

UNIVERSITY OF CALIFORNIA

***General  
Catalogue***

***Primarily for Students in the  
DEPARTMENTS AT LOS ANGELES***

***Fall and Spring Semesters  
1950-1951***

**AUGUST 10, 1950**

***For Sale by the***

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**BULLETIN**

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## GENERAL INFORMATION

Letters of inquiry concerning the University of California, Los Angeles, should be addressed to the *Registrar, University of California, 405 Hilgard Avenue, Los Angeles 24, California.*

Letters of inquiry concerning the University in general should be addressed to the *Registrar, University of California, Berkeley 4, California.*

For the list of bulletins of information concerning the several colleges and departments, see page 3 of the cover of this bulletin.

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



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



*All announcements herein are subject to revision. Changes in the list of Officers of Administration and Instruction may be made subsequent to the date of publication, August 10, 1950.*

UNIVERSITY OF CALIFORNIA

# General Catalogue

*General Information*

*Announcement of Graduate and  
Undergraduate Courses of Instruction*

FALL AND SPRING SEMESTERS

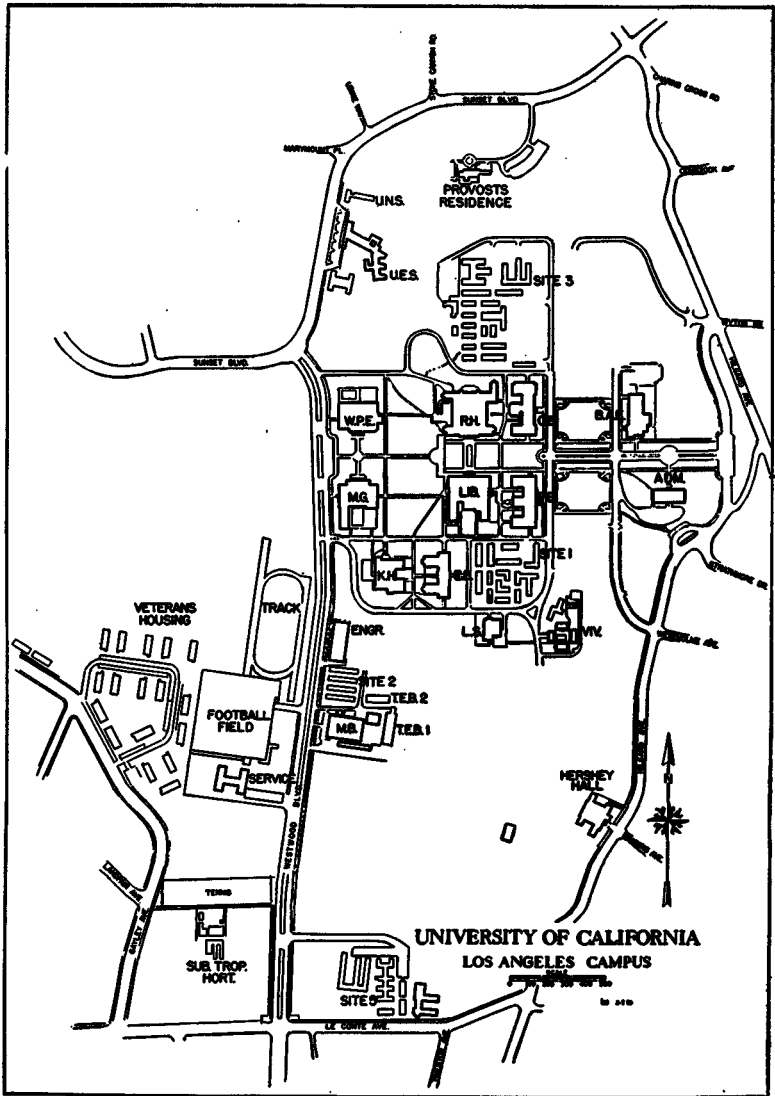
**1950-1951**

AUGUST 10, 1950

*Primarily for Students in the*  
DEPARTMENTS AT LOS ANGELES

405 HILGARD AVENUE • LOS ANGELES

*Published by the*  
UNIVERSITY OF CALIFORNIA PRESS • BERKELEY AND LOS ANGELES



## UNIVERSITY BUILDINGS

<b>Adm</b>	Administration Building	<b>MG</b>	Men's Gymnasium
<b>BAE</b>	Business Administration- Economics Building	<b>PB</b>	Physics-Biology Building
<b>CB</b>	Chemistry Building	<b>RH</b>	Josiah Royce Hall
<b>EB</b>	Education Building	<b>TEB1 } TEB2 }</b>	Temporary Engineering Buildings
<b>Engr</b>	Engineering Building	<b>UES</b>	University Elementary School
<b>KH</b>	Kerckhoff Hall	<b>UNS</b>	University Nursery School
<b>Lib</b>	Library	<b>Viv</b>	Vivarium
<b>LS</b>	Life Science Building	<b>WPE</b>	Women's Physical Education Building
<b>MB</b>	Mechanics Building		

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## CALENDAR, 1950-1951

### 1950

### FALL SEMESTER

Aug. 1, Tuesday	Applications for admission to graduate standing in the fall semester, with complete credentials, must be filed on or before this date.
*Aug. 15, Tuesday	Applications for admission to undergraduate standing in the fall semester, with complete credentials, must be filed on or before this date.
Aug. 23, Wednesday	Last day to file applications for readmission by students returning after an absence.
Sept. 5, Tuesday Sept. 9, Saturday	} Counseling of students.
Sept. 6, Wednesday	} Examination in Subject A. Examination in English for foreign students.
Sept. 11, Monday	Fall semester begins.
Sept. 12, Tuesday	Special examination in Subject A.
Sept. 13, Wednesday	Registration of all students who did not register by mail. For details, see <i>Registration Circular</i> and official bulletin boards.
Sept. 18, Monday	Instruction begins.
Sept. 21, Thursday	Last day to file applications for graduate reading examinations in modern foreign languages.
Sept. 26, Tuesday	Last day to file registration books or to change study lists <i>without fee</i> .
Oct. 2, Monday	Last day to file applications for advancement to candidacy for the master's degree to be conferred in January, 1951.
Oct. 3, Tuesday	Last day to add courses to study lists.
Oct. 3, Tuesday	Failure to file registration book by this date will result in lapse of status as a student in the University.
Oct. 7, Saturday	Graduate reading examinations in modern foreign languages for candidates for master's or doctor's degrees.
Oct. 21, Saturday	Last day to drop courses from study lists without penalty of grade F (failure).
Oct. 21, Saturday	Last day to file <i>without fee</i> notice of candidacy for the bachelor's degree to be conferred in January, 1951.
Nov. 11, Saturday	End of mid-term period.
Nov. 24, Friday	Last day to file in final form with the committee in charge theses for the doctor's degree to be conferred in January, 1951.
Nov. 30, Thursday	Thanksgiving Day—a holiday.
Dec. 9, Saturday	Last day to file notice of candidacy for the bachelor's degree to be conferred in January, 1951.
Dec. 18, Monday Jan. 1, Monday	} Christmas recess.

### 1951

Jan. 2, Tuesday	Classes resume.
Jan. 2, Tuesday	Last day to file in final form with the committee in charge theses for the master's degree to be conferred in January, 1951.
Jan. 15, Monday Jan. 25, Thursday	} Final examinations, fall semester.
Jan. 25, Thursday	Fall semester ends.

\* May 6, Saturday, qualifying examinations for admission to the College of Engineering in the fall semester, 1950.



