

138. Business Cycles. (3) II.

Mr. MAVERICK

A study of fluctuations in business, as in prices, production, wages, and profits; whether there is a common or general fluctuation; theories of causation and consequent feasibility of forecasting; proper adjustment of business management to the cycles; possibility of controlling the cycle or alleviating its social effects.

171. Public Utilities. (3) I.

Mr. PEGRUM

A study of the economics of public service corporations from both the public and private points of view. The legal and economic problems of regulation will be discussed carefully; problems of labor, finance, rate-making, valuation will be analyzed. Attention will also be given to state, national, and international problems arising from the development of public utilities.

195. Principles of Foreign Trade. (3) I, II.

Mr. ROBBINS

General principles governing international trade movements are examined in theory and in the trade histories of major nations. Emphasis is given to the development of judgment, concerning current questions of international economic policy, such as tariffs, intergovernmental debts, foreign commercial investments, and commercial treaties. Minor consideration is given to the methods and practices of exporting and importing.

199. Special Problems in Economics. (2) I, II.

Prerequisite: six units of upper division economics and the consent of the instructor.

For the year 1934-35 the work will be done primarily in the following fields:

Section 1. Problems in Income Tax Procedure.

Mr. FRISBEE

Section 2. Problems in Sociology.

Mr. PANUNZIO

For the year 1935-36 work will be done in addition in the following field:

Section 3. Problems in Economic Statistics.

Mr. MAVERICK

Prerequisite: Economics 140, Mathematics 3B or 9A.

Business Administration

120. Industrial Management. (3) I, II.

Mr. DODD

Development of scientific management, and its present application in modern industry. Includes a consideration of the problems and principles involved in plant location and construction, layout of machinery, storing of materials, and routing of production orders; together with a discussion of the efficient control of production and the inspection of performance.

Practical problems of scientific management are considered, and representative factories are visited.

121. Business Administration. (3) II.

Mr. NOBLE

Prerequisite: Course 14A-14B and 12 units of upper division economics.

A study of the problems of business administration by the case method. Emphasis is placed upon the correlation of functions and activities of operating departments.

151. Personnel Management. (2) I, II.

Mr. DODD

A study of the administration of human relations in industry; the development of employment relationships; 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) Yr.

Mr. FRISBEE

M W F, 8, 9.

Prerequisite: course 14A-14B.

First semester: continuation of corporation and of partnership accounting; insolvency and receivership accounts; specialized financial statements; advanced theory problems. Second semester: estate accounting; consolidated balance sheets; actuarial accounting; advanced theory problems.

161. Cost Accounting. (3) I.

Mr. NOBLE

Prerequisite: course 14A-14B, 160A-160B.

Accounting in manufacturing enterprises. Cost systems; accounting for material, labor, and overhead; distribution of overhead; effective cost reports.

162. Auditing. (3) II.

Mr. FRISBEE

Prerequisite: course 14A-14B, 160A-160B.

Accounting investigations, balance sheet audits and detailed audits performed by public accountants. Valuation, audit procedure, working papers and audit reports.

Sociology

185A-185B. Social Institutions. (2-2) Yr.

Mr. PANUNZIO

Prerequisite: Economics 1A-1B or equivalent preparation.

A critical study of the origin, evolution, structures, functions of social institutions; social processes and the idea of progress.

Lectures, discussions, and collateral reading.

186. Population and Race Relations. (3) I.

Mr. PANUNZIO

Prerequisite: Economics 185A-185B.

A study of population in the modern period; modern migration, race and its relation to culture contacts, conflict, and interchange.

Lectures, discussions, original research.

187. Social Problems. (3) II.

Mr. PANUNZIO

Prerequisite: Economics 185A-185B.

A study of contemporary poverty, crime, and family disorganization; the means and agencies of reform and prevention.

Lectures, discussion, original research.

GRADUATE COURSES

201A-201B. History of Economic Doctrine. (3-3) Yr.	Mr. WATKINS
254A-254B. Seminar in Economic Theory. (2-2) Yr.	Mr. CARVER
256A-256B. Seminar in Monetary Theory. (2-2) Yr.	Mr. CARVER
265A-265B. Seminar in Accounting. (2-2) Yr.	Mr. NOBLE

COMMERCE

TEACHERS' COURSES

- †A. Typing. (No credit) I, II. Tu Th, 10, 11; M F, 1.
 Fee, \$6. Mrs. ALLEN
 A study of the principles involved in learning to use the typewriter.
- †B. Shorthand. (No credit) I. M W F, 10.
 Fee, \$10. Mrs. ALLEN
 A study of the beginning principles of Gregg shorthand. Sight reading, penmanship drills, dictation.
16. Advanced Typing. (2) I, II. Tu Th, 9, 2. 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 either half-year. Tu Th, 9, 10. Mrs. PLOUGH
 (A) A study of the principles of business handwriting; a survey of the methods of teaching penmanship in the elementary schools.
 (B) 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. Tu Th, 8. Mrs. ALLEN
 198. Commercial Education. (2) II. Mr. NOBLE

† Although Commerce B gives no credit, it is counted on a student's allowable program as 2 units. Commerce A may be added to the allowable program.

EDUCATION

ERNEST CARROLL MOORE, Ph.D.; LL.D., Professor of Education, Vice-President and Provost of the University of California at Los Angeles.

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.

KATHERINE L. McLAUGHLIN, Ph.D., Associate Professor of Education.

*HARVEY L. EBY, Ph.D., Associate Professor of Education.

FREDERICK P. WOELLNER, Ph.D., Associate Professor of Education.

WILLIAM A. SMITH, Ph.D., Associate Professor of Education.

CLARENCE HALL ROBISON, Ph.D., Associate Professor of Education and Associate Director of Admissions.

ETHEL I. SALISBURY, Associate Professor of Elementary Education and Supervisor of Training.

CORINNE A. SEEDS, M.A., Assistant Professor of Elementary Education and Principal of the Training School.

FRANCIS GIDDINGS, M.A., Instructor in Kindergarten-Primary Education and Supervisor of Training, Kindergarten and Primary.

MARGARET MANNING ROBERTS, M.A., Associate in Kindergarten-Primary Education.

BARBARA GREENWOOD, Associate in Kindergarten-Primary Education and Supervisor of Nursery School Training.

BENJAMIN W. JOHNSON, Lecturer in Education and Supervisor of Classes for the Training of Trade and Industrial Teachers.

Letters and Science List.—Courses 103, 121, 122, 150, and 170 are included in the Letters and Science List of Courses. For regulations governing this list, see page 62. A major in education is not offered in the College of Letters and Science.

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

* In residence second half-year only, 1934-35.

Education 103 or 121 or 122

Education 104 or 105*

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

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 McLAUGHLIN, Miss GIDDINGS

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 to Educational Measurement. (2) I, II. Mr. WILLIAMS

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: Education 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.

105. Kindergarten-Primary Education. (3) I, II.

Miss GIDDINGS

The principles and practices underlying current trends in curriculum organization at the kindergarten-primary level. Critical evaluation of representative courses of study and experimental formulation of units of activity showing the continuity of child development.

113. The Nursery School. (3) II.

Miss McLAUGHLIN

A survey of the development of the nursery school movement, analyzing needs, purposes, procedures, outcomes, and criteria for evaluation.

121. Philosophy of Education. (3) II.

Mr. DARSIE

A critical analysis of the assumptions underlying education in a democratic social order.

* Required for the Kindergarten-Primary Credential.

122. History of Education. (3) I.

Mr. DARSIE

The evolution of educational practices and ideals with emphasis on social, economic, and philosophical backgrounds.

133. Educational Diagnosis. (2) I.

Mr. WILLIAMS

Prerequisite: senior standing and consent of the instructor.

The use of standard tests and elementary statistical techniques in solving problems of school, class, and individual diagnosis.

135. Rural Society and Education. (3) II.

Mr. EBY

A study of the social-economic conditions and needs in rural communities as related to rural education.

138. Problems in Rural Education. (2) II.

Mr. EBY

Prerequisite: senior standing and consent of the instructor.

A study of rural school conditions with an evaluation of the means for their improvement. Special and individual problems. Field visits.

143. Administration of Secondary Education. (2) Either half-year. Mr. HILL

Registration limited to experienced administrators.

Provision will be made for extensive field work and practical application of principles of administration.

150. Public Education in the United States. (3) I, II.

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. JOHNSON

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. JOHNSON

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.

A study of secondary education in the United States, with special reference to the needs of junior and senior high school teachers.

179. The Junior College. (2) I, II.

Mr. HILL

Prerequisite: senior standing and consent of the instructor.

Growth of the junior college movement; functions of the junior college; its place in the educational system; types, curricula, problems; trends of reorganization in secondary and higher education.

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 education will be considered.

PROFESSIONAL COURSES

306. Children's Literature. (2) I, II. Miss McLAUGHLIN
 Not open to students who took Education 106 prior to September, 1934.
 Sources of children's literature; basic principles for selection and presentation of suitable materials for young children; evaluation, classification, and placement of recent publications in the field.
390. Introduction to Elementary Teaching. (4) I, II. Miss SEEDS, Mr. WADDELL
 Prerequisite to supervised teaching at the elementary level.

GRADUATE COURSES

251. Seminar in Supervision. (2) II. Mr. WADDELL
- 254A-254B. Seminar in Experimental Education. (2-2) Yr. Mr. WILLIAMS
255. Seminar in Test Construction. (2) II. Mr. WILLIAMS
- 260A-260B. Seminar in Comparative Education. (2-2) Yr. Mr. MERIAM
 A. School movements in various countries.
 B. Experiments in public and private schools.
- 264A-264B. Seminar in Secondary Education. (2-2) Yr. Mr. SMITH
- 276A-276B. Research in Curriculum. (2-2) Yr. Mr. MERIAM
 Individual investigation within the range of elementary and secondary schools.

ENGLISH

FREDERIC THOMAS BLANCHARD, Ph.D., Professor of English.
 LILY B. CAMPBELL, Ph.D., Professor of English.
 SIGURD BERNHARD HUSTVEDT, Ph.D., Professor of English.
 ALFRED E. LONGUELL, Ph.D., Associate Professor of English.
 HERBERT F. ALLEN, Ph.D., Associate Professor of English.
 CHARLES ALMER MARSH, B.S., Associate Professor of Public Speaking.
 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.
 CARLYLE F. MACINTYRE, Ph.D., Assistant Professor of English.
 HARRIET M. MACKENZIE, Ph.D., Assistant Professor of English.
 LU EMILY PEARSON, Ph.D., Assistant Professor of English.
 LLEWELLYN MORGAN BUELL, Ph.D., Assistant Professor of English.
 MAJL EWING, Ph.D., Assistant Professor of English.
 ALICE O. HUNNEWELL, B.L.I., Instructor in English.
 EVALYN A. THOMAS, B.L.I., Instructor in English.
 FRANKLIN P. ROLFE, Ph.D., Instructor in English.
 KATHERINE E. COLLINS, M.A., Associate in English.
 WESLEY LEWIS, M.A., Associate in Public Speaking.
 DECALVUS W. SIMONSON, M.A., Associate in English.
 EDWARD BOCK, M.A., Associate in English.
 HARRISON M. KARR, M.A., Associate in Public Speaking.
 JAMES MURRAY, Ed.D., Associate in Public Speaking.
 PHILIP W. RICE, M.A., Associate in English.
 AGNES EDWARDS PARTIN, A.B., Associate in English.

LOUIS BOOKER WRIGHT, Ph.D., Lecturer in English.

Students must have passed Subject A (either examination or course) before taking any course in English or Public Speaking. Reference to regulations concerning Subject A will be found on page 37 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 62.

Preparation for the Major.—Courses 1A-1B and 56A-56B or the equivalent, with an average grade of C.

Recommended: History 5A-5B; ancient and modern foreign languages. A reading knowledge of French or German is required for graduate work toward a higher degree.

The Major.—1. Students must present, in the first term 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 the restricted junior course, to be taken in the junior year.

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.

The Minor in English in Teachers College.—1A, 1B; 56A-56B, or 56C-56D-56E; 6 units of upper division English.

The Minor in Public Speaking in Teachers College.—1A, 1B, 5A, 5B, 110A, 110B; or 2A, 2B, 10, 11, 111A, 111B, or 111C, 111D.

A. 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 12 units in upper division major courses in English.) This requirement is prerequisite to the 24 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.

B. Requirements for Advancement to Candidacy.

1. A reading knowledge of French or German. The test is a written examination normally taken at the beginning of the first semester of graduate work. The examination is set in the first week of each semester and of the Summer Session.

2. The Senior English Comprehensive Examination, with a grade of B. The student who has not met this requirement as a part of the English major at the University of California normally presents himself for the examination at the close of his first semester of graduate work. The examination is set in January, May, and August.

C. Requirements for the Master's Degree.

For the general requirements, see p. 95. The Department of English will follow Plan II (The Comprehensive Examination Plan).

LOWER DIVISION COURSES

Freshman Courses

1A-1B. First-Year Reading and Composition. (3-3) Beginning either half-year.
Mr. BLANCHARD and STAFF

M W F, 8, 9, 10, 11, 12, 2, 3.

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. BLANCHARD

* Not to be given, 1934-35.

SOPHOMORE COURSES

English 1A-1B is prerequisite to all sophomore courses in English.

51. Intermediate Composition. (2) I, II.

Mr. DOWNES, Miss MACKENZIE, Mr. ROLFE

53. Foundations of Literature. (2) I.

Miss MACKENZIE

A study of primitive types of literature: the civilization that produced each, the relation between similar stories found in different parts of the world, the modern forms modeled upon the ancient. Types such as myth, apologue, proverb, ballad, beast epos, hero tale.

56A-56B. Survey of English Literature. (3-3) Yr.

Mr. BUELL, Miss CARHART, Mr. DOWNES, Mr. HUBBELL, Mr.

MACINTYRE, Miss MACKENZIE, Mrs. PEARSON

(A) Beowulf to Shakespeare; (B) Shakespeare through Keats.

57A-57B. Shakespeare. (2-2) Yr.

Mr. LONGUELL

Open without prerequisite to sophomores and upper division students. Not open to students who have credit for 117J.

Credit in this course may not be used to fulfill major or minor requirements.

UPPER DIVISION COURSES

Courses 1A-1B and 56A-56B are prerequisite to all upper division courses in English.

Group I

Students who have not passed English 51 will be admitted to 106A, 106C, and 106F only upon a test given by the instructor.

106A. The Short Story. (2) I, II.

Mr. HUBBELL

106C. Critical Writing. (2) II.

Mr. DOWNES

106F. Exposition. (2) I, II.

Miss CARHART

*110. English Diction and Style. (3) I, II.

Mr. HUBBELL

130A-130B. American Literature. (2-2) Yr.

Mr. DOWNES, Mr. HUBBELL

153. Introduction to the Study of Poetry. (3) I, II.

Mr. ALLEN, Miss MACKENZIE

Group II

A. THE JUNIOR COURSE

(Sections limited to forty students each)

Designed for juniors whose major or minor subject is English.

117J. Shakespeare. (3) I, II.

Mr. BUELL, Mrs. PEARSON

A survey of from twelve to fifteen plays, with special emphasis on one chronicle, one comedy, and one tragedy.

* Not to be given, 1934-35.

B. THE TYPE COURSES

It is understood that major students in English will take at least one of the following courses.