# CALENDAR, 1950-1951

**1951**

## SPRING SEMESTER

*Jan. 2, Tuesday	Applications for admission to graduate standing in the spring semester, with complete credentials, must be filed on or before this date.
Jan. 15, Monday	Application for admission to undergraduate standing in the spring semester, with complete credentials, must be filed on or before this date.
Jan. 17, Wednesday	Last day to file applications for readmission by students returning after an absence.
Jan. 29, Monday	} Counseling of students.
Feb. 2, Friday	
Jan. 31, Wednesday	} Examination in Subject A. Examination in English for foreign students.
Feb. 5, Monday	
Feb. 6, Tuesday	Spring semester begins.
Feb. 7, Wednesday	Special examination in Subject A.
Feb. 12, Monday	Registration of all students who did not register by mail. For details, see <i>Registration Circular</i> and official bulletin boards.
Feb. 15, Thursday	Instruction begins.
Feb. 15, Thursday	Last day to file applications for Alumni Association scholarships.
Feb. 20, Tuesday	Last day to file applications for graduate reading examinations in modern foreign languages.
Feb. 20, Tuesday	Last day to file registration books or to change study lists <i>without fee</i> .
Feb. 22, Thursday	Last day to file applications for fellowships and graduate scholarships tenable at Los Angeles for 1951-1952.
Feb. 26, Monday	Washington's Birthday—a holiday.
Feb. 27, Tuesday	Last day to file applications for advancement to candidacy for the master's degree to be conferred in June or in August, 1951.
Feb. 27, Tuesday	Last day to add courses to study lists.
Mar. 1, Thursday	Failure to file registration book by this date will result in lapse of status as a student in the University.
Mar. 3, Saturday	Last day to file applications for undergraduate scholarships for the academic year 1951-1952.
Mar. 17, Saturday	Graduate reading examinations in modern foreign languages for candidates for master's or doctor's degrees.
Mar. 24, Saturday	Last day to drop courses from study lists without penalty of grade F (failure).
April 7, Saturday	Last day to file <i>without fee</i> notice of candidacy for the bachelor's degree to be conferred in June, 1951.
April 13, Friday	End of mid-term period.
April 23, Monday	} Last day to file in final form with the committee in charge theses for the doctor's degree to be conferred in June, 1951.
April 28, Saturday	
May 7, Monday	} Spring recess.
May 12, Saturday	Last day to file with the committee in charge theses for the master's degree to be conferred in June, 1951.
June 4, Monday	Last day to file notice of candidacy for the bachelor's degree to be conferred in June, 1951.
June 4, Monday	} Last day to file with the Dean of the Graduate Division completed copies of theses for the master's degree to be conferred in June, 1951.
June 14, Thursday	
June 14, Thursday	
June 14, Thursday	} Final examinations, spring semester.
June 14, Thursday	Spring semester ends.

\* December 9, 1950, Saturday, qualifying examinations for admission to the College of Engineering in the spring semester, 1951.

# THE REGENTS OF THE UNIVERSITY

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804 Mechanics Institute bldg,  
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the University of California  
464 California st, San Francisco 20

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Litt.D.  
President of the University  
203 Administration bldg, Los Angeles 24  
250 Administration bldg, Berkeley 4

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

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Francisco 4

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# THE UNIVERSITY OF CALIFORNIA

**NOTE.**—General information about instruction at Berkeley and Davis may be obtained by addressing the Registrar, University of California, Berkeley 4; for information about instruction at Los Angeles, address the Office of Admissions, University of California, Los Angeles 24; for information about instruction at Santa Barbara College, address the Registrar, University of California, Santa Barbara College, Santa Barbara; information concerning the schools and colleges in San Francisco may be obtained by addressing the deans in charge. University publications available to inquirers are listed on page 3 of the cover of this bulletin.

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Grace V. Bird, *Associate Director*  
Vern W. Robinson, *Associate Director*  
Raymond H. Fisher, *Assistant Director*  
H. P. Rodes, *Assistant Director*  
180 Administration bldg, Los Angeles 24  
119 Administration bldg, Berkeley 4

**University Extension :**

Baldwin M. Woods, *Vice-President—*  
*University Extension*  
Paul H. Sheats, *Associate Director*  
Boyd B. Rakestraw, *Associate Director*  
*and Business Manager*  
Edward E. Walker, *Associate Director*  
Building 5A, Los Angeles 24  
University Extension, Berkeley 4  
Emanuel E. Ericson, *Assistant Director*  
for the spring semester  
108 Industrial Education bldg, Santa  
Barbara

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

Karl F. Meyer  
The Medical Center, San Francisco 22

**Director of the Lick Observatory :**

C. Donald Shane  
Lick Observatory, Mount Hamilton

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

Carl H. Eckart, *Acting Director*  
Roger R. Revelle, *Associate Director*  
Scripps Institution of Oceanography,  
La Jolla

**Director of the Agricultural Experiment  
Station :**

Paul F. Sharp  
Stanley B. Freeborn, *Assistant Director*  
101 Giannini Hall, Berkeley 4

**Director of the Citrus Experiment Station :**

Leon D. Batchelor  
Citrus Experiment Station, Riverside

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

Douglas MacAgy  
800 Chestnut st, San Francisco 11

**Librarians :**

Lawrence C. Powell  
Robert G. Vosper, *Associate Librarian*  
282 Library, Los Angeles 24  
Donald Coney  
Douglas W. Bryant, *Assistant Librarian*  
Marion A. Milczewski, *Assistant*  
*Librarian*  
208 Library, Berkeley 4  
John B. de C. M. Saunders  
Medical Center, San Francisco 22  
Miss Nelle U. Branch  
College of Agriculture, Davis

**Miss Ruth Ragan**

Scripps Institution of Oceanography, La  
Jolla

**F. J. Neubauer**

Lick Observatory, Mt. Hamilton

**Miss Margaret S. Buvens**

Citrus Experiment Station, Riverside

**Donald C. Davidson**

200B Administration bldg, Santa Bar-  
bara

**Business Office :**

James H. Corley, *Vice-President—Busi-  
ness Affairs*  
101 Administration bldg, Los Angeles 24  
222 Administration bldg, Berkeley 4  
George F. Taylor, *Business Manager*  
101 Administration bldg, Los Angeles 24  
William J. Norton, *Business Manager*  
311 Administration bldg, Berkeley 4  
Ira F. Smith, *Assistant Comptroller and*  
*Business Manager*  
College of Agriculture, Davis  
W. D. Drew, *Business Manager*  
Citrus Experiment Station, Riverside  
J. A. D. Muncy, *Business Manager*  
Santa Barbara College, Santa Barbara  
William B. Hall, *Administrator*  
105 University Hospital, San Francisco  
Kenneth M. Eastman, *Administrator*  
Temporary Medical School bldg, Los  
Angeles 24

**Accounting Officers :**

Olof Lundberg, *Chief Accounting Officer*  
*of the Regents*  
401 Administration bldg, Berkeley 4  
Robert A. Rogers, *Principal Accountant*  
110 Administration bldg, Los Angeles 24  
Richard C. Cornett, *Senior Accountant*  
100 Quad, Santa Barbara  
E. O. Linsley, *Senior Accountant*  
Medical Center, San Francisco 22  
M. F. Cook, *Senior Accountant*  
College of Agriculture, Davis  
W. D. Drew, *Senior Accountant*  
Citrus Experiment Station, Riverside

**Chief Purchasing Agent :**

Lewis G. Baker  
F. S. Harter, *Purchasing Agent*  
318 Administration bldg, Berkeley 4  
David L. Wilt, *Purchasing Agent*  
5 Administration bldg, Los Angeles 24

**Manager of Insurance and Retirement  
Systems :**

Henry H. Benedict  
317 Administration bldg, Berkeley 4

**Personnel Officers :**

Miss Mildred L. Foreman  
Building 3P, Los Angeles 24  
Boynton S. Kaiser  
329 Administration bldg, Berkeley 4  
Miss Ione La Page  
Medical Center, San Francisco 22

**Office of Public Information :**

George A. Pettitt, *Assistant to the Presi-  
dent*  
225 Administration bldg, Berkeley 4

**Office of Public Information—(Continued)**

Harold Ellis, *Agricultural Public Information and Publications Manager*  
881 Hilgard Hall, Berkeley 4

William J. Young, *Manager of Official Publications and Acting Manager of the Printing Department, University Press*

1 Administration bldg, Berkeley 4

Hale Sparks, *Radio Administrator*

21 Administration bldg, Los Angeles 24

Andrew J. Hamilton, *Manager, Office of Public Information*

9 Administration bldg, Los Angeles 24

Maynard T. Morris, *Manager, Office of Public Information*

101 Administration bldg, Berkeley 4

Gordon P. Hagberg, *Manager, Office of Public Information*

118 Administration bldg, Santa Barbara

**Manager of the University Press:**

August Frugé, *Acting Manager, Publishing Department*

William J. Young, *Manager of Official Publications and Acting Manager, Printing Department*

University Press, Berkeley 4

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

Lloyd Bernard

128 Education bldg, Los Angeles 24

207 Administration bldg, Berkeley 4

**Bureau of Occupations:**

Miss Mildred L. Foreman, *Placement Office Manager*

158 Building 8P, Los Angeles 24

Miss Vera Christie, *Placement Office Manager*

South Hall Annex, Berkeley 4

**University Physicians:**

Donald S. MacKinnon, *Director, Student Health Service*

Gertrude T. Huberty, *Senior Staff Physician*

Building 8T, Los Angeles 24

William G. Donald

Margaret Zeff, *Assistant University Physician*

Ernest V. Cowell Memorial Hospital, Berkeley 4

Elizabeth A. Davis, *Director, Student Health Service*

John C. Talbot, *Physician*  
Medical Center, San Francisco 22

Wilfred T. Robbins, Jr., *Director of Student Health Service*

Santa Barbara College, Santa Barbara

J. Homer Woolsey, *Director and Surgeon, Student Health Service*

College of Agriculture, Davis

**Director of Hospitals and Infirmaries:**

Richard J. Stull

University Hospital, Medical Center, San Francisco 22

**Buildings and Grounds:**

Laurence H. Sweeney, *Principal Superintendent*

106 Service bldg, Los Angeles 24

John W. Aljets, *Principal Superintendent*

Grounds and Buildings, Berkeley 4

William H. Dufton, *Principal Superintendent*

Medical Center, San Francisco 22

Austin Walther, *Grounds and Buildings Superintendent*

College of Agriculture, Davis

Don D. Wilkerson, *Grounds and Buildings Superintendent*

Scripps Institution of Oceanography, La Jolla

Henning J. Noren, *Grounds and Buildings Foreman*

Lick Observatory, Mount Hamilton

Henry U. Meyer, *Grounds and Buildings Senior General Mechanic*

Citrus Experiment Station, Riverside

William F. Madden, *Senior Superintendent of Grounds and Buildings*

Santa Barbara College, Santa Barbara

**Foreign Student Advisers:**

Clifford H. Prator

232 Administration bldg, Los Angeles 24

Allen C. Blaisdell

International House, Berkeley 4

**VETERANS AFFAIRS**

Robert W. Webb, *University Coordinator and Acting Coordinator, Santa Barbara College*

111 Administration bldg, Santa Barbara

Byron H. Atkinson, *Campus Coordinator*

817 Administration bldg, Los Angeles 24

James G. Siler, *Campus Coordinator*

Office bldg F, Berkeley 4

Troy C. Daniels, *Campus Coordinator*

Medical Center, San Francisco 22

J. Price Gittinger, *Campus Coordinator*

206 Library-Administration bldg, Davis

Boyd B. Rakestraw, *General Extension Coordinator*

University Extension bldg, Berkeley 4

Edythe G. Hutchins, *Extension Coordinator, Northern Area*

University Extension bldg, Berkeley 4

John W. Caton, *Extension Coordinator, Southern Area*

211 Building 5B, Los Angeles 24

Caleb A. Lewis, *Extension Coordinator, San Diego Area*

1040 Fourth av, San Diego

Florene Harrison, *Extension Coordinator, Santa Barbara Area*

906 Santa Barbara st, Santa Barbara

# THE UNIVERSITY OF CALIFORNIA

FOUNDED 1868

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

## I. AT BERKELEY

### The Colleges of

Letters and Science

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

Chemistry

Engineering

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

### The Schools of

Architecture

Business Administration

Education

Forestry

Law

Librarianship

Medicine (first year)

Nursing (in part)

Optometry

Public Health (in part)

Social Welfare

### The Graduate Division (Northern Section)

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

### The California Museum of Vertebrate Zoölogy

### The Museum of Paleontology

### The Anthropological Museum

### The Heller Committee for Research in Social Economics

### The Institute of Child Welfare

### The Institute of East Asiatic Studies

### The Institute of Experimental Biology

### The Institute of Geophysics (in part)

### The Institute of Industrial Relations (in part)

### The Institute of Slavic Studies

The Institute of Transportation and Traffic Engineering  
 The Bureau of Business and Economic Research  
 The Bureau of Criminology  
 The Bureau of International Relations  
 The Bureau of Public Administration  
 The William H. Crocker Radiation Laboratory  
 The University Art Gallery  
 The University of California Press  
 The Bancroft Library  
 The Alexander F. Morrison Memorial Library

## II. AT LOS ANGELES

The Colleges of  
   Letters and Science  
   Engineering  
   Applied Arts  
   Agriculture (including courses of instruction and the Agricultural Experiment Station's activities in Los Angeles)  
 The Schools of  
   Business Administration  
   Education  
   Law  
   Medicine  
   Nursing  
   Public Health (in part)  
 The Graduate Division (Southern Section)  
 The Bureau of Governmental Research  
 The Institute of Geophysics (in part)  
 The Institute of Industrial Relations (in part)  
 The Institute of Slavic Studies (in part)  
 The Institute of Transportation and Traffic Engineering (in part)  
 The Senator William Andrews Clark Memorial Library  
 The Los Angeles Medical Department (graduate instruction only)

## III. AT SAN FRANCISCO

School of Medicine (second, third, and fourth years, including the University Hospital and Langley Porter Clinic)  
 School of Nursing (in part)  
 School of Public Health (in part)  
 The George Williams Hooper Foundation (for medical research)  
 College of Dentistry  
 College of Pharmacy  
 California School of Fine Arts  
 Hastings College of Law



**IV. AT DAVIS**

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

**V. AT RIVERSIDE**

The College of Agriculture, including the Citrus Experiment Station. Riverside College.

**VI. AT MOUNT HAMILTON**

The Lick Astronomical Department (Lick Observatory).

**VII. AT LA JOLLA**

The Scripps Institution of Oceanography.

**VIII. AT SANTA BARBARA**

Santa Barbara College.

**ELSEWHERE**

In addition to the principal divisions named above, the University maintains several field stations of the Agricultural Experiment Station in various parts of the State.

**HISTORY AND ORGANIZATION**

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

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

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

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

These three forces began working together to one end—the establishment of a University of California. The College of California contributed its buildings

and four blocks of land in Oakland and its 160 acres of land in Berkeley; the Federal Government, the congressional gift of 150,000 acres of public lands; and the State, its property accumulated for the purpose, together with new legislative appropriations. The legislative act creating the University of California was signed by Governor Henry H. Haight on March 23, 1868, and the new institution opened its doors for instruction in September, 1869.

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

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

### ADMINISTRATION

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

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

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

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

# UNIVERSITY OF CALIFORNIA, LOS ANGELES

## HISTORY AND DEVELOPMENT

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

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

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

On February 1, 1927, the name of the institution was changed to UNIVERSITY OF CALIFORNIA AT LOS ANGELES.

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

By action of the Regents, work in the College of Agriculture was established at Los Angeles in November, 1930. The College of Business Administration was established in June, 1935, with instruction beginning in September, 1936; the College of Applied Arts and the School of Education were established July 1, 1939.

On August 8, 1933, graduate study at the University of California, Los Angeles, leading to the degrees of Master of Arts and Master of Science, and to the Certificate of Completion for the general secondary and junior college teaching credentials was authorized by the Regents. Accordingly, in September, 1933, one hundred fifty candidates were admitted to graduate study and the first master's degrees were conferred in June, 1934. Beginning in

September, 1936, candidates were accepted for the Ph.D. degree, and the first doctorate was conferred in 1938. In September, 1941, candidates for the degree of Doctor of Education were accepted.

Under the terms of a special appropriation made by the State Legislature in the spring of 1943, a College of Engineering was established in November, 1944. Funds have been provided for a new School of Law which received first-year students in September, 1949.

### **SITE OF THE CAMPUS—CLIMATE**

The Los Angeles campus of the University of California 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, which falls mostly between December and March, is about 15 inches. Proximity to the ocean insures an even temperature without extremes; the daily range of variation is about fifteen degrees.

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

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

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

### **SURVEY OF CURRICULA**

Instruction at the University of California, Los Angeles, is offered in (a) the College of Letters and Science, with curricula leading to the degrees of Associate in Arts, Bachelor of Arts, and Bachelor of Science, curricula of the earlier years of the College of Dentistry and of the School of Medicine; (b) the School of Business Administration, with curricula leading to the degree of Bachelor of Science; (c) the College of Applied Arts, with curricula leading to the degrees of Associate in Arts, Bachelor of Arts, and Bachelor of Science, curricula of the earlier years of the School of Nursing, of the

School of Optometry, of the College of Pharmacy, and of the School of Public Health, and a curriculum leading to the Certificate in Public Health Nursing; (d) the College of Engineering, with curricula leading to the degree of Bachelor of Science; (e) the College of Agriculture, with curricula leading to the degree of Bachelor of Science; (f) the School of Public Health, with curricula leading to the degree of Bachelor of Science; and (g) the School of Law, with a curriculum leading to the degree of Bachelor of Laws. Students electing certain curricula in the College of Agriculture may register at Los Angeles for the first two years and then transfer to Berkeley or Davis to complete the requirements for the degree. The School of Education at Los Angeles supervises curricula leading to the Certificate of Completion for the various elementary and secondary teaching credentials, and for the administrative credential. Graduate study, leading to the degrees of Master of Science, Master of Arts, and Master of Business Administration, and to the degrees of Doctor of Philosophy and Doctor of Education, also is available at the University of California, Los Angeles.