- 114A-114B. English Drama from the Beginning to 1900. (3-3) Yr.
Miss CAMPBELL, Miss CARHART
- 121A-121B. Nineteenth Century Poetry. (3-3) Yr. Mr. ALLEN, Mr. LONGUEIL
(A) Wordsworth to Tennyson; (B) Tennyson to Swinburne.
- 125C-125D. The English Novel. (3-3) Yr. M W F, 2. Mr. BLANCHARD
- 125G-125H. English Prose, 1600 to 1900. (3-3) Yr.
Mr. EWING, Mr. MACINTYRE

C. THE PERIOD COURSES

It is understood that major students in English will take at least two of the following courses.

- 151L. Chaucer. (3) I, II. Mr. HUSTVEDT, Mr. LONGUEIL
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) Either half-year.
Mr. BLANCHARD, Mr. ALLEN

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 2-hour paper and one 3-hour paper, the first of which will take the form of an essay. The examination will cover English literature from the beginning to 1900. The papers will be set by the Board of Examiners 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 half-year, credit 3 units.

PROFESSIONAL COURSE

361. The Teaching of English. (2) II. Tu Th, 12. Miss MACKENZIE
Not open to students who took English 161 prior to September, 1934.
May be counted as part of the 18 units in Education required for the Secondary Credential.

GRADUATE COURSES

211. Old English. (3) I. Mr. HUSTVEDT
- 221A-221B. Shakespeare. (3-3) Yr. Miss CAMPBELL

225. The Popular Ballad. (3) II.

Mr. HUSTVEDT

240. Eighteenth-Century Literature: Criticism, 1750-1800. (3) I.

Mr. BLANCHARD

Exclusive of the novel.

241. Nineteenth-Century Literature: Criticism, 1800-1830. (3) II.

Mr. BLANCHARD

PUBLIC SPEAKING†

LOWER DIVISION COURSES

1A-1B. Elements of Public Speaking. (3-3) Beginning either half-year.

Mr. MARSH, Mr. KARR, Mr. LEWIS, Mr. MURRAY

2A-2B. The Fundamentals of Expression and Interpretation. (3-3) Beginning either half-year.

Mrs. HUNNEWELL, Miss THOMAS

M W F, 8, 9, 11 (for those beginning in September; M W F, 11 (for those beginning in February)).

5A-5B. Principles of Argumentation. (3-3) Yr. M W F, 10, 2.

Mr. MARSH, Mr. KARR, Mr. LEWIS

Prerequisite: Public Speaking 1A-1B and the consent of the instructor.

10. Dramatic Interpretation: Shakespeare. (3) I. M W F, 2. Miss THOMAS

11. Dramatic Interpretation: Greek Tragedy. (3) II. M W F, 2.

Miss THOMAS

UPPER DIVISION COURSES

110A-110B. Third-Year Public Speaking. (3-3) Yr.

Mr. MARSH

Prerequisite: course 5A-5B.

First half-year, oral argumentation and debate; preparation of briefs; presentation of arguments. Second half-year, practice in extemporaneous speaking; the preparation of the occasional address. Open to students selected from 110A.

111A-111B. Literary Interpretation. (3-3) Beginning either half-year.

Miss THOMAS

Prerequisite: course 2A-2B.

The study of typical literary forms such as the ballad, the lyric, the essay, and the short story.

111C-111D. Literary Interpretation. (3-3) Yr.

Mrs. HUNNEWELL

Prerequisite: 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.

160A-160B. Debates on Public Questions. (2-2) Yr.

Mr. MARSH

Several of the prominent questions of current interest will be thoroughly studied. Students will be expected to do original research, and to submit the results of their study in briefs and written arguments. Oral debates will be held in class.

† The University of California at Los Angeles does not offer a major in public speaking. Students wishing to satisfy the requirements for a major in public speaking are referred to the General Catalogue of the Departments at Berkeley.

FRENCH

HENRY RAYMOND BRUSH, Ph.D., Professor of French.

PAUL PÉRIGORD, Ph.D., Professor of French Civilization.

ALEXANDER GREEN FITTE, 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 IGNAOE BIENCOURT, Docteur de l'Université de Paris, Assistant Professor of French.

MADELEINE LETESSIER, A.B., Associate in French.

LOUIS F. D. BRIOIS, M.A., Associate in French.

ANNA FÉNELON HOLAHAN, Ph.B., Associate in French.

ALICE HUBARD, M.A., Associate in French.

PAUL BONNET, Lic. ès Lettres, Associate in French.

CLINTON C. HUMISTON, M.A., Associate in French.

ANNE E. GIBSON, M.A., Teaching Assistant 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 62.

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 French 101A-101B, 109A-109B, 112A-112B.

Any of the remaining upper division courses except 140A-140B and 109A-109B, Sec. 2, may be applied on the major. With the permission of the department four units of the 24 may be satisfied by appropriate upper division courses in the following departments: English, German, Greek, Latin, Spanish, Italian, or philosophy.

The Minor in Teachers College.—A, B, C, D, or the equivalent; 101A, 101B.

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. No student who has matriculation credit for two years of high school French will receive any credit for French A.

A. Elementary French. (5) I, II.

Mr. BRIOIS in charge

M Tu W Th F, 8, 9, 10, 11, 12, 3.

Not open for credit to students who have credit for two years of high school French.

B. Elementary French. (5) I, II. Mr. BRIOIS in charge
 M Tu W Th F, 8, 9, 11, 12, 2.
 Prerequisite: course A or two years of high school French.
 Not open for credit to students who have credit for three years of high school French.

C. Intermediate French. (3) I, II. Mr. HUMISTON in charge
 M W F, 8, 9, 10, 11, 12.
 Prerequisite: course B or three years of high school French.
 Not open for credit to students who have credit for four 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.
 Not open for credit to students who have credit for four years of high school French.

D. Intermediate French. (3) I, II. Mr. HUMISTON in charge
 M W F, 8, 9, 2.
 Prerequisite: course C or four years of high school French.

5A-5B. Advanced French. (3-3) Yr. Mr. PÉRIGORD, Mr. BRIOIS
 Prerequisite: course D.

5AB. Advanced French. (5) II. Mr. BRUSH
 M Tu W Th F, 11.
 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 shall constitute the examination. This course may be taken only twice for credit.

UPPER DIVISION COURSES

The prerequisite to all upper division courses except 140A-140B is 16 units in the lower division, including 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 109A-109B, Sec. 2, and 140A-140B, are conducted mainly in French.

101A-101B. Composition, Oral and Written. (3-3) Beginning either half-year.
 Mr. BARKER, Mr. CROWLEY, Mr. BIENCOURT, Mr. FITE
 M W F, 10, 11, 2.

* Not to be given, 1934-35.

109A-109B. A Survey of French Literature and Culture. (3-3) Yr.

Mr. PÉRIGORD, Mr. HUMISTON

Sec. 1, M W F, 11; given in French and limited to French majors. Sec. 2, M W F, 12, given in English, does not count on the major in French.

(A) The Middle Ages, the Renaissance, and the XVII Century.

(B) The XVIII, XIX, and XX centuries.

112A-112B. The Nineteenth Century. (2-2) Yr.

Mr. BRUSH

Tu Th, 1.

Prerequisite: courses 101A-101B and 109A-109B.

(A) From 1789 to 1850.

(B) From 1850 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. BRUSH

120A-120B. The Seventeenth Century. (2-2) Yr.

Mr. BARKER

121A-121B. The Eighteenth Century. (2-2) Yr.

Mr. CROWLEY

Tu Th, 11.

130A-130B. Grammar, Composition, and Style. (3-3) Yr.

Mr. FITE

M W F, 10.

Prerequisite: an average grade higher than C in French courses.

Practice in oral and written composition based on selected models. This course is required at Berkeley of all candidates for the certificate of completion of the teacher-training curriculum, or for the M.A. degree.

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 majors in English and history.

199A-199B. Special Studies in French. (2-2) Yr.

Mr. BRUSH, Mr. PÉRIGORD, Mr. FITE

Prerequisite: senior standing and at least twelve units of upper division French.

PROFESSIONAL COURSE

*390. The Teaching of French. (2) I.

Mr. BRUSH

Tu Th, 10.

Prerequisite: French 101A-101B and 109A-109B, the latter being permitted concurrently.

Not open to students who took French 190 prior to September, 1934.

* Not to be given, 1934-35.

GEOGRAPHY

GEORGE MCCUTCHEM MCBRIDE, Ph.D., Professor of Geography.
 BURTON M. VARNEY, Ph.D., Associate Professor of Geography.
 MYRTA LISLE MCCLELLAN, B.S., Assistant Professor of Geography.
 CLIFFORD M. ZIERER, Ph.D., Assistant Professor of Geography.
 RUTH EMILY BAUGH, Ph.D., Assistant Professor of Geography.
 KAZUO KAWAI, M.A., Instructor in Geography and History.
 HALLOCK F. RAUP, M.S., Associate in Geography.
 WILLIAM G. CUNNINGHAM, A.B., Teaching Assistant 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 62.

Preparation for the Major.—Required: Geography 1A-1B, Geology 1C or 1A, and in addition, two of the following courses: Geography 3, 5B, 8. Recommended: Botany 1, Economics 1A-1B, one year of history, Physics 1A-1B, Political Science 3A-3B, Geology 1B, and at least one modern foreign language.

The Major.—The minimum requirement for the major is 18 or 21 units of upper division work in geography, including courses 101 and 113 plus 6 or 3 units selected, with the approval of the department, from some one of the following departments: botany, economics, geology, history, political science.

The Minor in Teachers College.—1A-1B (for commerce majors, 5A-5B); 6 units of upper division geography selected from the Letters and Science List.

Laboratory Fee.—Geography 1A-1B, \$2.00 per half-year.

LOWER DIVISION COURSES

1A-1B. Elements of Geography. (3-3) Beginning either half-year.

Miss MCCLELLAN, Mr. KAWAI, Mr. RAUP, Mr. CUNNINGHAM

Lectures, two hours; laboratory, two hours; field trips. Fee, \$2 per half-year.

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.

Not open for full credit to students who have credit for course 5A.

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 either half-year.**Mr. ZIERER, Mr. RAUP**

(A) No prerequisite, but limited to prospective majors in economics and commerce. Not open for full credit to students who have credit for Geography 1A-1B.

A brief study of those elements of the natural environment essential to a geographic interpretation of economic activities.

(B) Prerequisite: Geography 5A or 1A-1B.

The principles of economic geography as developed from a study of representative commodities, industries, and areas.

8. The Geographic Basis of Human Society. (3) I, II.**Miss BAUGH**

Prerequisite: Geography 1A-1B.

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.

UPPER DIVISION COURSES

Geography 1A-1B (or, for majors in economics and commerce, 5A-5B) is prerequisite to all upper division courses except 181.

101. Field Course: the Geography of Los Angeles and its Environs.

(3) II. Saturdays.

Mr. ZIERER

To be taken by major students during the junior year.

An expenditure of \$10 for transportation may be incurred by each student; registration to be made only after consultation with the instructor.

A field study in geography based on portions of the Los Angeles metropolitan area. The course affords training in the theory and technique of regional analysis.

111. The Conservation of Natural Resources. (3) I.**Mr. ZIERER**

The significance of abundant and varied natural resources in the development of the United States and the need for conserving the national wealth in soils, minerals, forests, and water.

113. General Climatology. (3) I.**Mr. VARNEY**

Geography 3 is especially desirable as a preparation for this course.

A study of the underlying principles of climatic phenomena, of the features which characterize the climates of various regions, and of the influence of climatic conditions upon the life of plants, animals and the human race.

114. Regional Climatology: Western Hemisphere. (3) II.**Mr. VARNEY**

Prerequisite: Geography 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.

121. The Geography of Anglo-America. (3) I.**Mr. ZIERER**

Consideration of the principal economic activities and life of the people in the United States, Canada, and Alaska in relation to the natural environment.

- 122A-122B. The Geography of Latin America. (3-3) Yr. Mr. McBRIDE
 (A) South America.
 (B) Mexico, Central America, and the West Indies.
 A study of the physical conditions characterizing the countries of Latin America, particularly in relation to the life of the inhabitants.

- 123A-123B. The Geography of Europe. (2-2) Yr. Miss BAUGH
 (A) The Atlantic States of Europe.
 (B) Eastern and Southern Europe.
 The effect of geographic conditions upon the economic status, political organization, and distribution of population in the present-day states of 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.

155. Advanced Economic Geography. (3) II. Mr. ZIERER
 A detailed analysis of selected problems from the fields of urban, industrial, and commercial geography.

- 171A-171B. The Geographic Setting of American History. (2-2) Yr. Mr. McBRIDE
 Additional prerequisite: a university course in American history.
 The purpose of this course is to study the relation of the physical environment to the historical development of the peoples inhabiting the Americas.
 (A) Anglo-America. (B) 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) Either half-year. Mr. McBRIDE and the STAFF
 Open only to seniors who have the necessary preparation for undertaking individual study of a problem. Registration only after conference with the instructor.

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.

Not open to students who took Geography 169 prior to September, 1934.

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

- 251A-251B. Seminar in Regional Geography. (3-3) Yr.

Mr. McBRIDE, Mr. VARNEY

A. The anthropogeography of the tropical plateaus of America.

B. Advanced field course in the geography of a selected unit in Southern California.

- 255A-255B. Seminar in Physical Geography. (3-3) Yr.

Mr. McBRIDE, Mr. VARNEY

A. An advanced survey of the physical bases of geography.

B. Oceanic and continental influences on the climates of the Pacific coast states.

* Not to be given, 1934-35.

GEOLOGY

WILLIAM JOHN MILLER, Ph.D., Sc.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., Assistant Professor of Geology.

JOSEPH MURDOCH, Ph.D., Assistant Professor of Geology.

ROBERT WALLACE WEBB, M.S., Teaching Assistant in Geology.

EARL M. IRVING, A.B., Teaching Assistant 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 62.

Preparation for the Major.—Required: Chemistry 1A-1B; elementary physics; Civil Engineering 1A-1B; 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 (6), 103 (4), 199A-199B (4), and at least 10 units of other upper division courses in the department which may include paleontology. Certain allied courses in chemistry, physics, 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.

The Minor in Teachers College.—1A or 1C, 1B, 107, Paleontology 111.

Laboratory Fee.—Mineralogy 3A-3B, \$2 per half-year.

GEOLOGY

LOWER DIVISION COURSES

1A. General Geology: Dynamical and Structural. (3) I, II.

Mr. SOPER, Mr. MURDOCH, Mr. WEBB

I, M W F, 8, 9; II, M W F, 8, 10; and one section meeting per week.

Prerequisite: Elementary chemistry.

Two field trips (half-day) required.

A study of the materials and structure of the earth, and of the processes and agencies by which the earth has been, and is being changed.

Not open to students who have taken or are taking Geology 1C.

1B. General Geology: Historical. (3) I, II.

Mr. MILLER

I, M W F, 9; II, M W F, 9, 10.

Prerequisite: Geology 1A or 1C.

A study of the geological history of the earth and its inhabitants, with special reference to North America.

* On leave, 1934-35.

1G. General Geology: Physiographic. (3) I, II.**Mr. MILLER, Mr. SOPER, Mr. GRANT**

I, M W F, 10, 11, 12, 2; II, M W F, 11, 12.

Two field trips (half-day) required.

An elementary course dealing with the earth's surface features and the geological laws governing their origin and development.

Not open to students who have taken or are taking Geology 1A.

1D. Physiography. (2) I.**Mr. GRANT, Mr. WEBB**

Lecture, Tu, 10; laboratory, three hours.

Prerequisite: Geology 1A or 1C, and Geology 1B.

Two field trips and three extra lecture hours per term 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.

Students who have taken 2C cannot receive credit for 1D.

UPPER DIVISION COURSES**102A-102B. Field Geology. (3-3) Yr.****Mr. WHITMAN**

S, 9-5.

Prerequisite: Geology 1B, 103, and Civil Engineering 11A-11B, 1FA-1FB.