### THE UNIVERSITY LIBRARY

The Library of the University of California, Los Angeles, contains approximately 700,000 accessioned volumes and regularly receives about 12,000 periodicals and newspapers.

Undergraduate students will find most of the books they need in the Reserve Book Room or in the open stack Undergraduate Library. All graduate students have access to the book stacks on presentation of registration cards. Books, except for bound periodicals, circulate for a three-week period. Assigned seats are available to a limited number of graduate students in the Graduate Reading Room; application should be made to the librarian in charge of the Room. There are a few cubicles in the stacks for students actually working on dissertations, upon application to the stack supervisor. The Graduate Reading Room has special facilities for the use of microfilm and typewriters.

Temporarily housed in the main library building are branch libraries in engineering and biomedicine. The latter also has a reading room in the temporary medical building group. Branch libraries in biology, chemistry, physics, geology, meteorology, agriculture, industrial relations and theater arts are housed in the quarters of their respective departments, as in the new Law Library.

The Library Department of Special Collections provides a special music library of over 8,000 scores, and collections of maps, manuscripts, and archives.

Supplementing the University Library is the William Andrews Clark Memorial Library\* of nearly 45,000 books, pamphlets, and manuscripts, featuring English culture of the 17th, 18th, and 19th centuries, and the history of Mon-

\* This library is not on the University campus but is situated at 2205 West Adams Boulevard (Telephone RE 8-5925). It may be reached by Los Angeles Transit Lines, via Wilshire Boulevard and Western Avenue to West Adams Boulevard, or by the "11" bus of the Los Angeles Transit Lines. The library is open Mondays through Saturdays from 8:00 A.M. to 5:00 P.M.

tana. Materials in this library do not circulate and admission is by card only, application for which should be made to the University Librarian. Leaflets descriptive of the Clark Library are available.

### UNIVERSITY EXTENSION

University Extension offers facilities to men and women who seek some form of higher education, but are prevented from taking up residence at the University.† An increasing number of Extension courses are offered to those who have been to college and who desire to advance themselves professionally. The University of California, therefore, provides, through University Extension, educational opportunities to adults living in any part of the State. Of special interest are courses offered to professional people in the fields of medicine, dentistry, engineering, law, business administration, and industrial relations. Veterans may use the educational benefits available to them under the Federal and State laws to enroll in University Extension courses.

The work is carried on in five ways:

(1) **Class Instruction.** Classes are organized in cities and towns wherever a sufficient number of people can be secured who wish to study a subject. Instruction is offered in art, business administration, economics, education, engineering, geography, history, languages, law, literature, mathematics, music, political science, psychology, science, speech, and many other subjects. Opportunity is offered through the Class Department for applicants for admission to the University to remove entrance deficiencies by a program of Extension courses approved in advance by the Director of Admissions.

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

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

(4) **Visual Instruction.** University Extension maintains a library of 16 millimeter educational motion pictures which are available for loan to schools, industries, organizations, and the general public.

(5) **Institutes,** for periods ranging from two days to several weeks, provide intensive familiarization courses for interested groups, under the leadership of experts in theory and practice.

Persons desiring to take advantage of the facilities offered by any one of these departments may receive detailed information on request. Address University Extension, University of California, Los Angeles 24, or 813 South Hill Street, Los Angeles 14, or University of California, Berkeley 4.

† For information concerning admission to the University through residence courses in University Extension, see page 27.

# ADMISSION TO THE UNIVERSITY

## STUDENT STATUS

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

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

The regular students are persons who have met all the requirements for admission to the University as set forth below. Regular students normally are pursuing, within the University, programs of study that comply with the established rules and regulations and lead to the degrees of Associate in Arts, Bachelor of Arts, or Bachelor of Science. An irregular program must be approved by the dean of the student's college.

The special students are those persons twenty-one years of age or over who have not had the opportunity to fulfill the requirements laid down for the admission of regular students. Each student in this group is admitted only after special consideration.

Graduate students are of two designations: those in regular graduate status, and those in unclassified graduate status. Regular graduate students are graduates of this University or of other institutions with equivalent requirements for graduation, who are carrying on advanced (graduate) work for higher degrees or teaching credentials. Unclassified graduates are those who have received a recognized degree and who wish to undertake work leading to another bachelor's degree, or to complete preparation necessary for acceptance in regular graduate status; students so designated may take undergraduate courses only. Detailed information concerning admission to each student status is given on the following pages.

## ADMISSION IN UNDERGRADUATE STATUS

An applicant who wishes to enter the University must fulfill the general requirements for admission, as set forth below. Application blanks may be obtained from the Director of Admissions, 121 Administration Building, University of California, Los Angeles 24. Every applicant for admission is required to pay a fee of \$5 when the first application is filed.† Remittance by bank draft or money order should be made payable to The Regents of the University of California. With the application for admission nonveterans must file a certificate showing successful vaccination against smallpox within the last seven years. A form for this purpose will be furnished by the University. It must be signed by a licensed physician or registered nurse.

The University of California bases its entrance requirements on two principles: first, that the best guarantee of success in the University is high quality

† Veterans who expect to enroll under the provisions of Public Law 846 or 16 are not required to remit this fee at the time of application; if the applicant is accepted and registers in the University, the fee will be paid by the government.



of scholarship in previous work, and second, that the study of certain specified subjects will give to the student both good preparation for the work of the University and reasonable freedom of choice of a major field of study after his entrance. These principles apply to admission in either freshman or advanced standing.

#### LIMITATION OF ADMISSION OF OUT-OF-STATE APPLICANTS

Within the limits of its capacity the University of California ordinarily makes no restriction on admission of applicants from areas outside California. However, enrollment in the *freshman* and *sophomore classes* will be restricted to students of exceptional promise (the upper half of applicants ordinarily eligible). In addition to complete school records, freshman and sophomore applicants must present a properly certified standing on either the College Entrance Examination Board Scholastic Aptitude Test or the American Council on Education Psychological Examination. Applicants to the College of Engineering may substitute for these the examinations required by that college (see below).

Beginning the fall semester of 1951, junior and senior applicants from outside California, in addition to submitting the scholarship records specified under "Admission in Advanced Standing," must also submit a score on the College Ability Test and two designated Proficiency Tests of the Intermediate Tests for College Students. These examinations are administered by the Educational Testing Service, and information concerning them may be secured directly from the Educational Testing Service, P. O. Box 592, Princeton, New Jersey, or P. O. Box 2416, Terminal Annex, Los Angeles 54, California.

There are special limitations concerning nonresidents in certain of the professional schools and colleges. Students desiring to enter these schools should keep informed as to the prerequisite requirements, date of application, and required aptitude examinations.

#### EXAMINATIONS FOR ADMISSION TO COLLEGE OF ENGINEERING

An engineering qualifying examination must be taken by all applicants for admission to the College of Engineering at either the freshman or junior level. The first year test is primarily an aptitude test, but presumes that the student has had the required subjects in high school, particularly those in mathematics through trigonometry, physics or chemistry, mechanical drawing, and English. No preparation beyond successful completion of the high school courses is required. The junior examination is based on the subject matter of the pre-engineering and engineering courses given in the first two years and presumes the completion of mathematics through integral calculus, general college chemistry, general college physics, descriptive geometry, and engineering drawing.

Out-of-state applicants are permitted to use the engineering examination both for the engineering requirement and for the nonresident examination requirement.

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### ADMISSION IN FRESHMAN STANDING

#### Berkeley, Los Angeles, Davis Campuses

**NOTE.**—An applicant who has attended a junior college, four-year college, university, extension division of college level, or any comparable institution since graduating from high school is subject to regulations governing admission in advanced standing (see page 27). Such college attendance may not be disregarded, whether or not any courses were completed.

#### Admission on the Basis of the High School Record

The applicant must file with the Admissions Office a regular application, on or before the last date for the receipt of applications for the semester desired, and must have the secondary schools he has attended send to the Admissions Office complete transcripts of record of all studies undertaken in such schools. The transcripts must show that the applicant has been graduated from an accredited high school. The Admissions Office will then evaluate the high school record, and the applicant will be eligible for admission if he qualifies under any one of the following methods:\*

1. Complete the high school courses listed under (a) to (f) below with marks that demonstrate ability to do university work with good prospect of success. Courses in the (a) to (f) list taken in the ninth grade need show passing marks only; courses in the (a) to (f) list taken in the tenth, eleventh, and twelfth grades must be passed with marks that will make an average of grade B. Courses in which a grade of D is received may not be counted either in reckoning the required scholarship or in satisfaction of the subject requirements. An A grade in one course will balance a C grade in another. Grades are considered on a semester basis, except from schools that give only year marks.