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. WHITMAN**

Lectures, M F, 10; laboratory, M F, 2-5.

Prerequisite: Geology 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.

104. Petrographical Laboratory. (3) II.*Mr. WHITMAN**

Lectures, W, 12; laboratory, M F, 2, 3, 4.

Prerequisite: Geology 103.

Mineral optics and microscopy, and the study of thin sections of rocks.

106. Economic Geology: Metalliferous Deposits. (3) II.**Mr. WHITMAN**

M W F, 9.

Prerequisite: Geology 1A, 1B, and 103.

A systematic study of ore occurrences, and of the genetic processes and structural factors involved.

* Not to be given, 1984-85

107. Physical Geology of North America. (2) II. Mr. MILLER
 Tu Th, 9.
 Prerequisite: Geology 1A or 1C, and 1B.
 A course in advanced general geology with special reference to North America.
108. Economic Geology; Non-metalliferous Deposits. (2) I. Mr. MURDOCH
 Tu Th, 9.
 Prerequisite: Geology 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
 M W F, 8.
 Prerequisite: Geology 1A, 1B, 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
 Lecture, M W, 9; laboratory, W, 2-5.
 Prerequisite: Geology 1A; Geology 102A, which may be taken concurrently; Geology 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.
- 199A-199B. Problems in Geology. (2-2) Yr. To be arranged.
 Mr. MILLER and the STAFF
 Open only to seniors who are making geology their major study. Reports and discussions. A and B should not be taken concurrently.

GRADUATE COURSES

- 235A-235B. Geology of California. (3-3) Yr. Mr. SOPER, Mr. GRANT
 A. Physical geology of California.
 B. Paleontology and stratigraphy of California.
- 250A-250B. Seminar in Advanced Geology. (3-3) Yr. Mr. MILLER
 A. Petrology, with emphasis on petrogenesis.
 B. Geomorphology, including general principles and regional studies.
- 290A-290B. Selected Problems in Geology. (3-3) Yr. Mr. WHITMAN
 A. Diastrophism.
 B. Advanced economic geology.

MINERALOGY

LOWER DIVISION COURSE

- 3A-3B. Introduction to Mineralogy. (3-3) Yr. Mr. MURDOCH, Mr. WEBB
 Lecture, M, 1; laboratory, Sec. 1, Tu Th, 1-4; Sec. 2, M W, 2-5.
 Prerequisite: Elementary chemistry and physics. Fee, \$2 per half-year.
 Lectures and laboratory practice in crystal morphology and projection, determination of minerals by the physical and chemical properties, and descriptive mineralogy.

UPPER DIVISION COURSE

101. Paragenesis of Minerals. (2) II.

Mr. MURDOCH

Prerequisite: Mineralogy 3A-3B, Chemistry 1A-1B.

PALEONTOLOGY*

UPPER DIVISION COURSES

111. Systematic Paleontology. (4) I.

Mr. GRANT

Lectures, Tu Th, 11; laboratory, 6 hours.

Prerequisite: Geology 1B or Paleontology 1.

A general introduction to the study of invertebrate fossils.

112. Advanced Historical Geology. (3) II.

Mr. GRANT

Lecture, Tu, 11; laboratory, 6 hours.

Prerequisite: Paleontology 111, Geology 1B.

A general survey of earth history from fossil and physical evidence. The relationship between physical events and faunal evolution is stressed.

* Courses in Vertebrate Paleontology may be found in the announcement of the Department of Biology (p 117).

GERMAN

_____, 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., Assistant Professor of German.

PHILIP ROBERT PETSCH, J.D., Instructor in German.

GODFREY EHRLICH, Ph.D., Instructor in German.

CARL W. HAGGE, M.A., Instructor in German.

GERALD M. SPRING, Ph.D., Instructor in German.

CHRISTEL B. SCHOMAKER, M.A., Associate in German.

ELSA VON SENDENHORST-BAUWENS, Associate in German.

Letters and Science List.—All undergraduate courses in German are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

Preparation for the Major.—Required: Courses A, B, C, D, (16) and 6A-6B (4) 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, 118A-118B, and at least 4 units made up from the senior courses 111A-111B and 119. Students looking forward to the secondary credential should take also 106C-106D.

Minor in Teachers College.—Courses A, B, C, and D, or the equivalent; 6 units of elective credit in upper division German.

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. REINSCH in charge

This course corresponds to the first two years of high school German.

Not open for credit to students who have credit for two years of high school German.

B. Elementary German. (5) I, II.

Mr. REINSCH in charge

Prerequisite: course A or two years of high school German.

Not open for credit to students who have credit for three years of high school German.

C. Intermediate German. (3) I, II.

Mr. SCHOMAKER in charge

Prerequisite: course B or three years of high school German.

D. Intermediate German. (3) Yr. Mr. SCHOMAKER in charge
Prerequisite: course C or four years of high school German.

CD. Intermediate German. (5) Yr. Mr. SCHOMAKER in charge
Prerequisite: course B or three years of high school German.

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) Yr. Mr. HOFFMANN
The study and presentation of a masterpiece of German 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.

50A-50B. Advanced German. (3-3) Yr. Mr. REINSCH
Prerequisite: course D or consent of instructor.

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 6A-6B.

104A-104B. Introduction to Modern German Literature. (3-3) Yr.
Mr. REINSCH
Selected readings from nineteenth century authors.

105A-105B. German Classics of the Eighteenth Century. (3-3) Yr.
Mr. REINSCH
Selected works of Lessing, Goethe, Schiller.

106A-106B. Grammar, Composition, and Conversation. (2-2) Yr.
Mr. DOLCH

106C-106D. Grammar, Composition, and Conversation. (2-2) Yr.
Prerequisite: course 106A-106B. Mr. SCHOMAKER

110A-110B. German Lyrics and Ballads. (2-2) Yr. Mr. HOFFMANN
German ballad and lyric poetry from the Middle Ages to the present.

111A-111B. The German Novel. (2-2) Yr. Mr. HOFFMANN
Prerequisite: course 104A-104B, 105A-105B, or 106A-106B.
Selected novels of Goethe, Freytag, Ludwig, Keller, Raabe, Meyer, Fontane, and others.

118A-118B. History of German Literature. (3-3) Yr. Mr. HOFFMANN
Prerequisite: course 104A-104B or 105A-105B.
First half-year: the Middle Ages. Second half-year: from the Reformation to the death of Goethe.
Lectures and discussions; collateral reading.

119. Middle High German. (3) II.**Mr. DOLCH****Prerequisite:** course 104A-104B, or 105A-105B, and 118A.**Outline of grammar, selections from the Nibelungenlied, the Kudrun, and the Court Epics.****140A-140B. German Civilization. (2-2) Yr.****Mr. HOFFMANN****Prerequisite:** junior standing.**Lectures and reports. Conducted in English.****A general survey of the development of German civilization in its more important cultural manifestations.**

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.

² LOUIS K. KOONTZ, Ph.D., Associate Professor of History.

DAVID K. BJORK, Ph.D., Associate Professor of History.

WILLIAM F. ADAMS, Ph.D., Associate Professor of History.

LUCY M. GAINES, M.A., Assistant Professor of History.

ROLAND D. HUSSEY, Ph.D., Assistant Professor of History.

JOHN W. OLMSTED, M.A. (Oxon.), Assistant Professor of History.

ANDRÉ LOBANOV-ROSTOVSKY, Assistant Professor of History.

JOHN W. CAUGHEY, Ph.D., Assistant Professor of History.

———, Assistant Professor of History.

BRAINERD DYER, Ph.D., Instructor in History.

KAZUO KAWAI, M.A., Instructor in History and Geography.

LILY B. CAMPBELL, Ph.D., Professor of English.

Letters and Science List.—All undergraduate courses in history except 11 are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

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 courses: Political Science 3A-3B, Political Science 51A-51B, 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, or German, or Latin, or Spanish, or Italian, or a Scandinavian language.

For upper division work in history a reading knowledge of French or German, or both, is highly advisable; for graduate work, indispensable.

The Major.—Twenty-four units of upper division work in history. In certain cases 2 to 6 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: 121A-121B, 142A-142B, 153A-153B or Ancient History 112A-112B) and a year course in American history (one of the following: 162A-162B, 171A-171B).

² In residence second half-year only, 1934-35.

At least one advanced course must follow a general course in the same field, chosen within one of the following sequences: History 121A-121B, or 142A-142B, or 153A-153B, followed by 199A-199B in European history; 162A-162B, or 171A-171B, followed by 199A-199B in American history. Only one advanced course need be taken.

Recommended Course in Other Departments.—The following course will be accepted in partial fulfillment of the major in history: Ancient History 112A-112B.

The Minor in Teachers College.—4A-4B, or 5A-5B, or 8A-8B; 6 units of elective credit in upper division history.

LOWER DIVISION COURSES

4A-4B. History of Western Europe. (3-3) Beginning either half-year.

Mrs. GAINES, Mr. OLMSTED, Mr. LOBANOV

M W F, 8, 9, 10, 12, 2.

The growth of Western European civilization from the decline of the Roman Empire to the present time.

5A-5B. History of England and Greater Britain. (3-3) Beginning either half-year.

Mr. HARVEY, Mr. ADAMS, Mr. OLMSTED

M W F, 8, 10, 11, 12.

8A-8B. History of the Americas. (3-3) Beginning either half-year.

Mr. HUSSEY, Mr. CAUGHEY, Mr. DYER

M W F, 8, 9, 11, 12, 2; Tu Th, 8:30-10.

*9A-9B } Great Personalities. (2-2) Yr. Tu Th, 10.
9C-9D }

(A) United States.

(B) Latin America.

(C) England.

(D) Continental Europe.

Mr. HARVEY
Mr. OLMSTED

*11. Social Studies in the Kindergarten-Primary Grades. (2) Either half-year.

Prerequisite: Psychology 1A.

Treats of sources of material, curricula now in use, and projects.

39. Pacific Coast History. (2) I, II.

Mr. CAUGHEY

75. Economic History of England. (3) I.

Mr. HARVEY

76. Economic History of the United States. (3) II.

Mr. HARVEY

UPPER DIVISION COURSES

Prerequisite: History 4A-4B, or History 5A-5B, or History 8A-8B, or equivalent preparation in history.

121A-121B. The Middle Ages. (3-3) Yr. M W F, 8, 9.

Mr. BJORK

* Not to be given, 1934-35.

- *131A-131B. The Renaissance. (2-2) Yr. Mr. KLINGBERG, Miss CAMPBELL**
 (A) The civilization of the Renaissance in Italy.
 (B) The civilization of the Renaissance in northern Europe
- 142A-142B. Modern Continental Europe since 1648. (3-3) Beginning either half-year. Mr. WESTERGAARD, Mr. ADAMS, Mr. OLMSTED**
- *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 two years of college history, including History 4A-4B or 5A-5B, and one upper division course, preferably in continental or English history.
 (A) Rise and decline of the Swedish Baltic empire and the rise of modern Russia.
 (B) The Viking Age, Hanscatic League, the struggle for the control of the Baltic.
- 149A-149B. History of Russia. (2-2) Yr. Mr. LOBANOV**
 Russia from its earliest days to the present.
- 153A-153B. Social and Political History of Modern England: 1603 to the Present. (3-3) Beginning either half-year. Mr. KLINGBERG, Mr. HARVEY**
 M W F, 11 (for those beginning in September); M W F, 12 (for those beginning in February).
- *155A-155B. History of the British Empire. (2-2) Yr. Mr. KLINGBERG**
 Prerequisite: senior standing and two years of college history, including History 4A-4B or 5A-5B or 8A-8B and one upper division course in history.
- 162A-162B. History of Hispanic America from 1808 to the Present. (3-3) Yr. Mr. LOCKEY, Mr. HUSSEY**
 M W F, 11, 12.
 Prerequisite: History 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 History 8A-8B or 162A-162B.
- 171A-171B. History of the United States. (3-3) Beginning either half-year. Mr. PARISH, Mr. KOONTZ, Mr. DYER**
 A general course dealing with the English colonies and the political history of the United States.
- 173A-173B. The Civil War and Reconstruction. (2-2) Yr. Mr. DYER**
- *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. In any event, History 8A-8B or 171A-171B is a prerequisite.
 A study of expansion in the United States from the Atlantic to the Pacific.

* Not to be given, 1984-85.

188A-188B. History of California. (2-2) Yr.

Mr. CAUGHEY

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.

199A-199B. Special Studies in History. (2-2) Yr.

Mr. KLINGBERG, Mr. LOCKEY, Mr. PARISH, Mr. WESTERGAARD,
Mr. KOONTZ, Mr. BJORK, Mr. HARVEY

The work in each section must be continuous throughout the year.

Prerequisite: senior standing and two years of college history, including one upper division course. For further prerequisites, consult instructors concerned.

Term papers are required each half-year. Enrollment is limited to twenty-five.

Laboratory Work

Each member of the instructional staff will devote two hours a week to the guidance of groups of students in historical laboratory work, with emphasis on the use of the library and the evaluation and synthesis of historical materials. Supplementary to courses listed above; no additional credit. Students will participate in this plan by rotation, so that only a limited amount of additional time will be required of each student.

PROFESSIONAL COURSE

*390. Social Sciences for Junior and Senior High Schools. (2) I, II.

Mr. KOONTZ

Not open to students who took History 190 prior to September, 1934.

GRADUATE COURSES

253A-253B. Seminar in English History. (3-3) Yr.

Mr. KLINGBERG

Studies of England during the Napoleonic and post-Napoleonic periods.

257A-257B. Seminar in Modern European History. (3-3) Yr.

Mr. WESTERGAARD

Studies in nineteenth century continental history.

258A-258B. Seminar in United States History. (3-3) Yr.

Mr. PARISH

Studies in the expansion of the American people.

260A-260B. Seminar in Hispanic American History. (3-3) Yr. Mr. LOCKEY

Studies in the colonial and early national periods.

COURSES IN ANOTHER DEPARTMENT

Ancient History 112A. History of Greece to the Fall of Corinth.

Ancient History 112B. History of Rome to the Death of Justinian.

For these courses see page 126.

* Not to be given, 1934-35.

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.

MARGARET C. JONES, Ed.D., Instructor in Home Economics and Supervisor of Classes for the Training of Home Economics Teachers.

MAUD D. EVANS, M.A., Associate in Home Economics.

FLORENCE A. WILSON, M.A., Associate in Home Economics.

PAULINE F. LYNCH, M.A., Associate in Home Economics.

BERNICE ALLEN, M.A., Associate in Home Economics.

A student may select a major in this department either (a) in Home Economics, leading to the Bachelor of Education degree in the Teachers College and to the Special Secondary Credential in Home Making; or (b) in Household Science, leading to the Bachelor of Arts degree in the College of Letters and Science.

THE TEACHERS COLLEGE

Preparation for the Major in Home Economics.—Home Economics 1A, 1B, 2, 11A, 11B, 43A; Art 22; Chemistry 2A, 2B, 10; Physiology 1; Economics 1A.

The Major in Home Economics, leading to the Special Secondary Credential in Home Making.—Home Economics 108, 110, 118A, 120, 162A, 162B, 164, 168, and five units of advanced home economics approved by the department.

The Minor in Education.—Education 103, 170; Teaching, 6–10 units; Home Economics 147A, 147B.

The Minor in Home Economics.—1. Home Economics 1B, 33A, 33B, and six or more units selected from 162A, 162B, 164, 168, 179, 199A, 199B; or 2. Home Economics 11A, 11B, 110, 118A, 120.