The courses that must be completed under this plan of admission are listed as follows:

- (a) History ..... 1 unit. —This requirement must be satisfied by one unit of United States history or one unit of United States history and civics.
- (b) English ..... 3 units.—These may consist of any six semesters that give preparation in written and oral expression and in the reading and study of literature. Reading and study of contemporary literature may be included. The requirement in English must be satisfied by credit designated "English."
- (c) Mathematics ..... 2 units.—These must consist of two semesters of elementary or advanced algebra, and two semesters of plane geometry, or solid geometry and trigonometry.
- (d) Science ..... 1 unit. —This may consist of a year course in one field of science, namely, biology, botany, chemistry, physics, physical science, physiology, or zoology. The science selected must be an advanced (eleventh or twelfth grade) laboratory science, and the two semesters must be in the same subject field.

\* Although this minimum program will entitle the student to entrance to the University, it will not give him the right to enter unconditionally the curriculum of his choice unless he has credit for the prescribed subjects. Information regarding the preparation required and recommended for each curriculum may be found in later pages of this bulletin.

(e) Foreign language. . . . . 2 units.—These must be in one language.

(f) Advanced course chosen from one of the following:

- 1 (or 2) units.—1. Mathematics, a total of 1 unit (second-year algebra,  $\frac{1}{2}$  or 1 unit; solid geometry,  $\frac{1}{2}$  unit; trigonometry,  $\frac{1}{2}$  unit);
2. Foreign language, either 1 additional unit in the same foreign language offered under (e), or 2 units of a different foreign language;
3. Science, 1 unit of either chemistry or physics in addition to the science offered under (d) above.

2. Achieve a scholarship rank in the highest tenth of his graduating class, with a substantial academic preparation, although he need not complete the exact pattern of subjects (a) to (f) listed above.

3. Complete not less than 15 high school units of grade A or B in work taken in the ninth, tenth, eleventh, and twelfth years, or not less than 12 high school units of grade A or B in the work of the tenth, eleventh, and twelfth years; total deficiencies not in excess of two, either in subjects (a) through (f), above, or scholarship, or both.

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

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

### Accrediting of Schools in California

An accredited high school is one that has been officially designated by the Board of Regents of the University as a school from which graduates will be admitted to the University without examination on the basis of the high school record of subjects completed and scholarship attained. The list of accredited schools is published by the University annually in the month of June or July. For information concerning the accrediting of schools, principals may communicate with the Director of Relations with Schools, Berkeley or Los Angeles.

### Responsibility of High School Authorities

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

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

### Preparation for University Curricula

In addition to those subjects required for admission to the University (outlined, beginning on page 24), certain preparatory subjects are recommended for each University curriculum which, if included in the high school program, will give the student a more adequate background for his chosen field of study. Details of these recommendations will be found in the separate circular, **PREREQUISITES AND RECOMMENDED SUBJECTS**, which may be obtained from the Director of Relations with Schools, University of California, Los Angeles 24.

### Admission by Examination

The University of California does not itself offer entrance examinations, but accepts on all campuses the results of examinations given by the Educational Testing Service for the College Entrance Examination Board. Information about dates and places of examination may be secured from the College Entrance Examination Board, P. O. Box 592, Princeton, New Jersey, or P. O. Box 2416, Terminal Annex, Los Angeles 54, California. Definite arrangements to take the tests must be made with the Board at least four weeks previous to the date of the tests. If the applicant has completed all of the subjects in the (a) to (f) list with grades of C or better, but is deficient in the scholarship average, he may clear his admission requirements by a satisfactory score on the Scholastic Aptitude Test and on three achievement tests in subject fields. If the (a) to (f) list of subjects has not been completed with grades of C or better, the applicant should consult the Admissions Office in regard to the tests he must take.

### Removal of Admission Deficiencies

Deficiencies in high school scholarship or subject requirements must be removed by examination or additional studies before admission is approved. The applicant whose only deficiency arises from not having studied a required subject may remove the deficiency by a satisfactory grade in a course acceptable for that purpose, and by maintaining a satisfactory scholarship average in other studies pursued in the meantime. The applicant whose deficiency is caused by low scholarship, or by a combination of low scholarship and incomplete subject preparation, may remove his deficiencies as follows:

1. By college courses of appropriate content and amount completed with satisfactory scholarship in junior colleges, or state colleges of California, or in other approved colleges. The applicant must include in his program courses acceptable for removing his subject shortages, and present either:

- (a) Sixty units with at least an average grade of C in college transfer courses, or
- (b) A minimum of 15 units of college transfer courses with a grade-point average of 1.5.

Ordinarily, it is recommended that graduates of California high schools who are not eligible for admission to the University attend one of the California junior colleges and complete there the lower division requirements of the college in which they wish to register.

2. By college courses in one of the three following divisions of the University of California:

- (a) *University Extension*.—These courses are of three types—correspondence, general adult education classes marked "X," "XB," "XL," or "XSB," and special classes designed to make up entrance deficiencies. There are no restrictions on enrollment in correspondence courses, but only those with 5 units or less of scholarship deficiencies in their high school records are eligible for the special program of class courses designed to make up entrance deficiencies. To be acceptable, grades received in this program must be definitely above the grade C average, and must serve, not merely as specific make-up of deficiencies, but also as a demonstration of ability to do college work successfully.
- (b) *Combination Program of the College of Agriculture at Davis*.—For high school graduates with not more than three matriculation deficiencies, a Combination Program is offered at the College of Agriculture of the University of California at Davis. These three matriculation deficiencies may be entirely subject shortages, entirely scholarship deficiencies, or a combination of both. A grade of D or F on the high school transcript shall count as both a scholarship and a subject deficiency. Students cannot remove entrance deficiencies in the Two-Year Curricula (nondegree course). See PROSPECTUS OF THE COLLEGE OF AGRICULTURE.
- (c) *Summer Session*.—For students with only one or two deficiencies the eight-week summer session of the University of California, Los Angeles, or the first six-week summer session at Berkeley may be used to make up shortages. Because of the short time between the end of the second summer session at Berkeley and the fall semester, the second summer session may not be used to make up deficiencies for entrance to the fall semester.

3. By postgraduate courses in accredited high schools.

4. By College Entrance Examination Board Examination (see previous section under "Admission by Examination").

5. As an alternative to making up high school subject deficiencies, the Board of Admissions and Relations with Schools has approved an experimental plan of admissions, limited to the years 1949-1953 inclusive. Under this plan an applicant from a California junior college or state college may be admitted on the basis of a record showing completion of at least 60 units of C average work, in which must be included all of the subjects required for junior standing in the school or college of the University for which application is made.

#### ADMISSION IN ADVANCED STANDING

Berkeley, Los Angeles, Davis Campuses

An applicant for admission to the University in advanced standing must present evidence that he has satisfied, through either high school or college courses, the subject and scholarship requirements prescribed for the admission of high school graduates in freshman standing (see sections on admission from high school and on removal of admission deficiencies) and that his advanced work

in institutions of college level has met the minimum scholarship standard required of transferring students, namely, an average grade of C or higher in all college courses undertaken.

An applicant may not disregard his college record and apply for admission in freshman standing; he is subject without exception to the regulations governing admission in advanced standing. He should ask the registrars of all preparatory schools and colleges he has attended to forward complete official transcripts direct to the Director of Admissions. A statement of honorable dismissal from the last college attended must also be sent.

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

*Subject A: English composition.* Credit for Subject A (English Composition) is given upon certificate to those students who enter the University with credentials showing the completion elsewhere of the required training in composition or with a satisfactory score in the College Entrance Examination Board Achievement Test in English composition. Of all other students, an examination by this University, at Los Angeles or at other centers of instruction, is required (see further statement, page 35).

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

*Credit for experience.* No University credit is given for experience, even though the work may have been closely related to University courses. No University credit is given for teaching experience. Students presenting evidence of successful teaching experience may substitute approved courses in education for part or all of the regular requirements in supervised teaching upon the recommendation of the Director of Training.

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

Applicants otherwise eligible who seek to transfer from other institutions of collegiate rank but whose college records fail to show a satisfactory scholarship average may be admitted only when the deficiency has been removed by additional work completed with grades sufficiently high to offset the shortage of grade points. This may be accomplished by work in other approved higher institutions, in Summer Sessions, or in correspondence courses in University Extension. Except for veterans, applicants for advanced standing who have scholarship deficiencies will not be admitted to the admissions program classes of University Extension.

### **Admission of Returning Members of the Armed Forces**

Some exceptions in the subject requirements for admission will be made for men and women who were for at least one year members of the armed forces

of the United States. Such exceptions will apply, however, only when the scholarship record is high enough to indicate probable success in the University. Veterans whose scholastic records are good, whose high school subject deficiencies total not more than three units, and who are over 21 years of age, are encouraged to make application, even though they may not have all of the usual requirements. Such a veteran with a good scholarship record but with subject deficiencies will be classified as a special student until deficiencies are removed, or until all of the requirements for junior standing in the college of his choice have been completed.

Veterans who apply and are not eligible for admission to either regular or special status will, upon request, be given programs of work in University Extension or in junior college designed to prepare them for University work.

### **ADMISSION OF SPECIAL STUDENTS**

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

Regulations regarding admission of veterans to special status are given above.

*A nonveteran applicant will be admitted to special status only if he has a definite and restricted objective and if the Director of Admissions and the department or departments concerned are satisfied that he can profitably undertake the courses he desires. Admission of a nonveteran to special status is rarely granted for more than one semester and is never granted for the purpose of making up deficiencies for admission to regular status.* Such deficiencies must be made up as provided for in the section entitled "Removal of Admission Deficiencies," page 26. A nonveteran special student cannot be a candidate for a degree. He may, however, attain the status of regular student by satisfying all the matriculation requirements for admission to the University as provided above.

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

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

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

The University has no "special courses"; all courses are organized for regular students. A special student may be admitted to those regular courses for which, in the judgment of the instructor, he has satisfactory preparation. *A special student will seldom be able to undertake the work of the engineering and professional colleges or schools until he has completed the prerequisite subjects.*

### ADMISSION FROM SCHOOLS AND COLLEGES IN FOREIGN COUNTRIES

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

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

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

*Special advisers* have been appointed by the President of the University to assist foreign students in all matters pertaining to their attendance at the University. Every student from another country is urged, upon his arrival at the University, to consult the Foreign Student Adviser, Room 232, Administration Building.

### ADMISSION IN GRADUATE STANDING

As indicated on page 22, graduate students may be admitted as regular graduates or as unclassified graduates.

Applications for admission to regular graduate status will be received from graduates of recognized colleges and universities who propose to work for the

† See section on "Limitation of Admission," page 23.



degrees of Master of Arts, Master of Science, Master of Education, or Master of Business Administration, for the degree of Doctor of Education, or for the degree of Doctor of Philosophy, or for the certificates of completion leading to the general secondary or junior college teaching credentials. Completed applications with supporting documents must be in the hands of the Dean of the Graduate Division not later than August 1, 1950, for the fall semester, and not later than January 2, 1951, for the spring semester. Corresponding days will be set for subsequent semesters.

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

Unclassified graduate status is open to students holding degrees from recognized institutions. An unclassified graduate student is in general admitted to any undergraduate course for which he has the necessary prerequisites; he may not enroll in any graduate course, nor is any assurance implied that he will later be admitted to regular graduate status. In the event of such admission the grade-point requirements for degrees and credentials will apply to all work done in unclassified graduate status; degree credit may be allowed for such work upon the special recommendation of the department of the candidate's field of study, subject to approval by the Dean of the Graduate Division.

Application is to be made upon the form provided by the Dean of the Graduate Division, 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 \$5† 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.

† Veterans who expect to enroll under the provisions of Public Law 846 (G. I. Bill of Rights), or Public Law 16, are not required to remit this fee with their applications; if the applicant is accepted and registers in the University, the fee will be paid by the government.

## **GENERAL REGULATIONS**

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

### **REGISTRATION**

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

### **Admission and Registration**

The student or prospective student should consult the University calendar and acquaint himself with the dates upon which students should register and begin their work at the opening of the sessions.

Prospective students are warned of the necessity of making early application in order that their credentials may be processed in time to permit registration within the scheduled period. New undergraduate students must file applications for admission not later than August 15 for the fall semester and not later than January 15 for the spring semester. For new graduate students, these dates are August 1 and January 2, respectively. Students planning to return after an absence must file applications for readmission not later than August 23 for the fall semester and not later than January 17 for the spring semester.

### **MEDICAL AND PHYSICAL EXAMINATION**

All new students (graduate and undergraduate, including transfer students from other campuses of the University) must appear before the University Medical Examiners and pass a medical and physical examination to the end that the health of the University community, as well as the individual student, may be safeguarded. This examination must be taken prior to registration.

Before coming to the University, every student is urged to have his own physician examine him for fitness to carry on University work, and to have all defects capable of remedial treatment, such as diseased tonsils, dental cavities, imperfect hearing, or imperfect eyesight, corrected. This will prevent possible loss of time from studies.

All reentrant students as well as old undergraduates entering graduate status for the first time are required to report to the Student Health Service for clearance of health record.

### **STUDENT HEALTH SERVICE**

The purpose of the Student Health Service is to conserve the time of students for their classwork and studies, by preventing and treating acute illnesses.

Each registered student at Los Angeles may, at need, have such consultations and medical care or dispensary treatment on the campus as the Student Health Service is staffed and equipped to provide, from the time of payment of his registration fee to the last day of the current semester.

The Health Service does not take responsibility for certain chronic physical defects or illnesses present at the time of entrance to the University (as, for example, hernias, chronic bone and joint diseases or deformities, chronic gastrointestinal disorders, fibroids of the uterus, chronically infected tonsils, tuberculosis, syphilis, malignant diseases, psychiatric problems, allergic and endocrine disorders, etc.).

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

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

The student is referred to the announcements of the departments of Military Science, Naval Science, Air Science, and Physical Education in the **GENERAL CATALOGUE, DEPARTMENTS AT LOS ANGELES.**

### **Naval Reserve Officers' Training Corps**

By action of the Secretary of the Navy and of the Regents of the University of California in June, 1938, provision was made for the establishment of a unit of the Naval Reserve Officers' Training Corps on the Los Angeles campus of the University.

The primary object of the Naval Reserve Officers' Training Corps is to provide at civil institutions systematic instruction and training which will qualify selected students of such institutions for appointment as officers in the Regular Navy, Naval Reserve, Marine Corps, and Marine Corps Reserve. The Naval Reserve Officers' Training Corps is expected to train junior officers for the Regular Navy, Naval Reserve, Marine Corps, and Marine Corps Reserve and

\* The University requirements in physical education referred to in this section cover Physical Education 1 (Men) and 26 (Women), 1-unit courses which are required of students in each semester of the freshman and sophomore years, irrespective of the total number of units of credit received in these courses.

thus assist in meeting a demand for increased commissioned personnel in time of war or national emergency.

Initial enrollment is restricted to able-bodied male students who are citizens of the United States and are between the ages of fourteen and twenty-one years. Students must pass the same physical examination as is required of all candidates for admission to the Naval Academy.

Courses in seamanship, communications, ordnance and fire control, advanced fire control, navigation, advanced seamanship, engineering (steam and Diesel), and damage control are given to those students seeking Naval commissions. Courses in military history and principles, small unit tactics and amphibious landings are given during the last three semesters to those students seeking Marine Corps commissions.

Students are enrolled in the Naval Reserve Officers' Training Corps under three categories. These categories are listed below together with the method of selection:

**Regular N.R.O.T.C.**—Students selected after successfully completing a nation-wide Navy college aptitude test. Quotas are set by the Navy Department. The competitive examinations are given at least six months prior to the beginning of the college year in which they will enter.

**Contract N.R.O.T.C.**—Students selected by the Professor of Naval Science after a personal interview. Quotas are set by the Navy Department.

**Naval Science N.R.O.T.C.**—Selected students who have not entered into a contract with the Navy and are pursuing Naval Science courses for college credit only.

### **Army Reserve Officers' Training Corps**

In accordance with section 40, National Defense Act of 1920, and with the concurrence of the Regents of the University, a unit of the Senior Division Reserve Officers' Training Corps was established on the Los Angeles campus of the University in February, 1921.

The purposes of the Army R.O.T.C. are to qualify male students as leaders in peace and war, to acquaint them with the military factors of our national life to the end that they may more intelligently perform their duties as future leaders of their communities, and to qualify selected students as Reserve Officers of the Army of the United States.