Vocational Home Economics.—A vocational curriculum in home economics is maintained under the provisions of the Smith-Hughes Act. This curriculum leads to the Bachelor of Education degree 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.—Home Economics 1A–1B, 11A–11B, 110, 118A–118B, 120, 125, 159, 162A–162B, 164, 168, and 199A–199B are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

Preparation for the Major in Household Science.—Home Economics 11A–11B, 43A; Chemistry 1A–1B, 8; Economics 1A–1B; Physiology 1.

The Major in Household Science.—Eighteen units in Home Economics are required, including 162A–162B, at least six units chosen from 110, 118A, and 120, and five to eight units chosen from 118B, 125, 159, 164, 168, 199A, 199B; and six additional units to be selected with the approval of the department from upper division courses in chemistry, economics, psychology, or zoölogy.

Laboratory Fees.—The fee required for courses 1A, 1B, 2, 175, is \$1.50; for courses 33A, 33B, 108, 199A, 199B, is \$2; 11B is \$2.50; 110, 120, 125, 159 is \$3; 11A is \$4.

LOWER DIVISION COURSES

1A–1B. Clothing. (3–3) Beginning either half-year.

Miss LYNCH, Miss WILSON

Prerequisite: matriculation credit in “clothing” or Art 22.

Fee, \$1.50 per half-year.

The study of kinds and qualities of materials for different uses; typical forms of clothing; artistic appreciation, standards and hygienic characteristics of dress; construction time studies; quantity and cost estimates of wardrobes for individuals and for family groups.

2. The Study of Dress. (2) I, II.

Miss LYNCH

Prerequisite: Home Economics 1A. Fee, \$1.50.

A study of the 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 ALLEN

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 EVANS

Prerequisite: Home Economics 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; the practical problems involved in the selection and service of food in school lunch rooms and for social functions involving large groups.

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.

33A–33B. Elementary Food and Dietetics. (2–2) Yr.

Miss EVANS

Fee, \$2 per half-year.

A brief study of food selection and preparation and of its economic uses. Calculations of nutritive values, planning of dietaries for individuals, the family, and other groups.

- ✓ 43A-43B. Elementary Household Administration. (2-2) Beginning either half-year. Miss GRAY, Miss JONES

First half-year: Equipment; standards and methods of household work; prices and values of house furnishings; housing.

Second half-year: Management problems including those pertaining to the social aspects of the home in the care and training of children.

UPPER DIVISION COURSES

- ✓ 108. Textiles. (2) I, II.

Miss WILSON

Prerequisite: Art 22, Chemistry 10, Economics 1A. Fee, \$2.

The economic development of the textile industry; history of weaves and patterns; chemical, physical and microscopic examination of textile fibers, yarns and fabrics; bleaching and dyeing; stain removal; laundry processes as they affect color, texture, shrinkage, and durability.

- ✓ 110. Food Composition. (3) I, 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.

- 118A-118B. Nutrition. (3-2) Yr.

Miss THOMPSON

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 THOMPSON, Miss GODDARD

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.

Miss GRAY

Prerequisite: Home Economics 110. Fee, \$3.

Quantitative methods in food preparation under controlled conditions.

- ✓ 147A. Development of Home Economics Education. (3) I. Miss THOMPSON

Prerequisite: Psychology 1A, 1B, nine or more units in home economics.

The development of home economics as an educational movement; organization of curricula and present status of courses in different types of schools.

- ✓ 147B. Principles of Home Economics Teaching. (3) II.

Miss JONES

Prerequisite: Psychology 1A, 1B, six or more units in home economics.

Study of typical courses and their presentation; critical review of texts and references for elementary and secondary schools.

159. Metabolism Methods. (3) II.

Miss GODDARD

Prerequisite: Chemistry 8 or 10; Home Economics 118A or equivalent preparation. Fee, \$3.

Laboratory observations of the influence of special diets upon various phases of metabolism; practice in the methods for the analysis of blood and of digestion and metabolic products; determinations of the respiratory exchange and of nitrogen and mineral excretions.

162A-162B. Economics of the Household. (2-2) Yr.

Miss GRAY

Prerequisite: Economics 1A, 1B, or six or more units in home economics.

First half-year: 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.

Second half-year: Readings and reports of recent literature and discussion of the trends in the development of the art of consumption.

164. Household Sanitation. (2) II.

Miss GRAY

Sanitary standards and methods applicable to household processes. Family responsibility for health.

Not open to students who have taken course 164A.

168. Family Relationships. (2) I.

Miss JONES

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 open to students who have taken course 164B.

175. Advanced Study of Costume. (3) II.

Miss WILSON

Prerequisite: Art 22, Home Economics 1A, 1B, 2. 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.

179. Economics of Textiles and Clothing. (2) I.

Miss LYNCH

Prerequisite: Economics 1A, 1B, or Home Economics 1B.

The history and organization of the clothing trades and industries; the manufacture and utilization of fabrics; qualities and standards of textiles and their hygienic uses; individual and household practices in clothing selection.

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. Fee, \$2 per half-year.

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.

MATHEMATICS

- EARLE B. HEDRICK, Ph.D., Professor of Mathematics.
 GEORGE E. F. SHERWOOD, Ph.D., Professor of Mathematics.
 GLENN JAMES, Ph.D., Associate Professor of Mathematics.
 PAUL H. DAUS, Ph.D., Associate Professor of Mathematics.
 WILLIAM M. WHYBURN, Ph.D., Associate Professor of Mathematics.
 RAYMOND GARVER, 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.
 GEORGE E. ALBERT, A.B., Teaching Assistant in Mathematics.
 ELIZABETH J. BREUER, A.B., Teaching Assistant in Mathematics.
 JOHN S. HICKMAN, Teaching Assistant in Mathematics.
 VERNON V. QUILLIAM, A.B., Teaching Assistant in Mathematics.
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- 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 62.

Preparation for the Major.—Required: Mathematics C (or the equivalent), 8, 5, 6, 9A and 9B with an average grade of C, except that students who have completed two years of high school algebra and also trigonometry may be excused, upon examination, from course 8. Courses 5, 9A, 9B, 109, may be replaced, by permission, by the equivalent courses 3A, 3B, 4A, 4B respectively. Recommended: physics, astronomy, and a reading knowledge of French and German.

The Major.—Mathematics 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 in upper division courses in mathematics.

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

The Minor in Teachers College.—Mathematics C, 8, 5 (or 3A), 9A (or 3B), 9B (or 4A); 6 units chosen from 101, 102, 104, 109 (or 4B), 111, 190.

Pre-Commerce.—Freshmen in this curriculum are required to take courses 8 and 2, except that students who have completed two years of high school algebra may be excused, upon examination, from course 8.

Pre-Engineering and Pre-Mining.—The University of California at Los Angeles offers the first two years of the curricula of the Colleges of Engineering and Mining 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 one and one-half years of algebra, plane geometry, plane trigonometry, and course 8 unless excused as noted above. Prospective engineering students are urged, however, to add another half-year of algebra and solid geometry to this minimum preparation.

Fees.—The fees required for Civil Engineering 1FA-1FB are \$5 per half-year; for Civil Engineering 3 the fee is \$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 2.

C. Trigonometry. (2) I, II. Tu Th, 10, 11. Mr. BELL, Miss GLAZIER

Prerequisite: high school geometry and one and one-half years of elementary algebra or Mathematics 8.

Not open to students who have had trigonometry in high school.

F. Spherical Trigonometry. (1) I, II. Mr. WHYBURN

Prerequisite: plane trigonometry.

2. Mathematics of Finance. (3) I, II. M W F, 10. Mr. DAUS

Prerequisite: Mathematics 8.

3A. Plane Analytic Geometry. (3) I, II. M W F, 8, 9, 12.

Mr. BELL, Mr. MASON

Prerequisite: Mathematics C and 8 or the equivalents.

3AB. Analytic Geometry and First Course in Calculus. (6) II. Mr. DAUS

M Tu W Th F, 7:45.

Prerequisite: Mathematics C and 8, or equivalents.

This course is equivalent to Mathematics 3A and 3B (or 5 and 9A, by permission).

3B. First Course in Calculus. (3) II. Mr. HUNT, Miss GLAZIER

Prerequisite: Mathematics 3A or its equivalent.

3C. First and Second Courses in Calculus. (6) I. Mr. SHERWOOD

M Tu W Th F, 7:45.

Prerequisite: Mathematics 3A.

This course is equivalent to Mathematics 3B and 4A (or to 9A and 9B, by permission). Engineers must take Mathematics 4B also.

4A. Second Course in Calculus. (3) I. M W F, 10. Mr. GARVER

Prerequisite: Mathematics 3B.

- 4B. Third Course in Calculus. (3) II. M W F, 9, 11. Mr. JAMES
 Prerequisite: Mathematics 4A.
 Course 4B may be substituted for Mathematics 109 with the approval of the department.
5. Analytic Geometry. (3) I, II. Mr. MASON, Miss WORTHINGTON
 Prerequisite: Mathematics C and 8 or the equivalent.
 This course is essentially equivalent to Mathematics 3A.
6. Advanced Geometry. (2) I, II. Tu Th, 10. Mr. JAMES
 Prerequisite: Mathematics 3A or 5, and consent of instructor.
8. College Algebra. (3) I, II, M Tu W Th F, 8, 9, 12. Mr. SHEERWOOD, Mr. HUNT and the STAFF
 Prerequisite: at least one year of high school algebra.
 Within a few weeks the class meetings will be reduced to three a week for all students except the minority who require extra review and drill.
- 9A. First Course in Calculus. (3) I. M W F, 10, 11. Mr. WHYBURN
 Prerequisite: Mathematics 5, or 3A.
 This course is essentially equivalent to Mathematics 3B.
- 9B. Second Course in Calculus. (3) II. M W F, 9, 10, 11. Mr. GARVER
 Prerequisite: Mathematics 9A or 3B.
 This course is essentially equivalent to Mathematics 4A.
- 10A. Vectors and Allied Topics. (2) I. Mr. BELL
 This course may be taken only in conjunction with, or subsequent to, Mathematics 4A. It is prescribed for pre-engineering students in the mechanical and electrical engineering curricula.
- 10B. Elementary Differential Equations and Applications. (2) II. Mr. BELL
 This course may be taken only in conjunction with, or subsequent to, Mathematics 4B. It is prescribed for pre-engineering students in the mechanical and electrical engineering curricula. It is not equivalent to Mathematics 119, but students may not take both courses for full credit.
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 9A-9B, or the equivalent.

101. Elementary Geometry for Advanced Students. (3) I. M W F, 11. Mr. DAUS
 Prerequisite: Mathematics 5.
 Selected topics in elementary geometry, with particular emphasis on recent developments.

102. Elementary Algebra for Advanced Students. (3) II. M W F, 2.
Miss WORTHINGTON
Prerequisite: Mathematics 8 and 9A-9B.
Selected topics in algebra, with particular reference to modern points of view.
104. History of Mathematics. (3) I. M W F, 2. Miss GLAZIER
A non-technical course open to students who have some knowledge of the fundamental ideas of analytic geometry and calculus.
109. Third Course in Calculus. (3) I. M W F, 9, 11. Mr. GARVER
Prerequisite: Mathematics 9A-9B.
Course 4B may be substituted for Mathematics 109 with the approval of the department.
111. Theory of Algebraic Equations. (3) I, II. M W F, 2.
Mr. JAMES, Mr. BELL
Prerequisite: Mathematics 8 and 9A-9B.
- 112A-112B. Introduction to Higher Geometry. (2-2) Beginning either half-year. Tu Th, 11. Mr. DAUS, Mr. SHERWOOD
Prerequisite: Mathematics 5, 6 and 9A-9B.
- *113. Synthetic Projective Geometry. (3) I. Mr. DAUS
Prerequisite: Mathematics 112A-112B, or consent of the instructor.
114. Modern Geometry. (3) II. Mr. SHERWOOD
Prerequisite: Mathematics 6, 112A-112B.
- *115. Theory of Numbers. (3) II. Mr. DAUS
119. Differential Equations. (3) I, II. M W F, 9. Mr. BELL, Mr. GARVER
Prerequisite: Mathematics 109 or its equivalent.
Not open for full credit to students who have had course 10B.
121. Mathematical Theory of Statistics. (3) I. Mr. GARVER
Prerequisite: Mathematics 109 or its equivalent.
- 122A-122B. Advanced Calculus. (3-3) Yr. M W F, 10. Mr. HEDRICK
Prerequisite: Mathematics 109.
124. Vector Analysis. (3) I. Mr. JAMES, Mr. WHYBURN
Prerequisite: Mathematics 109 and one year of college physics.
125. Analytic Mechanics. (3) II. Mr. WHYBURN
Prerequisite: Mathematics 109 or its equivalent, and Physics 105.
190. The Teaching of Mathematics. (3) II. M W F, 12. Miss GLAZIER
Prerequisite: Mathematics 9A-9B or its equivalent.
A critical inquiry into present-day tendencies in the teaching of mathematics.
199. Special Problems in Mathematics. (3) Either half-year. Mr. SHERWOOD
Permission is required for registration.

* Not to be given, 1934-35.

GRADUATE COURSES

215. Non-Euclidean Geometry. (3) II. Mr. DAUS
216. Differential Geometry. (3) I. Mr. JAMES
- 221A-221B. Higher Algebra. (3-3) Yr. Mr. GARVER
- 224A-224B. Functions of a Complex Variable. (3-3) Yr. Mr. HEDRICK
- 242A-242B. Functions of a Real Variable. (3-3) Yr. Mr. WHYBURN

CIVIL ENGINEERING†

- 11A-11B. Plane Surveying Lectures. (2-2) Beginning either half-year.
Mr. HUNT, Mr. MASON
Prerequisite: trigonometry and geometric drawing.
- 1FA-1FB. Plane Surveying Field Practice. (1-1) Beginning either half-year.
Mr. HUNT, Mr. MASON
M or W, 2-5; Tu or Th, 1-4; S, 8-11.
This course may be taken only in conjunction with, or subsequent to,
Civil Engineering 11A-11B. Fee, \$5 per half-year.
3. Summer Class in Plane Surveying. (3) Mr. MASON
Prerequisite: Civil Engineering 1FA-1FB. Fee, \$25.
Four weeks of field work after the close of the school year.
8. Materials of Engineering Construction. (2) I, II. Tu Th, 12. Mr. MASON
Prerequisite: sophomore standing.

† 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 10, 11, 40, 51, 65A, 65B, 75A, 80A; recommended, mathematics and physics.

The Major, leading to the Secondary Special 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, 6-10 units; Mechanic Arts 190.

Special Secondary Credential in Vocational Arts.—A two-year curriculum leading to the secondary special teaching credential in vocational arts is maintained under the provisions of the Smith-Hughes Act. This course is open to experienced journeymen workmen who have had two years of schooling beyond the eighth year. All applications must be approved by the Assistant Director of the Division of Vocational Education. A statement of the requirements for the Limited Credential in Industrial Arts Education will be found in Bulletin H-2 published by the State Board of Education.

*The College of Letters and Science**

Mechanical Engineering D, 1, 2, and 6 are included in the Letters and Science List of Courses.

Laboratory Fees.—A fee of \$3 is required for each of the following courses: Mechanic Arts 10, 11, 12, 40, 65A, 75A, 75B, 80A, 80B, 100A, 100B, 130, 131, 140A, 140B, 141, 160, 161, 176A, 176B; for Mechanical Engineering 10B the fee is \$5.

* The University of California at Los Angeles offers the first two years in preparation for admission to the junior year of the College of Engineering in the University at Berkeley. Students intending to pursue their studies in this college should present their programs for approval to the pre-engineering adviser.

MECHANICAL ENGINEERING

- D. Engineering Drawing. (2) I, II.** **Mr. MANSFIELD, Mr. PAXTON**
 Sec. 1, Tu Th, 9; Sec. 2, Tu Th, 10. Drafting, four hours to be arranged.
- 1. Elements of Heat Power Engineering. (3) I.** **Mr. PAXTON**
 M W F, 11.
- 2. Descriptive Geometry. (3) I, II.** **Mr. PAXTON**
 Lecture, Tu, 10. Drafting, 1-4, six hours to be arranged.
- 6. Machine Drawing. (3) I, II.** **Mr. PAXTON**
 Lecture, Th, 11. Drafting, 1-4, six hours to be arranged.
 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
 Fee, \$5.

MECHANIC ARTS**LOWER DIVISION COURSES**

- †A. Shop Work. (No credit) I, II.** **Mr. KELLER**
 Care and use of fundamental tools necessary for work in the elementary grades. Introduction of projects and processes essential for adequate development of activity program.
- 10. Shop Work. (2) I.** **Mr. KELLER**
 Fee, \$3.
 Bench work in wood. Fundamental tool and joinery operations. Lathe work, including spindle, face-plate, chuck and mandrel turning.
- 11. Shop Work. (2) II.** **Mr. KELLER**
 Fee, \$3.
 Building construction. Foundation layout and form building. Essential operations in framing and finishing including interior trim, built-in features. Use of steel square.
- 12. Shop Work. (2) I.** **Mr. KELLER**
 Fee, \$3.
 Care, operation, adjustment, and maintenance of wood-working tools and machinery.
- 20c-20d-20e. Printing. (2-2-2) Three half-years.** **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.

† Although Mechanic Arts A gives no credit, it is counted on a student's allowable program as 2 units.

40. Shop Work. (2) I.

Mr. MARSH

Fee, \$3.

Storage battery construction and repair; lead burning; battery charging, treatment, and care.

51. Architectural Drawing. (2) I.

Mr. MANSFIELD

Lettering, details of typical frame and masonry construction, plans, elevation, sections, and specifications.

65A-65B. The Automobile. (3-3) Yr.

Mr. BROCKWAY, Mr. MARSH

(A) 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. Fee, \$3.

(B) 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.

75A-75B. Shop Work. (2-2) Yr.

Mr. WATSON

Fee, \$3 per half-year.

Elementary machine shop practice, fundamental operations and tool processes; practical operation of standard power tools.

80A-80B. Sheet Metal. (2-2) Yr.

Mr. MANSFIELD, Mr. MARSH

Fee, \$3 per half-year.

Work in tin plate, galvanized iron and other metals; development of patterns in drafting room; use, care and upkeep of bench and machine equipment.

92A-92B. Related Technical Subjects. (3-3) Beginning either half-year.

Mr. PAXTON, Mr. MARSH

UPPER DIVISION COURSES

100A-100B. Shop Work. (3-3) Yr.

Mr. KELLER

Fee, \$3 per half-year.

(A) Furniture construction and repair, finishing and refinishing. Study of period furniture. Construction, methods of laying out various parts, use of jigs. Methods of preparing and applying paint, stains, varnishes and lacquers in finishing and refinishing. Marking of models, showing correct construction of table corner, rails and legs, drawer, etc. Construction of projects for junior high school work.

(B) Study of principles of design. Upholstering tools and equipment, materials used, cost of materials, etc. Construction of more advanced projects than in 100A.

130. General Shop. (2) I.

Mr. BROCKWAY

Fee, \$3.

Analysis and construction of "projects" involving combined use of various tools, materials, and processes.

131. 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.

140A-140B. Applied Electricity. (2-2) Yr.

Mr. MARSH

Fee, \$3 per half-year.

(A) Fundamental principles of electricity; electric and magnetic circuits; induction; with applications.

(B) Construction of simple electric circuits, splicing and joining wires; installation of common fixtures and devices; development of high school projects; transformers; radio circuits.

141. Electric Apparatus. (2) II.

Mr. MARSH

Fee, \$3.

Electric generators; motors; transformers; instruments and their principles and use; presented in lectures, demonstrations, and shop applications.

150A-150B. 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.

160. Automotive Reconstruction. (3) II.

Mr. BROCKWAY, Mr. MARSH

Fee, \$3.

Study and application of modern automotive maintenance technic, including cylinder boring, grinding and honing; piston fitting; precision valve fitting; and general automotive machine tool use.

161. Automotive Laboratory. (3) I.

Mr. BROCKWAY, Mr. MARSH

Fee, \$3.

Diesel engines; testing of engines, fuels, and lubricants. Diagnosis of engine and automobile troubles.

176A-176B. Shop Work. (2-2) Yr.

Mr. WATSON

Fee, \$3 per half-year.

Advanced machine shop practice, machine and bench work, machine construction and repair; tool making; heat treatment of steel.

190. Organization and Administration of Industrial Arts Education. (2) II.

Mr. MANSFIELD

MILITARY SCIENCE AND TACTICS

EDWARD J. MORAN, Colonel, U. S. Army, Professor of Military Science and Tactics.

RAYMOND C. BAIRD, Ph.B., LL.B., Lt. Colonel, U. S. Army, Assistant Professor of Military Science and Tactics.

FRANK J. PEARSON, Captain, U. S. Army, Assistant Professor of Military Science and Tactics.

———, Assistant Professor of Military Science and Tactics.

———, Assistant Professor of Military Science and Tactics.

JOHN C. NEWTON, Captain, U. S. Army, Assistant Professor of Military 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 62.

The University of California at Los Angeles does not offer a major in military science and tactics in the College of Letters and Science. In Berkeley, a combination major of military science and either (a) history and political science or (b) jurisprudence may be offered. 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 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, viz., the basic course and the advanced course.

BASIC COURSE

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 non-

citizenship, 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. MORAN, Mr. BAIRD, Mr. NEWTON, Mr. PEARSON, —, —

†Field, M F, 8, 11, 1.

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, leadership to include the duties of a private.

2A-2B. Basic Military Training. (1½-1½) Yr.

Mr. MORAN, Mr. BAIRD, Mr. NEWTON, Mr. PEARSON, —, —

†Field, M F, 8, 11, 1.

Instruction in military history, characteristics of infantry weapons, automatic rifle, musketry, scouting and patrolling, combat principles of the squad and section, leadership to include the duties of a corporal.

ADVANCED COURSE

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 of California at Los Angeles 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 \$72.00 per year).

....., 193.....
In consideration of commutation of subsistence to be furnished in accordance with law, I hereby agree to complete the advanced course Infantry R. 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)

† Each student must enroll for two hours of field instruction and one hour of class instruction each week.

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. PEARSON

Tu W Th, 8, 11.

Instruction and practice in the duties of officers in connection with the basic course; instruction in pistol and rifle marksmanship, howitzer company weapons, aerial photographs, combat principles of the rifle platoon, leadership to include duties of the sergeant.

103B. Advanced Infantry Training. (3) I, II.

—, **Mr. NEWTON**

Tu W Th, 8, 11.

Instruction and practice in duties of an officer in connection with the basic course; instruction in machine guns, combat principles of machine gun and rifle platoon, leadership to include duties of the sergeant.

104A. Advanced Infantry Training. (3) I, II.

Mr. BAIRD, —

Tu W Th, 8, 11.

Instruction and practice in the duties of an officer in connection with the basic course; instruction in military history and military law, combat principles of rifle and machine gun platoon, leadership to include duties of company officer and battalion staff.

104B. Advanced Infantry Training. (3) I, II.

Mr. BAIRD

† Tu Th, 8, 11.

Instruction and practice in the duties of an officer 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, leadership to include duties of company officers and battalion staff.

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 ($\frac{1}{2}$) unit per 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 (6) units.

† Each student must enroll for one hour's duty as instructor in the basic course.

MUSIC

THEODORE STEARNS, M.A. (Wurzburg), Professor of Music.

FRANCES A. WRIGHT, Associate Professor of Music.

BERTHA W. VAUGHN, Associate in Music.

SQUIRE COOP, Lecturer in Music.

ALEXANDER SCHREINER, Lecturer in Music and University Organist.

The Teachers College

Preparation for the Major. Music 1A, 1B, 2A, 2B, 7A, 7B, 9A, 9B, 10A, 10B, 55A, 55B.

The Major, leading to the Special Secondary Credential in Music.—Music 101A, 101B, 105A, 105B, 108A, 108B, 109, 111A, 111B, 114A, 114B.

The Minor in Education.—Education 103, 170, Teaching, 6–10 units; Music 112A, 112B.

The Minor in Music.—1A, 1B, 2A, 2B, 9A, 9B, 113A, 113B.

*The College of Letters and Science**

Music 1A–1B, 2A–2B, 9ABCD, 10ABCD, 55A–55B, 101A–101B, 105A–105B, 110, 111A–111B, and 118ABCD are included in the Letters and Science List of Courses.

Fee.—The fee for course 110 is \$20.

LOWER DIVISION COURSES

1A–1B. Solfeggio. (3–3) Yr.

Miss WRIGHT

Elementary theory, dictation and music reading. Basic course for music major.

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.

Mrs. VAUGHN

9A–B–C–D. Choral Practice. (1 unit each half-year.)

Mr. COOP

10A–B–C–D. Orchestral Practice. (2 units each half-year.)

Mr. COOP

55A–55B. Harmony. (3–3) Yr.

Mr. STEARNS

Prerequisite: Music 1A–1B; also a knowledge of harmony up to the inversions of the triads.

* The University of California at Los Angeles does not offer a major in music in the College of Letters and Science. Students wishing to satisfy the requirements for a major in music are referred to the General Catalogue of the Departments at Berkeley.

† Restricted to music majors.

UPPER DIVISION COURSES

A certain degree of proficiency in piano playing is prerequisite to junior standing in the Department of Music.

101A-101B. Counterpoint and Form. (2-2) Yr. Mr. STEARNS

Prerequisite: Music 55A-55B.

Practice in one of the technical processes of music writing.

105A-105B. Composition. (2-2) Yr. Mr. STEARNS

Prerequisite: Music 101A-101B; senior standing.

Vocal and instrumental composition in the smaller forms.

†108A-108B. Advanced Voice. (2-2) Yr. Mrs. VAUGHN

Prerequisite: Music 7A-7B.

109. Conducting. (1) I. Mr. COOP

Prerequisite: Music 1A-1B, 55A-55B.

Chorus organization and training; the technique of the baton.

*110. String Ensemble. (2) I, II. —

Fee, \$20.

111A-111B. The Great Composers. (2-2) Yr. Mr. STEARNS

Prerequisite: junior standing.

Not open to students who have taken course 113A-113B.

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. COOP

Prerequisite: Music 55A-55B and senior standing.

Orchestra, theory and practice of the instruments.

118A-B-C-D. A Cappella Choir. (2 units each half-year.) Mr. COOP

Prerequisite or concurrent: 9A-B-C-D and permission of the instructor.

Study of public performance of the polyphonic music of the classical period.

PROFESSIONAL COURSE

360A-360B. Elementary Music Education. (2-2) Yr. —

Not open to freshmen students.

Not open to students who took Music 60A-60B prior to September, 1934.

A professional subject matter course required of all candidates for the general elementary credential.

† Restricted to music majors.

* Not to be given, 1934-35.

PHILOSOPHY

CHARLES H. RIEBER, Ph.D., LL.D., Professor of Philosophy and Dean of the College of Letters and Science.

JOHN ELOF BOODIN, Ph.D., Professor of Philosophy.

DONALD A. PIATT, Ph.D., Professor of Philosophy.

HUGH MILLER, Ph.D., Assistant Professor of Philosophy.

DONALD C. WILLIAMS, Ph.D., Assistant Professor of Philosophy.

ERNEST C. MOORE, Ph.D., LL.D., Professor of Education, Vice-President and Provost, University of California at Los Angeles.

The Department offers courses of two types:

(1) Courses dealing with the principles of wide fields of study and showing the interrelationship of the special studies pursued in other departments. This type includes the lower division courses, and 104A-104B, 112, 121, 146, 150, 151, 152, 153, 164, 173, open to all students of junior standing without other prerequisite than the approval of the Department. Such courses should be chosen with reference to the student's major interest.

(2) Courses devoted to the history, problems, and theories of philosophy, and intended primarily for the student majoring in this subject. This type includes 102, 115, 116, 117, 119, 122, 123, 141, 161.

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 62.

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

The Major: Twenty-four units of work are required for the major. Of these, at least eighteen units must be completed in upper division courses of this department. At the option of the student and with the consent of the department adviser, as many as six units may be applied toward the major from certain allied courses in other departments.

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.

The Minor in Teachers College.—1A-1B, 2A-2B, or 3A-3B; 6 units of elective credit in upper division philosophy.

LOWER DIVISION COURSES

Courses 1A-1B, 2A-2B, and 3A-3B are all introductory courses, carrying no prerequisite.

✓ 1A-1B. Logic. (3-3) Yr.

Mr. RIEBER

(A) Deductive logic. Division, definition, the forms and transformations of judgments, the syllogism.

(B) Inductive logic. The presuppositions, methods, and limits of inductive sciences. Prerequisite: course 1A.

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. MILLER, Mr. WILLIAMS

An introductory course, tracing the thought of the major philosophers of the ancient and modern world.

50. Problems of Ethics and Religion. (2) II.

Mr. WILLIAMS

An introduction to the basic problems of morality and religion, with a survey of representative approaches to their solution.

51. Problems of Metaphysics and Knowledge. (2) I.

Mr. MILLER

An introduction to the problems of metaphysics and to central issues in theories of knowledge.

UPPER DIVISION COURSES

Where no prerequisite is stated, the course is open to all students of junior standing.

102. Philosophy of John Dewey. (2) I.

Mr. MOORE

Prerequisite: 6 units of credit in philosophy.

104A-104B. Ethics. (3-3) Yr.

Mr. PIATT

(A) Consideration of the meaning of morality, and a study of representative ethical theories.

(B) Application of ethical theory and method formulated in the first semester to current social problems.

112. Philosophy of Religion. (3) I.

Mr. RIEBER

M W F, 2.

A study of the nature and methods of religious knowledge. The problem of how religious truth may be known; its field and extent. The three chief avenues to religious truth: Rationalism, Empiricism, Mysticism.

115. Kant. (2) II.

Mr. PIATT

Prerequisite: Philosophy 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: Philosophy 3A-3B.

The Philosophy of Plato will be considered, with special attention to its development in the *Republic*.

117. Aristotle. (2) I.

Mr. BOODIN

Prerequisite: Philosophy 3A-3B.

Aristotle's philosophy and its significance for present thought.

119. Modern Idealism. (2) II.

Mr. MILLER

Prerequisite: Philosophy 3A-3B.

* Not to be given, 1984-85.

121. Social and Political Philosophy. (3) I. Mr. MILLER
A study of the sources and development of our social-political institutions.
122. British Empiricism. (2) I. Mr. PIATT
Prerequisite: Philosophy 3A-3B.
An examination of the philosophies of Locke, Berkeley, and Hume.
123. Continental Rationalism. (2) I. Mr. WILLIAMS
Prerequisite: Philosophy 3A-3B.
The rise of modern science, and the philosophies of Descartes, Spinoza, and Leibniz.
- *141. Present Tendencies of Thought. (3) II. Mr. WILLIAMS
Prerequisite: Philosophy 3A-3B.
A study of contemporary realism.
146. Philosophy of Literature. (3) II. Mr. RIEBER
Comparison between philosophical and literary expressions of typical problems of philosophy. A discussion of *idealism, realism, mysticism*, and other attitudes as expressed in literature.
- *150. Philosophy of Science. (2) Mr. PIATT
An enquiry concerning man's place in nature, seeking to determine the philosophical bearing of the fundamental concepts of the sciences.
151. Philosophy of Nature. (3) I. M W F, 11. Mr. BOODIN
An interpretation of evolution and of man's place in the universe.
152. Metaphysics. (3) II. M W F, 11. Mr. BOODIN
An examination of the chief types of theory of reality and an attempt at an idealistic synthesis.
153. Fundamental Concepts of Biology. (3) II. Mr. MILLER
An examination into the theoretical foundations of biological, psychological, and sociological science.
161. Epistemology. (3) I. Mr. WILLIAMS
Prerequisite: Philosophy 3A-3B.
The analysis of mind and knowledge, with reference to present psychological problems and to the methods of the sciences.
- *164. General Logic. (3) 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 and characteristics of the social mind.