The courses in military science are those prescribed by the Department of the Army and are standard in all R.O.T.C. college units. Specialized courses are offered at the University of California, Los Angeles, in either Infantry or Quartermaster.

### **Air Force Reserve Officers' Training Corps**

In accordance with the provisions of the National Defense Act of 1920, as amended by the Act of 1940, and the National Security Act of 1947 and with the concurrence of the Regents of the University of California, a unit of the Air Force Reserve Officers' Training Corps was established on the Los Angeles campus of the University in September, 1947.

The purposes of the Air Force R.O.T.C. are to acquaint male students with some of the military factors of our national life to the end that they may more intelligently perform their duties as future leaders of their communities, and to qualify selected students as officers in the Air Force Reserve and in the Regular Air Force.

Courses are prescribed by the Department of the Air Force and are standard in all Air Force R.O.T.C. units. A specialized course in Supply and Administration is offered at the University of California, Los Angeles.

### **SUBJECT A: ENGLISH COMPOSITION**

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

The examination in Subject A is given at the opening of each semester. (See the *Registration Circular*, to be obtained from the Registrar). A second examination for persons who do not appear at the announced time is given a few days after the first examination in each semester; for this examination a fee of \$1 is charged.

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

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

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

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

No student will be granted the degree of Associate in Arts or a bachelor's degree until he has satisfied the requirement of Subject A.

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

A student who has received a satisfactory rating in the College Entrance Examination Board examination in English composition will receive credit for Subject A. A student who has passed an examination in Subject A given by the University at Berkeley or given under the jurisdiction of the University

at various centers in the State annually in May or June will receive credit for Subject A.

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

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

Students from other countries whose native language is not English should take the special examination in English for foreign students rather than the Subject A examination. Students who subsequently complete English 33B, the advanced course in English for foreign students, with a grade of C or higher, will be credited as having met the Subject A requirement.

### AMERICAN HISTORY AND INSTITUTIONS

Candidates for a bachelor's degree must satisfy the "Requirement in American History and Institutions" by demonstrating a knowledge of American history and of American political institutions and ideals. This requirement may be satisfied by any one of four ways.

1. By passing two optional examinations (one in American History and one in American Institutions) which the Committee on American History and Institutions offers for the purpose of satisfying the requirement. (Normally the examinations are offered once each semester. No unit credit is given for the examinations.)

2. By satisfactorily completing in the University any two courses from the following list:

Economics 13; History 7A, 7B, 8A, 8B, 101, 171, 172, 173, 174, 175, 176, 177, 178, 179, 181; Political Science 1, 3A, 3B, 34, 103, 113, 125, 141, 142, 143, 146, 166, 167A, 167B, 171, 186; American Institutions 101; X7AB (Department of Correspondence Instruction, Berkeley 4, California).

Equivalent courses completed in the University Extension or in Summer Sessions may be used to fulfill the requirement. Equivalent courses taken at other collegiate institutions and accepted by the Board of Admissions may be used to fulfill the requirement.

3. By a combination of 1 and 2, above.

4. By presentation of a certificate of satisfaction of the present California requirement as administered in another collegiate institution within the State.

Candidates for a teaching credential, but not for a degree, need take only the optional examination (in American Institutions) or one of the courses in political science, including American Institutions 101, listed above. They may also satisfy the requirement by completion of a two-unit course on the principles and provisions of the Constitution of the United States at any other college (including colleges outside of California) whose undergraduate credits are accepted by the State Board of Education.

Further information regarding the requirement and the optional examina-

tions may be obtained from the Committee on American History and Institutions. For room number and office hours, see official announcements on campus bulletin boards.

### **DEGREES AND TEACHING CREDENTIALS**

Detailed statements of requirements for the degree of Associate in Arts and for bachelor's degrees issued by the University will be found in this bulletin under headings of the several colleges and departments; for the master's degrees and the doctor's degrees, see the ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION. The requirements for certificates of completion leading to teaching credentials are to be found in the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

*Degree residence.\** Every candidate for a bachelor's degree is required to have been enrolled in that college of the University in which the degree is to be taken during his two final semesters of residence; the last 24 units must be done while so enrolled. It is permissible to offer two summer sessions attended in previous years as equivalent to one semester; but the student must complete in resident instruction at least one regular semester of his senior year. The regulation applies both to students entering this University from another institution and to students transferring from one college to another within the University.

Candidates for the degree of Associate in Arts must have been registered in the University for the two final semesters of residence, and in the college in which the degree is taken for the final semester.

All graduates receiving bachelor's degrees in any one calendar year—January 1 to December 31—are considered as belonging to the "class" of that year.

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

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

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

### **HONORS**

Honor students include those who receive honorable mention with the degree of Associate in Arts in the College of Letters and Science, in the College of Applied Arts, in the College of Business Administration, or upon attaining junior standing in the College of Agriculture. Honors are granted also with the bachelor's degrees. For regulations concerning honors see the sections explanatory of the curricula of the various colleges in later pages of this bulletin.

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\* Special provisions governing residence of degree candidates in the College of Engineering are described in the requirements of that college. See under College of Engineering in later pages of this bulletin.

### CREDIT AND SCHOLARSHIP

In both the University and the high school the student is credited, in respect to the amount of work accomplished, in terms of units; and in respect to quality of scholarship, in terms of grades. In a further, more exact determination of the student's scholarship, the University assigns a numerical value in points to each scholarship grade. These points are called grade points and are more fully described below.

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

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

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

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

### STUDY-LIST LIMITS\*

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

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

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

\* The course in Subject A which does not give units of credit toward the degree, nevertheless displaces 2 units from a student's allowable program.



program below the 12-unit limit. After the first semester a student may on petition carry a program of not more than 20 units, if in the preceding semester he attained an average of at least two grade points for each unit of credit in his total program (of 12 units or more). A student in good academic standing may without special permission add  $\frac{1}{2}$  unit of physical education to the allowable study list. With this exception, all courses in military or naval science and physical education and repeated courses are to be counted in study-list totals. Any work undertaken in the University or elsewhere simultaneously with a view to credit toward a degree must also be included.

In the School of Business Administration, a student who is not restricted in his study list and who is not on probation may present a study list aggregating 12 to 18 units a semester without special permission with respect to quantity of work, save that in his first semester of residence the maximum is 16 units plus the required  $\frac{1}{2}$ -unit course in physical education.

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

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 THE GRADUATE DIVISION, SOUTHERN SECTION.

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

In the University, the result of the student's work in each course (graduate and undergraduate) is reported to the Registrar in one of six scholarship grades, four of which are passing, as follows: A, excellent; B, good; C, fair; D, barely passed; E and F, not passed. The designations "passed" and "not passed" may be used in reporting upon the results of certain courses taken by honor students in the College of Letters and Science.

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

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

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

Grade points are assigned to the respective scholarship grades as follows: for each unit of credit, the scholarship grade A is assigned 3 points; B, 2 points; C, 1 point; D, E, and F, no points. Removal of grade E or F entitles the student to grade points in accordance with the regulations stated under Removal of Deficiencies, below.

In order to qualify for the degree of Associate in Arts, or for any bachelor's degree at Los Angeles,\* the student must have obtained at least as many grade points as there are units in the total credit value of all courses undertaken by him in the University of California.† A similar regulation is in effect in the colleges on the Berkeley campus.

### MINIMUM SCHOLARSHIP REQUIREMENTS

The following provisions apply to all undergraduate students at Los Angeles except students in the College of Engineering:

(A) Probation. A student shall be placed on probation

(1) If at the close of his first semester his record shows a total deficiency of six or more grade points; or

(2) If at the close of any subsequent semester, his grade-point average is less than 1.0 (a C average), computed on the total of all courses undertaken in this University for which he has received a final report.

(B) Dismissal. A student shall be subject to dismissal from the University

(1) If in any semester he fails to pass with a grade of C or higher courses totaling at least 4 units; or

(2) If while on probation his grade-point average for the work undertaken during any semester falls below 1.0 (a C average); or

(3) If after two semesters of probationary status he has not obtained a grade-point average of 1.0 (a C average), computed on the total of all courses undertaken in this University for which he has received a final report.

Students at Los Angeles coming under the above regulations are subject to the supervision of the deans of their respective colleges, who have adopted a policy of limiting study lists of students under their charge to 12 units or less, exclusive of required physical education.

Effective July 1, 1948, the following provisions apply to all students in the College of Engineering:

A student will be subject to dismissal from the University

(1) If during any semester he fails to pass with a grade of C or higher courses totaling at least 4 units; or

(2) If at the end of any semester he has failed to attain at least a C average in all courses undertaken in the University.