GRADUATE COURSES

204. Theory of Value. (3) II. Mr. WILLIAMS
214. Logical Theory. (3) I. Mr. WILLIAMS
- 251A-251B. Seminar: Concepts of Cosmology. (3-3) Yr. Mr. BOODIN
- *252A-252B. Seminar: Concepts of Metaphysics. (3-3) Yr. Mr. BOODIN
- *261A-261B. Seminar: Concepts of Epistemology. (3-3) Yr. Mr. PIATT

* Not to be given, 1934-35.

PHYSICAL EDUCATION FOR MEN

WILLIAM H. SPAULDING, A.B., Director of Physical Education for Men.
FREDERICK W. COZENS, Ph.D., Professor of Physical Education and Associate Director of Physical Education for Men.
PAUL FRAMPTON, M.A., Associate Supervisor of Physical Education for Men.
FRED H. OSTER, B.S., Assistant Supervisor of Physical Education for Men.
CECIL B. HOLLINGSWORTH, Ed.B., Associate in Physical Education for Men.
PATRICK MALONEY, Associate in Physical Education for Men.
DONALD K. PARK, A.B., Associate in Physical Education for Men.
WILBUR C. JOHNS, Ed.B., Associate in Physical Education for Men.
HARRY TROTTER, Assistant in Physical Education for Men.
PIERCE H. WORKS, A.B., Assistant in Physical Education for Men.
SILAS GIBBS, Ed.B., Assistant in Physical Education for Men.
WILLIAM BURKE, Assistant in Physical Education for Men.
EDGARDO A. ACOSTA, Assistant in Fencing.

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.

The Teachers College

Preparation for the Major.—High school chemistry or Chemistry 2A or Zoölogy 1A; Physiology 1; Biology 1; Zoölogy 35; Physical Education 1, 3 (2 units); 5, 29A-B-C-D.

The Major, leading to the Special Secondary Credential in Physical Education.—Physical Education †120, 130A-B-C-D, 131, 140, 149, 156A, 156B, 182, †190, †192A-192B.

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

The Minor in Physical Education for Men.—Physical Education 3 (2 units), 131, 140, 154, and 155A, 155B or 156A, 156B.

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

*The College of Letters and Science**

Physical Education 1 and 3 are included in the Letters and Science List of Courses.

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.

LOWER DIVISION COURSES

1. Hygiene and Sanitation. (1) I, II. Th, 8. Mr. MACKINNON

†3. Prescribed Physical Education for Freshmen and Sophomores. (4) I, II. Mr. COZENS and the STAFF

Baseball, basket-ball, boxing, fencing, American football, gymnastics, handball, swimming, tennis, track, wrestling, individual gymnastics. Sections meet twice weekly. Section assignments are made by the department after students have been classified on the basis of physical efficiency, health, strength, endurance, agility, ability to swim, and skill in self-defense.

Physical Education 3 may be elected by students in the junior and senior years.

5. First Aid and Bandaging. (1) II. Mr. PARK

The care of common accidents and emergencies on the playground and athletic field.

29A-B-C-D. Practice in Athletic Activities. (1-1) Yr. Mr. FRAMPTON

Required of physical education majors in their first and second years of work.

UPPER DIVISION COURSES

130A-B-C-D. Practice in Athletic Activities. (1-1) Yr. Mr. COZENS

Required of physical education majors in their third and fourth years of work.

131. Administration of Physical Education. (3) II. Mr. FRAMPTON

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) II. 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 offered. Students planning to become candidates for the A.B. degree 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 39.

149. Kinesiology. (3) I. M W F, 8. Mr. FRAMPTON
Prerequisite: Zoology 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. COZENS
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, and Mr. JOHNS
Prerequisite: Track, and basket-ball or baseball.
(A) Football and basket-ball. (B) Track and baseball.
182. Corrective Physical Education. (3) II. Mr. FRAMPTON
Prerequisite: Physical Education 149.
The application of massage and exercise to the treatment of orthopedic and remedial conditions. Two clinic hours per week to be arranged in addition to lecture and demonstration periods.

COURSES OFFERED IN THE
DEPARTMENT OF PHYSICAL EDUCATION FOR WOMEN

120. Principles of Physical Education. (2) II. Miss ATKINSON
190. Physiology of Exercise. (3) I. Mrs. JOHNSON
- 192A-192B. Administration of Health Education. (3-3) Yr. Miss HARSHBERGER, Mrs. JOHNSON
199. Problems in Physical Education. (2) II. Mrs. JOHNSON, Miss SHAMBAUGH, Mr. COZENS

* Not to be given, 1934-35.

PHYSICAL EDUCATION FOR WOMEN

RUTH V. ATKINSON, M.A., Assistant Professor and Director of Physical Education for Women.

LUCILE R. GRUNEWALD, M.A., Assistant Director of Physical Education for Women.

GEORGIA B. JOHNSON, Ph.D., Instructor in Physical Education for Women.

HAZEL J. CUBBERLEY, B.S., Associate Supervisor of Physical Education for Women.

MARTHA B. DEANE, B.S., Associate Supervisor of Physical Education for Women.

EDITH R. HARSHBERGER, M.A., Assistant Supervisor of Physical Education for Women.

DIANA W. ANDERSON, M.A., Assistant Supervisor of Physical Education for Women.

M. EFFIE SHAMBAUGH, Ph.D., Assistant Supervisor of Physical Education for Women.

ETHEL S. BRUCE, Associate in Physical Education for Women.

EDITH I. HYDE, A.B., Associate in Physical Education for Women.

BERNECE H. HOOPER, B.S., 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.

LILLIAN R. TITCOMB, M.D., Physician for Women.

Physical Education 4 is prescribed for all first-year and second-year undergraduate women 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 her petition, the student will enroll in and regularly attend the required course in physical education.

Medical Examination.—New students and reëntering students must pass a medical examination upon admission. All students are given an examination each year. The medical examiner may assign students to individual physical education.

The Teachers College

Preparation for the Major.—Physical Education 50A, 50B, 62A, 62B, 63A, 63B, 65, 72A, 72B, 73A, 73B, and one of the following sequences: (1) Chemistry 2A, 2B or Physics 4A, 4B; Biology 1; Zoölogy 35; Physiology 1, Home Economics 32. (2) Zoölogy 1A, 1B, 106; Physiology 1, Home Economics 32.

The Major, leading to the Special Secondary Credential in Physical Education.—Physical Education 120, 140 (offered in Department of Physical Education for Men), 149, 151A, 151B, 180A, 180B, 181A, 181B, 182, 183, 190, 192, 199.

The Minor in Education.—Education 103, 170, Teaching 6–10 units, Physical Education 121A, 121B.

The Minor in Physical Education for Women.—Physical Education 4 (4 units required without repetition of courses), 44 and six units from the following (with the approval of the department); 104, 111A–111B, 114A, 114B, 180B.

The College of Letters and Science†

Physical Education 2, 4, 44, 104, 114A–114B, and 180B are included in the Letters and Science List of Courses.

LOWER DIVISION COURSES

2. Hygiene. (2) I, II. M F, 1.

Mrs. TITCOMB

†4. Prescribed Physical Education for Freshmen and Sophomores. (½) I, II.

Miss ATKINSON and the STAFF

Practice in dancing, team games, and individual sports. The following activities are offered: Natural dancing, folk dancing, character dancing, swimming, tennis, lacrosse, badminton, archery, volleyball, hockey, basketball, soccer. Students whose physical condition indicates the need of modified activity are assigned to individual physical education classes.

Sections meet twice weekly. Section assignments are made only by the department.

Physical Education 4 may be elected, for credit, by students of junior and senior standing.

44. Principles of Health Education. (2) I, II.

Miss HARSHBERGER

A study of personal and community health problems. Reading, investigation, and reports on current practices, conferences, discussions.

50A–50B. Principles of Teaching Tennis and Swimming. (1–1) Yr.

Mrs. MATTEEN

This course includes participation in the activities and the practical application of the technique of teaching to varied age groups.

62A–62B. Folk Dancing and Folk Festivals. (1–1) Yr. Miss SHAMBAUGH

Practice in folk dancing and a study of the folk festivals as to purpose, type, source of material, organization and administration.

63A–63B. Elementary Rhythms and Natural Dancing. (1–1) Yr. Miss DEANE

A. Rhythmic activities for the elementary school including dramatic games, free rhythms, singing games, simple folk dances and creative rhythms related to social study units.

B. Practice in elementary natural dancing, including free rhythms, simple dance forms, improvisation and dance creation. Rhythm studies with percussion instruments.

† 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.

† For full statement of the requirement of this course refer to page 39.

65. Music Analysis. (1) I, II.**Miss DEANE**

A study of music structure in its relation to dance form. Use of percussion instruments as accompaniment for the dance.

Not open to students who took 62A-62B prior to September, 1933.

72A-72B. Athletics. (1-1) Yr.**Miss HYDE**

A. Demonstration and practice in games for elementary schools and playgrounds.

B. Practice in basketball and field hockey with special emphasis on the development of fundamental skills. Selection and care of archery equipment and practice in the technique of shooting.

73A-73B. Athletics. (1-1) Yr.**Miss CUBBERLEY**

Prerequisite: Physical Education 72A-72B or the equivalent.

An intermediate course for the development of skills in the following team sports: field hockey, basketball, baseball; field ball, soccer and speedball; lacrosse, volleyball.

UPPER DIVISION COURSES**104. Club Activities and Campercraft. (2) Either half-year.****Miss HOOPER**

Analysis of the problems of the leader in various types of national club organizations (Girl Scouts, Girl Reserve, Camp-Fire Girls), with discussion of educational values, objectives, and program.

Study of organization of the summer and holiday camp activities and program making.

111A-111B. Physical Education in the Elementary School. (2-2) Yr.**Miss HOOPER, Miss HARSHBERGER**

Not open to students majoring in physical education.

Prerequisite: Education 100.

Organization of plays, games, and rhythmic activities. Health instruction as related to physical education.

114A-114B. Pageantry. (1-1) Yr.**Miss DEANE**

A. A comparative study of historic pageantry and the various modern forms. An analysis of these modern forms and an original manuscript from each student.

B. Organization and production of a pageant.

Course 114B may be taken without 114A.

120. Principles of Physical Education. (2) II.**Miss ATKINSON**

A study of the purposes, scope, and ideals of physical education. The objectives of physical education as related to the program of general education. General principles of teaching applicable to all activities.

121A-121B. Principles of Teaching Athletics. (2-2) Yr.**Miss CUBBERLEY**

Prerequisite: Physical Education 72A-72B, 73A-73B, or the equivalent.

Analysis of problems in teaching athletic activities including fundamental techniques, game forms and advanced team play with special reference to their use in seasonal, weekly, and daily lesson planning. Advanced practice is offered in all 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 Dancing. (2-2) Yr. Miss DEANE

Prerequisite: Physical Education 65 and satisfactory completion of lower division courses in dancing.

A survey of the rhythm program from kindergarten to the university, including problem analysis, selection and organization of material, and method of presentation in folk, clog and character, and natural dancing. Practice in intermediate natural dancing.

149. Kinesiology. (3) I. Miss GRUNEWALD

Prerequisite: Zoölogy 106 or Zoölogy 35.

A study of the joint and muscular mechanism of movements.

150A-150B. Principles of Teaching Gymnastics. (1-1) Yr. Miss ANDERSON

A survey of gymnastic material followed by practice and methods of teaching marching, gymnastics, apparatus and stunts.

Not open to students who took 50A-50B prior to September, 1932.

180A-180B. Administration of Physical Education and Community Recreation. (2-2) Yr. Miss ATKINSON

Prerequisite: senior standing.

A. 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.

B. Administration of Community Play and Recreation.—Designed to meet the needs of workers in playgrounds, apart from the schools. Discussion for workers in industrial plants and social service institutions.

Not open for full credit to students who took 175 or 180B prior to September, 1933.

181A-181B. Organization and Management of Physical Education Activities. (2-2) Yr. Miss CUBBERLEY, Miss DEANE

Prerequisite: Physical Education 120, 121A-121B.

A. A study of athletic programs in schools and colleges, including the analysis and selection of activities; measurement of achievement; evaluation of social and physical values of team games; selection and care of athletic equipment and construction and upkeep of fields. The organization and management of playdays, meets, and tournaments with actual experience in conducting the fall playday for the Los Angeles County Elementary Schools.

B. A study of the public performances in the school program—its purpose, types, sources of material, development, organization, and presentation. The use of the dance, music, lighting, costuming, etc.

182. Corrective Physical Education. (3) II. Miss GRUNEWALD

Prerequisite: Physical Education 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.

183. *Massage and Therapeutic Exercise.* (3) I. Miss GRUNEWALD
Prerequisite: *Physical Education 182.*
Study of massage and therapeutic exercise applied in the treatment of disturbances of the cardio-vascular, nervous, muscular, and digestive systems.
190. *Physiology of Exercise.* (3) I. Mrs. JOHNSON
Prerequisite: *Physiology 1.*
A study of the effects of physical education activity on the human organism. The physiological basis for program construction and the adaptation of activities.
- 192A-192B. *Administration of Health Education.* (3-3) Yr.
Prerequisite: *Physiology 1.* Miss HAESHERBERGER, Mrs. JOHNSON
A. *Health Instruction.*—This course deals with the educational and physiological basis for teaching health and the application of these principles to the practical problems in the elementary and secondary schools.
B. *Health Protection.*—A discussion of the child conservation movement. Physiological diagnosis of normal and pathological conditions with the procedure in securing the control or correction of these conditions.
Not open for full credit to students who took 180A or 192A-192B prior to September, 1933.
199. *Problems in Physical Education.* (2) II. Mrs. JOHNSON, Miss SHAMBAUGH
Prerequisite: senior standing and the consent of the instructor.
Reading, investigation, and reports on current problems in physical education. Conferences, discussions.

COURSE OFFERED IN THE
DEPARTMENT OF PHYSICAL EDUCATION FOR MEN

140. *Tests and Measurements in Physical Education.* (2) II. Mr. COZENS

PHYSICS

SAMUEL J. BARNETT, Ph.D., Professor of Physics.

VERN O. KNUDSEN, Ph.D., Professor of Physics, and Acting 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.

JOSEPH W. ELLIS, Ph.D., Associate Professor of Physics.

JOSEPH KAPLAN, Ph.D., Assistant Professor of Physics.

E. LEE KINSEY, Ph.D., Assistant Professor of Physics.

ARTHUR H. WARNER, Ph.D., Instructor in Physics

LEO P. DELSASSO, A.B., Associate 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 62.

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, 5, 9A–9B, or their equivalents. Recommended: a reading knowledge of German and French.

The Major.—Eleven units of upper division physics, consisting of 105, 107A, 108B, and 110A; and thirteen units chosen from other upper division courses in physics, Mathematics 119, 122A, 122B, 124, Chemistry 110, and (upon the recommendation of the Department of Astronomy and the approval of the Department of Physics) Astronomy 117A–117B. At least nine of these latter thirteen units shall be courses in the Department of Physics.

The Minor in Teachers College.—1A, 1B, 1C, 1D; one upper division course in physics.

Laboratory Fees.—The fee for each lower division laboratory course (1A, 1B, 1C, 1D, 2A, 2B) is \$5 per half-year. The fee for each of the following upper division laboratory courses: 107A, 107B, 108B, 113C, 114C, is \$12 per half-year. The laboratory fee for 108A is \$6. 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) three years of high school mathematics, including trigonometry, and the high school course in chemistry. Prerequisite for 2A–2B: (1) three years of high school mathematics, or (2) two years of high school mathematics and college algebra. Prerequisites for 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.

1A. General Physics: Mechanics of Solids. (3) I, II.

Mr. ADAMS, Mr. ELLIS, Mr. WARNER, Mr. DELSASSO
 Demonstration, W, 11; lecture and laboratory, four hours.
 Fee, \$5.

1B. General Physics: Mechanics of Liquids, and Heat. (3) I, II.

Mr. DODD, Mr. KAPLAN, Mr. KINSEY, Mr. DELSASSO
 Demonstration, M, 11; lecture and laboratory, four hours.
 Fee, \$5.

1C. General Physics: Electricity and Magnetism. (3) I.

Mr. WARNER, Mr. ELLIS, Mr. DELSASSO
 Prerequisite: 1A or the equivalent.
 Lectures, Tu Th, 9; laboratory, three hours. Fee, \$5.

1D. General Physics: Light and Sound. (3) II.

Mr. ELLIS, Mr. KINSEY, Mr. WARNER, Mr. DELSASSO
 Lectures, Tu Th, 9; laboratory, three hours. Fee, \$5.

1AD. General Physics: Mechanics of Solids and Fluids, Wave Motion, Sound, Light. (6) I.

Mr. ADAMS
 Prerequisite: Mathematics 3B or the equivalent.
 Demonstration, one hour; lecture and laboratory, eight hours.
 Fee, \$10.

1BC. General Physics: Heat, Electricity, Magnetism. (6) II. Mr. ADAMS

Prerequisite: Physics 1AD, Mathematics 4A, or the equivalent.
 Demonstration, one hour; lecture and laboratory, eight hours.
 Fee, \$10.

2A-2B. General Physics. (4-4) Yr. Mr. EDWARDS, Mr. KAPLAN, Mr. KINSEY

Demonstration, Th, 11; lecture, three hours; laboratory, two hours.
 Fee, \$5 per half-year.

Mechanics, sound, heat, light, electricity. Prescribed for pre-medical students.

4A-4B. General Physics. (3-3) Yr.

Mr. BARNETT

Lectures, M W F, 9.

A descriptive course, without laboratory work, fully illustrated by experiments. Prerequisite: elementary algebra and plane geometry.

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. (2) I. Mr. WARNER, Mr. DELSASSO

Prerequisite: Physics 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. KNUDSEN, Mr. DELSASSO

Prerequisite: Physics 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) II. Mr. DODD

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. KAPLAN

Fee, \$12.

Lectures, demonstrations and laboratory work dealing with interference, diffraction, polarization, and their applications.

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. KINSEY

113C. Spectroscopy Laboratory. (1) II. Mr. ELLIS

Fee, \$12.

This course may be taken only concurrently with or subsequently to course 113.

114. Mechanics of Wave Motion and Sound. (3) II. Mr. KNUDSEN

Lectures and demonstrations on the fundamental theory of wave motion and sound.

114C. Mechanics of Wave Motion and Sound Laboratory. (1) II.

Mr. KNUDSEN, Mr. DELSASSO

Prerequisite: Physics 107B and 114. 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.

GRADUATE COURSES

Courses 210A-210B and 220A-220B are required of all candidates for the Master's degree with major in physics.

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.

214. Acoustics. (2) I.**Mr. KNUDSEN**

Molecular phenomena associated with the dispersion and absorption of sound in gases, and recent developments in physical, physiological, and architectural acoustics.

220A-220B. Introduction to Quantum Theory. (3-3) Yr.**Mr. KINSEY, Mr. KAPLAN, Mr. ELLIS**

Quantum theory introduced from the standpoint of advanced dynamics and statistical mechanics with selected applications.

290A-290B. Selected Problems in Physics. (2-2) Yr.**Mr. KNUDSEN in charge****COURSE IN ANOTHER DEPARTMENT**

Astronomy 117A-117B. Astrophysics and Stellar Astronomy.

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.
 ORDEAN ROCKEY, B.Litt., Assistant Professor of Political Science.
 CHARLES H. TITUS, Ph.D., Assistant Professor of Political Science.
²J. A. C. GRANT, Ph.D., Assistant Professor of Political Science.
 H. ARTHUR STEINER, Ph.D., Assistant Professor of Political Science.
 ERIC ARMOUR BEECROFT, Ph.D., Instructor in Political Science.

FRED ARTHUR SCHUCKMAN, M.A., Lecturer in Political Science.
 RALPH A. NOREM, M.A., Lecturer in Political Science.
 VALDIMER O. KEY, JR., M.A., Lecturer 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 62.

Preparation for the Major.—Political Science 3A-3B, or its equivalent, and one of the following: Political Science 51A-51B, Political Science 52, Political Science 74, 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 six of which may be taken in courses approved by the department in history, economics, philosophy, psychology, or geography. Major programs must be approved by the departmental adviser.

The Minor in Teachers College.—The preparation for the major, and in addition six units of elective credit in upper division political science.

LOWER DIVISION COURSES

3A-3B. American Government. (3-3) Beginning either half-year.

MR. TITUS, MR. GRANT, MR. ROCKEY, MR. STEINER,
 MR. BEECROFT, MR. NOREM, MR. KEY

(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 the 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 2 units for Political Science 3A.

² In residence second half-year only, 1934-35.

51A-51B. Introduction to European Governments. (3-3) Yr.**Mr. GRAHAM, Mr. STEINER, Mr. BEECROFT****Prerequisite:** sophomore standing and Political Science 3A-3B.

A comparative study of European governments; constitutional development; political institutions; political parties and elections; contemporary politics.

51E. Introduction to European Governments. (2) I.**Mr. STEINER, Mr. BEECROFT**

The government and politics of Russia, Italy, and Spain.

Not to be offered after February, 1935.

52. American Political Parties. (3) I, II.**Mr. NOREM, Mr. BEECROFT****Prerequisite:** sophomore standing and Political Science 3A-3B.

American party history; federal and state party organizations; the electorate; nominations and elections; the direct primary; party control of legislature; the President as party leader; theory of American party divisions; American public opinion; the rise of blocs.

74. American State and Local Government. (3) I, II.**Mr. KEY****Prerequisite:** sophomore standing and Political Science 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 51A-51B, Political Science 52, Political Science 74, Economics 1A-1B, Geography 1A-1B, History 4A-4B, History 5A-5B, or History 8A-8B.

110. Principles of Political Science. (3) I, II.**Mr. ROCKEY, Mr. TITUS**

A survey of fundamental political concepts including the legal and theoretic bases of the modern state, the various forms of government, and an analysis of the functions of government.

113A-113B. American Political Theories. (2-2) Yr.**Mr. ROCKEY**

A comparative study of the characteristic types of American political theories of the past, together with a consideration of recent tendencies in American political thought.

114. Political Statistics. (2) I, II.**Mr. TITUS**

The application of statistical method to certain phases of political science, including the collection, analysis, summarization, evaluation, and presentation of measureable phenomena.

118. The Nature of the State. (3) II.**Mr. TITUS****Prerequisite:** permission of the instructor.

The nature of the modern state and its differences from the state of the eighteenth and nineteenth centuries. Both monistic and pluralistic approaches are included in this study.

125. Foreign Relations of the United States. (3) I. Mr. GRAHAM

A study of the agencies which formulate and administer American foreign policies; the Department of State; the American Foreign Service. An analysis of basic factors and fundamental principles in American foreign relations.

127. International Relations. (3) I, II. Mr. GRAHAM, Mr. STEINER

The modern state system and the society of nations; the diplomatic and consular services; the origin and development of the instrumentalities of international government, including the Permanent Court of International Justice and the League of Nations; current political and economic problems of international organization.

133. Introduction to International Law. (3) II. 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. NOREM

Expansion of European, American, and Japanese interests in the Pacific. Clash of national policies and resultant problems. Political and unofficial efforts toward international understanding and cooperation.

138. International Relations of the Far East. (3) I. Mr. NOREM

A survey of the relations of China and Japan with the western world and with each other, with an analysis of their conflicting interests.

153. The Government of the British Empire. (2) I. 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.

157A-157B. Constitutional Law. (3-3) Yr. Mr. HAINES

Prerequisite: senior standing or the permission of the instructor.

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.

162. Municipal Government. (3) I, II.

Mr. STEWART, Mr. KEY

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. STEWART

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.

165. 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.

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. STEWART

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.

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: health and welfare; conservation of natural resources; public works; education; finance; protection to persons and property; and other topics.

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.

For the year 1934-35 the work will be done primarily in the four following fields:

Section 1. Problems in Public Law.

Mr. GRANT

Section 2. Problems in International Relations.

Mr. STEINER

Section 3. Problems in Political Theory.

Mr. ROCKEY, Mr. TITUS

Section 4. Problems in Municipal Government.

Mr. STEWART

GRADUATE COURSES

252A-252B. Seminar in Public Law. (2-2) Yr.

Mr. HAINES

Prerequisite: Either Political Science 157A-157B, or Jurisprudence 117 and 156.

253A-253B. Seminar in International Relations. (2-2) Yr.

Mr. GRAHAM

Prerequisites: Political Science 125, and 127 or 133; or 136 and 138.

- 254A-254B. Seminar in Public Administration. (2-2) Yr. Mr. STEWART
Prerequisites: Political Science 162 and 163, or 181 and 183, or 156 and 158.
- 275A-275B. Special Study and Research. (2-4 units each half-year).
Mr. HAINES in charge

AMERICAN INSTITUTIONS

101. American Institutions. (2) I, II. Mr. ROCKEY, Mr. TITUS
The fundamental nature of the American constitutional system and of the ideals upon which it is based.
This course, or the Examination in American Institutions (see page 40), is required of all students during the junior or senior year with the following exceptions:
- (1) Students who complete Political Science 3A-3B;
 - (2) Political Science majors;
 - (3) History majors who complete History 8A-8B;
 - (4) History majors or minors who complete History 171A-171B.
- American Institutions 101 may not be applied toward the political science major.
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.

JURISPRUDENCE

LOWER DIVISION COURSE

- 18A-18B. Commercial Law. (3-3) Yr. Mr. SCHUCKMAN
Definitions and elementary principles of law; essentials of the law of contracts, agency, sales, partnership, negotiable instruments and private corporations.

UPPER DIVISION COURSES

117. Elements of Law. (3) II. Mr. HAINES
Prerequisite: junior standing.
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.
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.
158. Government and Business. (3) II. 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.

PSYCHOLOGY

———, Professor of Psychology.

KATE GORDON, Ph.D., Professor of Psychology.

GRACE M. FERNALD, Ph.D., Associate Professor of Psychology.

S. CAROLYN FISHER, Ph.D., Assistant Professor of Psychology.

ELLEN B. SULLIVAN, Ph.D., Assistant Professor of Psychology.

LAWRENCE GAHAGAN, Ph.D., Assistant Professor of Psychology.

JOSEPH A. GENDERELLI, Ph.D., Assistant Professor of Psychology.

MASON N. CROOK, Ph.D., Instructor in Psychology.

FRANK C. DAVIS, Ph.D., Instructor in Psychology.

HOWARD C. GILHOUSEN, Ph.D., Instructor in Psychology

Letters and Science List.—All undergraduate courses in psychology except 119 are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

Preparation for the Major.—Required: Psychology 1A and 1B, and Zoölogy 1A and either Zoölogy 1B or Physiology 1. Recommended: French, German, chemistry, physics.

The Major.—Required: Psychology 106A, 107A, and 12 other units in upper division courses in psychology. The remaining 6 units may be chosen from other upper division courses in psychology, or from the following, subject to the approval of the department: any upper division courses in philosophy; Zoölogy 103; Education 103; Economics 185A–185B.

The Minor in Teachers College.—1A–1B, and 6 units of upper division work, including 110 or 106A or 106B.

Laboratory Fees.—The fee for 106A, 106B, 107A, 107B, and 199 is \$3; for course 150, \$5.

LOWER DIVISION COURSES

✓ 1A–1B. General Psychology. (3–3) Beginning either half-year.

Miss GORDON, Miss FISHER, and STAFF

Lectures, either Tu Th, 10 or Tu Th, 2 (for those beginning in September); Tu Th, 1 (for those beginning in February); one hour quiz, and one hour demonstration.

Course 1A–1B is prerequisite to all courses in psychology. It is not open to freshmen, but is open to sophomores without prerequisite.

The year sequence 1A–1B is required of all Teachers College students in their sophomore year.

An account of the development of psychology; will and personality; intelligence, its nature and measurement; feeling, emotion, attitude; human and animal learning; basic activities, instincts, skills; nervous structures and functions; sense organs and functions; associations; perception, illusion; attention; imagination, dreams; memory and forgetting; current psychological doctrines. The second half-year is devoted to the more detailed treatment of special topics.

Lectures, readings, demonstrations, and recitations.

2. Applied Psychology. (2) I, II.

Mr. CROOK

Prerequisite; Psychology 1A.

A discussion of psychological principles bearing on problems of daily life, and on legal, medical, and industrial problems.

Lectures, reading, demonstrations.

UPPER DIVISION COURSES

Psychology 1A-1B is prerequisite to all upper division courses.

106A-106B. Experimental Psychology. (3-3)

Mr. DAVIS

106A, either half-year; 106B, second half-year only. Fee, \$3 per half-year.

The methods and typical results in the experimental investigation of movement, fatigue, habit, memory, association, attention, perception, etc.

One hour lecture or conference, four hours laboratory, outside reading.

107A-107B. Psychological Measurement and the Use of Statistics. (3-3) Beginning either half-year. Fee, \$3 per half-year.

Miss SULLIVAN

First half-year: Statistical methods and their use in relation to psychological problems, including illustrations and problems from the field of education and experimental psychology and group mental tests.

Second half-year: A study of the standard intelligence tests, and their applications. Two lectures or conferences and three hours of clinical work in the use of various tests.

Lectures, clinical demonstrations, laboratory exercises, outside reading and conferences.

*108. Physiological Psychology. (3) I.

The physiological correlates of mental conditions, with special reference to the sensory, motor, and association processes of the cerebrum.

Lectures, reading, demonstrations, and discussions, Physiology 1, Zoölogy 1A, or Biology 1 is recommended as preparation, but is not required.

110. Experimental Educational Psychology. (3) I, II.

Mr. GINGERELLI

Discussion of special topics pertaining to fundamental educational problems and their applications to educational procedures. Laboratory and clinical or teaching experiments pertaining to the problems of learning, memory, etc., in children and adults.

Two hours lecture; three hours laboratory; outside reading.

112. Child Psychology. (3) I, II.

Miss FERNALD

The psychology of the child, with special reference to the problem of mental development.

119. Psychology of Special School Subjects. (3) I, II.

Miss FERNALD

An analysis of the psychological problems involved in learning to write, read, solve problems in mathematics, grasp the meaning of history, geography, natural science, and other school subjects.

Lectures, assigned reading, and conferences.

* Not to be given, 1934-35.

124. History of Psychology. (2) I, II. Miss GORDON, Mr. GENDERELLI
Prerequisite: six upper division units in psychology.
Psychology in ancient, medieval, and modern times, with special reference to developments in the nineteenth and twentieth centuries.
Lectures, assigned readings, and conferences.
132. Contemporary Psychology. (2) I, II. Mr. GAHAGAN
Prerequisite: six upper division units in psychology.
A study of present day psychology in theory, backgrounds, and results.
Lectures, assigned readings, and conferences.
133. Advanced General Psychology. (2) I, II. Miss GORDON
Prerequisite: six upper division units in psychology.
Criticism of the major concepts of psychology, such as attention, imagination, memory, will.
Lectures, assigned readings, and conferences.
- 145A-145B. Social Psychology. (2-2) Yr. Miss FISHER
First half-year: The instinctive and the higher mental processes that are the basis of social life; the behavior of men in groups.
Second half-year: Adjustment and maladjustment. Race, intelligence, and psychic stability as factors in national unity.
Lectures, reading, discussions, and clinical demonstrations.
150. Animal Psychology. (3) I. Mr. GILHOUSEN
Prerequisite: Biology 1 or the equivalent. Fee, \$5.
The mental processes of animals, and their relations to human mental processes. Each student will carry out a number of observations and experiments on animals illustrating the general facts of animal behavior in different phyla.
Lectures, reading, and laboratory exercises.
- 166A-166B. Clinical Psychology. (2-2) Yr. Miss FERNALD
One lecture and three hours of clinical work weekly.
A study of the problems connected with the atypical child, including the discussion of mental and physical deficiencies, abnormalities, genius, and emotional instability. Special emphasis is placed on the methods by which such children may be developed to a maximum of efficiency. Practice in mental testing in the clinics, juvenile courts, and schools is given.
Lectures, reading, clinical demonstrations, testing, and training of special cases.
168. Abnormal Psychology. (3) II.
The facts of abnormality; in movement, speech, and sensation; delusions, disorders of attention, memory, and association; the relation of psychology to psychiatry and other subjects dealing with mental abnormalities.
Lectures, reading, demonstrations.

199. Special Problems in Psychology. (3) I, II. — and the STAFF

Prerequisite: Psychology 106A, 107A, and one of the following courses: 108, 110, 112, 145A, 150, 166A, or 168. Special permission to register for this course is required.

In this course students will undertake the special study of problems in connection with their major interests, in some field of psychology—animal, clinical, experimental, physiological, statistical, social—and under the direction of the special instructor in whose field the interest lies.

GRADUATE COURSES

254A-254B. Seminar in Psychology. (3-3) Yr. Miss GORDON in charge

273A-273B. Psychological Research. (3-3) Yr. — in charge

SPANISH

CÉSAR BARJA, Doctor en Derecho, Professor of Spanish.

†S. L. MILLARD ROSENBERG, Ph.D., Professor of Spanish.

LAURENCE DEANE BAILIFF, Ph.D., Associate Professor of Spanish.

MANUEL PEDRO GONZÁLEZ, Ph.D., Assistant Professor of Spanish.

ERNEST H. TEMPLIN, Ph.D., Assistant 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.

MARIA L. DE LOWTHER, M.A., Associate in Spanish.

SYLVIA N. RYAN, M.A., Associate in Spanish.

FRANCISCO MONTAU, A.B., Associate in Spanish.

CONSUELO PASTOR, A.B., Associate in Spanish.

RALPH J. MICHELS, A.B., Teaching Assistant in Spanish.

Letters and Science List.—All undergraduate courses in Spanish are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

Preparation for the Major.—(1) Spanish A, B, C, D, and 50A–50B or 50AB or other 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, or Latin A and B, or the equivalent, is required. 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.

The Major.—Required: Spanish 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 101, 104, 105, 108, 109, and 110.

NOTE.—Students who have not completed course 50A–50B or 50AB in the lower division must take 101A–101B.

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, and Greek language and literature; (4) the history of philosophy.

The Minor in Teachers College.—A, B, C, D, or the equivalent; 101A, 101B.

† Deceased.

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.

Mr. ZEITLIN in charge

I, M Tu W Th F, 8, 9, 10, 11, 12, 2; II, M Tu W Th F, 8, 9, 10, 11.

This course corresponds to the first two years of high school Spanish. It may not be taken for credit by students who have credit for two years of high school Spanish.

B. Elementary Spanish. Continuation of A. (5) I, II. Mr. ZEITLIN in charge

M Tu W Th F, 8, 9, 10, 11, 12, 2.

Prerequisite: course A or two years of high school Spanish or Spanish SA in a summer session with satisfactory grade.

Not open for credit to students who have credit for three years of high school Spanish.

C. Intermediate Spanish. Continuation of B. (3) I, II. Mr. ZEITLIN in charge

M W F, 8, 9, 12, 2.

Prerequisite: course B or three years of high school Spanish or the equivalent.

Not open for credit to students who have credit for four years of high school Spanish.

D. Intermediate Spanish. Continuation of C. (3) I, II. Mr. ZEITLIN in charge

M W F, 8, 9, 10, 11.

Prerequisite: course C or four years of high school Spanish or the equivalent.

CD. Intermediate Spanish. Continuation of B. (5) I, II.

Miss RYAN

M Tu W Th F, 12.

Prerequisite: course B or three years of high school Spanish or the equivalent.

Not open for full credit to students who have credit for four years of high school Spanish.

*19. Dramatic Interpretation in Spanish. (2) I.

Mr. BAILIFF

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.

50A-50B. Advanced Spanish. (3-3) Yr.

Miss KRAUSE, Mrs. LOWTHER

M W F, 9, 11.

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.

* Not to be given 1934-35; probably to be given, 1935-36.

50AB. Advanced Spanish. (5) II.

Miss RYAN

M Tu W Th F, 10.

Prerequisite: same as for course 50A-50B.

UPPER DIVISION COURSES

Prerequisite: sixteen units of lower division Spanish or the equivalent (except for courses 140A-140B).

Major students who enter the upper division without course 50A-50B or 50AB must take 101A-101B.

JUNIOR COURSES

101A-101B. Oral and Written Composition. (3-3) Yr.

M W F, 8, 10, 12.

Miss KRAUSE, Mr. TEMPLIN, Mr. ZEITLIN

102A-102B. Survey of Spanish Literature to 1900. (3-3) Yr.

M W F, 9, 11, 2.

Mr. ZEITLIN, Mr. BAILIFF, Mr. TEMPLIN

Required of major students in Spanish.

JUNIOR AND SENIOR COURSES

104A-104B. Survey of Spanish American Literature. (2-2) Yr.

Tu Th, 10.

Mr. GONZÁLEZ

A study of the principal authors of Spanish America.

Lectures and reading.

105C-105D. Readings in Classical Literature. (2-2) Yr.

Mr. ZEITLIN

M F, 1.

Students planning to take graduate work in Spanish are expected to take this course or offer an equivalent.

108A-108B. Spanish Literature from 1850-1898. (2-2) Yr.

Mr. BAILIFF

Tu Th, 9.

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

M W, 9.

A study of the Neo-classic and Romantic movements.

140A-140B. Spanish Civilization. (2-2) Yr.

Mr. BARJA

Tu Th, 11.

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.

RESTRICTED TO SENIORS

110A-110B. Contemporary Literature. (3-3) Yr.

Mr. BARJA

M W F, 10.

Reading and discussion of contemporary writers.

* Not to be given 1934-35; probably to be given, 1935-36.

116A-116B. Advanced Composition. (2-2) Yr.

Mr. CORBATÓ

Tu Th, 10, 12.

Required of Spanish majors. Not open to students who took Spanish

106A-106B prior to September, 1934.

PROFESSIONAL COURSE

*390. The Teaching of Spanish. (2) Either half-year. —

Tu Th, 1.

Prerequisite: Spanish 102A-102B.

Not open to students who took Spanish 190 prior to September, 1934.

GRADUATE COURSES

205A-205B. Prose Masterpieces of the Sixteenth and Seventeenth Centuries.

(3-3) Yr.

Mr. BARJA

Tu Th, 2:30-4:00.

*209A-209B. The Drama of the Golden Age. (3-3) Yr. —

M W, 3-4:30.

212A-212B. Historical Grammar and Old Spanish Readings. (3-3) Yr.

M W, 2:30-4:00.

Mr. BARJA in charge

* Not to be given 1934-35; probably to be given 1935-36.

SUBJECT A: ENGLISH COMPOSITION

FRANK HERMANN REINSCH, Ph.D., Associate Professor of German, Chairman,
Committee on Subject A.

THOMAS E. THOMPSON, A.B., Associate in Subject A.

SELENA P. INGRAM, M.A., Associate in Subject A.

Fee.—A fee of \$10 is required for the course in Subject A.

Subject A. No credit. Either half-year.

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 his failure, the course in Subject A. Sections are limited to thirty students. For further details, see page 37.

Training in correct writing, including drill in sentence and paragraph construction, diction, punctuation, grammar, and spelling. Weekly compositions and written tests on the text.

TRAINING DEPARTMENT

**STAFF IN UNIVERSITY OF CALIFORNIA AT LOS ANGELES
TRAINING DEPARTMENT**

- CHARLES WILKIN WADDELL, Ph.D., Professor of Education and Director of the Training Department.
- 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.
- JESSE A. BOND, M.A., Supervisor of Training, Junior High School.
- FRANCES GIDDINGS, M.A., Instructor in Kindergarten-Primary Education and Supervisor of Training, Kindergarten-Primary.
- BARBARA GREENWOOD, Associate in Kindergarten-Primary Education and Supervisor of Nursery School Training.
- LULU M. STEDMAN, Ed.B., Supervisor of Special Education.
- HELEN B. KELLER, Ed.B., Supervisor of Training, Elementary.
- BERTHA E. WELLS, Ed.B., Supervisor of Training, Elementary.
- NATALIE WHITE, M.A., Supervisor of Training, Art.
- FLORENCE MARY HALLAM, A.B., Supervisor of Training, Home Economics.
- HELEN CHUTE DILL, A.B., Supervisor of Training, Music.
- LAVERNA L. LOSSING, M.A., Supervisor of Training, Music.
- ELIZABETH BRUENE, M.A., 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.
- EDITH HOPE RINGER, Training Teacher, Second Grade.
- CLAYTON BURROW, M.S., Training Teacher, First Grade.
- JANE BERNHARDT, M.A., Training Teacher, Kindergarten.
- MARGARET DAWSON, Ed.B., Assistant Training Teacher, Kindergarten.
- THELMA PIERCE, Ed.B., Assistant Training Teacher, Nursery 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 and Supervisor of Training, Art.

- EVA M. ALLEN, Associate in Commercial Practice and Supervisor of Training, Commerce.
- ESTELLA B. PLOUGH, Associate in Commercial Practice and Supervisor of Training, Commerce.
- FOSS R. BROCKWAY, Associate in Mechanic Arts and Supervisor of Training, Mechanic Arts.
- DIANA ANDERSON, M.A., Assistant Supervisor of Physical Education for Women and Supervisor of Training, Physical Education.
- PAUL FRAMPTON, M.A., Associate Supervisor of Physical Education for Men and Supervisor of Training, Physical Education.

Staff in Sawtelle Boulevard Training School

- NORA STERRY, M.A., Principal.
- GENEVIEVE ANDERSON, Training Teacher, Kindergarten.
- , Training Teacher, Little B-1.
- , Training Teacher, First Grade.
- ALICE HILL ARMSTRONG, Training Teacher, First Grade.
- JOSEPHINE O'HAGAN, B.S. in Ed., Training Teacher, First Grade.
- , Training Teacher, Second Grade.
- RUTH C. HILLERBY, B.S. in Ed., Training Teacher, Second Grade.
- ESTELLA THOMPSON, Training Teacher, Third Grade.
- ALMA LOUISE EGERER, Training Teacher, Third Grade.
- GERTRUDE ROE MARTIN, B.S. in Ed., Training Teacher, Third Grade.
- EUNICE KLECKER, Ed.B., Training Teacher, Fourth Grade.
- GERTRUDE M. ALLISON, Training Teacher, Fourth Grade.
- EVELYN KIDWELL, A.B., Training Teacher, Fourth Grade.
- , Training Teacher, Fifth Grade.
- HELEN BARBER, Training Teacher, Fifth Grade.
- SIBYL WHITWORTH, Training Teacher, Sixth Grade.
- RUTH BAUGH MYERS, Training Teacher, Sixth Grade.
- HELEN BARBER, Training Teacher, Development Room.

Staff in Sawtelle Boulevard Observation School

- NORA STERRY, M.A., Principal.
- GWENDOLYN DEFOREST, B.S., Kindergarten.
- RUTH V. ANGELO, M.A., First Grade.
- EDNA M. EVENSON, Second Grade.
- LAVON WHITEHOUSE, Third Grade.
- MILDRED U. FRAZEE, B.E., Fourth Grade.
- MARCIA BONSALE, B.S. in Ed., Fifth Grade.

SUPERVISED TEACHING†

KINDERGARTEN, ELEMENTARY, SPECIAL SECONDARY

Prerequisite:

1. Senior standing.
2. Satisfactory scholarship.†
3. Education courses as specified by the respective departments.
4. Approval by the University Physician before each assignment.

Courses:*

K190A-K190B.	Kindergarten-Primary Teaching. (4-4)
E190A-E190B.	General Elementary Teaching. (4-4)
J191A-J191B.	General Junior High Teaching. (4-4)
A190.	Art Teaching, Elementary. (3)
A191.	Art Teaching, Junior High. (3)
A192.	Art Teaching, Secondary. (4)
C192A-C192B.	Commerce Teaching, Secondary. (5-5)
H191A-H191B.	Home Economics Teaching, Junior High. (2-2)
H192A-H192B.	Home Economics Teaching, Secondary. (2-2)
MA191.	Mechanic Arts Teaching, Junior High. (3)
MA192A-MA192B.	Mechanic Arts Teaching, Secondary. (3-3)
M190A-M190B.	Music Teaching, Elementary. (3-3)
M192A-M192B.	Music Teaching, Secondary. (3-3)
P190A-P190B.	Physical Education Teaching, Elementary. (3-3)
P191.	Physical Education Teaching, Junior High. (3)
P192A-P192B.	Physical Education Teaching, Secondary. (3-3)
**(-) 195.	Elective Teaching. (1 to 5 units)

GENERAL SECONDARY

Prerequisite:

1. Graduate standing.
2. A grade point average of 1.5 in junior and senior years.
3. Twelve units in Education, including Education 170.
4. Approval by the University Physician.

† For dates of application without late application fee, see University calendar.

† A "O" average for all work done at the University of California at Los Angeles; a "C" average for all courses in education; and a "O" average for all work in the major (when this is other than education).

* All courses offered either half-year.

** For students seeking a second type of credential after having completed the requirements of one. To be taken normally without degree credit.

Courses:

320A-320B. Supervised Teaching. General Secondary Field. (2-4) Yr.

Mr. WADDELL, Mr. BOND

(This year sequence is required of all candidates for the certificate of completion leading to the general secondary credential.)

320A. (2 units.) An intensive study of principles and problems of teaching in the secondary school made effective through observation of high school classes. This course is prerequisite to 320B and will be so conducted as to prepare for and lead to definite placement for actual student teaching in course 320B.

320B. (4 units.) Student teaching in the secondary school under close supervision. This course is accompanied by a required conference each week with the general supervisor of student teaching.

323. (2 units.) A short course in secondary teaching designed primarily for candidates who have had public school or equivalent experience or who have completed the training for some other type of teaching credential.

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) Beverly Hills and University High Schools of Los Angeles City; (4) other high schools of Los Angeles and Santa Monica, as requirements demand; (5) elementary schools in Beverly Hills.

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.

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