A student who becomes subject to the provisions of this regulation shall be under the supervision of the Faculty of the College. The Faculty, or persons designated by it, shall have the power to dismiss from the University students under its supervision, or to suspend the provisions of this regulation and permit the retention in the University of the students thus subject to dismissal, and the return to the University of students who have been dismissed under this regulation.

Any student who receives a notice of dismissal from the University may

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

† Courses taken by honor students of the College of Letters and Science without letter grades are not counted in determining the grade-point status.

petition the dean of his college for a hearing. Ordinarily, however, 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.

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

### **CREDIT BY EXAMINATION**

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

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

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

### **FINAL EXAMINATIONS**

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

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

### **WITHDRAWAL FROM THE UNIVERSITY**

During the course of any semester a student may file with the Registrar a Notice of Withdrawal and Request for Statement of Conditions for Readmission. Provided the student is in good standing at the time of withdrawal and secures the necessary clearances, he may be issued an "honorable dismissal."

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

*Discontinuance without notice.* Students who discontinue their work without petitioning for honorable dismissal may render themselves ineligible not only for readmission to the University of California but also for admission by transfer to another institution. All grades in courses undertaken in the semester from which a student withdraws without notice become "not passing" (E or F) and remain so upon the student's permanent record.

### TRANSCRIPTS OF RECORD

Each student, upon formal application to the Registrar, may receive or may have issued on his behalf, without cost, one transcript showing all work taken by him in this division of the University. Subsequent transcripts will be issued upon application at a cost of one dollar for one copy, fifty cents for each of five, and twenty-five cents for each of more than five additional copies ordered at the same time.

### DISCIPLINE

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

### STUDENT RESPONSIBILITY

Each student is responsible for compliance with the regulations printed in this bulletin and in the handbook of *Rules and Regulations for Students* issued by the Registrar's Office; also with official notices published in the *Daily Bruin*, or posted on official bulletin boards.

## MISCELLANEOUS INFORMATION

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

#### GENERAL EXPENSES AND FEES\*

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

A table of estimated minimum, moderate, and liberal budgets for one college year of two semesters is given on page 49.

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.

*Incidental fee.* The incidental fee for all undergraduate students is \$41. This fee, which must be paid each semester at the time of registration, covers certain expenses of students for library books, for athletic and gymnasium facilities and equipment, for lockers and washrooms,\* for registration and graduation, for such consultation, medical advice, and dispensary treatment as can be furnished on the campus by the Student Health Service, and for all laboratory and course fees. It also includes the rights and privileges of membership in the Associated Students, valued at \$6; see page 55. No part of this fee is remitted to those students who may not desire to make use of any or all of these privileges. If a student withdraws from the University within the first five weeks from the date of his registration, a part of this fee will be refunded. The incidental fee for graduate students is \$35 each semester; it does not include membership in the Associated Students.

*Tuition Fee.* Tuition in the academic colleges is free to students who have been legal residents of the state of California for a period of one year immediately preceding the opening of the semester during which they propose to attend the University. Every student who has not been a legal resident of the state of California for a period of one year immediately preceding the opening

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

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

day of the semester during which he proposes to enroll is classified as a non-resident. Such students are required to pay, in addition to the incidental fee, a tuition fee of \$150\* each semester.

A student entering the University for the first time should read carefully the rules governing determination of residence (see page 45) to the end that he may be prepared, in the event of classification as a nonresident of California, to pay the required tuition fee. This fee must be paid at the time of registration. *The attention of the prospective student who has not attained the age of 22 years and whose parents do not live in the state of California, is directed to the fact that presence in the state of California for a period of more than one year immediately preceding the opening day of the semester in which he proposes to attend the University, does not, of itself entitle him to classification as a resident.*

If a student is in doubt about his residence status, he may communicate with the Attorney for the Regents in Residence Matters. On the day preceding the opening day of registration and during the first week of instruction of each semester the Attorney may be consulted upon the campus at a place which may be ascertained by inquiry at the Information Desk in the Registrar's Office; throughout the registration period, he may be consulted during the hours of registration at the place where registration is being conducted. At other times he may be consulted or communications may be addressed to him at Room 910, Crocker Building, San Francisco 4, California.

*The eligibility of a student to register as a resident of California may be determined only by the Attorney for the Regents in Residence Matters.* Every entering student, and every student returning to the University after an absence, is required to make a "Statement as to Residence" on the day of registration, upon a form which will be provided for that purpose, and his status with respect to residence will be determined by the Attorney soon after registration. Old students are advised that application for reclassification as a resident student should be filed within ten days after regular registration. Application for a change of classification with respect to some preceding semester will not be received under any circumstances.

### Other Fees

*Application fee, \$5*† This fee is charged every applicant for admission to the University, and is payable at the time the first application is filed. Applicants for graduate status must pay this fee, even though it may have been paid once in undergraduate status; see page 31.

\* Graduate students pay the full amount of \$150 regardless of the number of units undertaken unless for reasons of health or employment they are unable to devote more than one-half time to academic study, in which event they may petition the Dean of the Graduate Division for reduction to one-half the amount. If an undergraduate student registers for less than 12 units the tuition fee is \$12.50 a unit or fraction of a unit, with a minimum of \$25.

† Veterans who expect to enroll under the provisions of Public Law 846 (G. I. Bill of Right), or Public Law 16, are not required to remit this fee with their applications; if the applicant is accepted and registers in the University, the fee will be paid by the government.

*Medical examination: Original appointment, or deferment arranged in advance, no fee; fee for a second appointment, \$2.*

*Late filing of registration book, \$2.*

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

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

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

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

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

*For late return of athletic supplies,\* \$1 for each 24 hours until full purchase price of article is reached.*

*For failure to empty locker within specified time, \$2.*

*Returned check collection, \$1.*

*Deposit required of applicants for teaching positions who register with the Office of Teacher Placement, a deposit of \$5 to cover the clerical cost of correspondence and copying of credentials.*

### **Refunds**

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

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

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

### **RULES GOVERNING RESIDENCE**

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

The residence of each student is determined in accordance with the rules for determining residence prescribed by the provisions of Section 244 of the Government Code of California, and Section 20005 of the Education Code of California, provided, however:

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

2. That no person is deemed to have made a valid declaration of intention to become a citizen of the United States whose declaration of intention at the time when it is presented in support of an application for classification as a resident student in the University has lost its force or effectiveness, or who

\* Supplies or equipment not returned before the close of the fiscal year must be paid for in full; return after that date is not permitted.

cannot, under said declaration, without renewing the same or making a new declaration, pursue his declared intention of becoming a citizen of the United States.

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

Every person who has been classified as a resident student shall, nevertheless, be subject to reclassification as a nonresident student and shall be reclassified as a nonresident student whenever there shall be found to exist circumstances which, if they had existed at the time of his classification as a resident student, would have caused him to be classified as a nonresident student. If any student who has been classified as a resident student should be determined to have been erroneously so classified, he shall be reclassified as a nonresident student, and if the cause of his incorrect classification shall be found to be due to any concealment of facts or untruthful statement made by him at or before the time of his original classification, he shall be required to pay all tuition fees which would have been charged to him except for such erroneous classification, and shall be subject also to such discipline as the President of the University may approve.

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

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

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



### LIVING ACCOMMODATIONS

Living accommodations for out-of-town students who do not live with friends or relatives are provided in a number of ways—in private homes which accept paying guests; in rooming houses; in residence halls or coöperatives; in neighboring hotels or apartments; in the Veterans Emergency Housing Project (for married students only); and in fraternities or sororities. Information concerning any of these accommodations may be obtained from the Housing Office, Room 105, Building 1L, University of California, Los Angeles 24. Office hours are: Monday through Friday 8:00 A.M. to 12:00 M.; 1:00 P.M. to 5:00 P.M.; Saturday 9:00 A.M. to 12:00 M.

#### *Accommodations with Private Landlords*

Up-to-date listings are freely available to any student who desires to call in person at the Housing Office. Arrangements for such rooms cannot be made by mail but must be made by the individual directly with the landlord. Students and landlords are both advised to have a clear understanding, preferably in writing, as to prices, intended length of tenancy, charges to be made during vacation periods, etc.

Prices range from \$60 to \$80 per month for room and board, and from \$25 to \$50 per month per person for room only. Those who are not boarding by the month will find many restaurants in the vicinity. There is also a student-owned cafeteria on the campus where meals may be purchased at moderate prices.

#### *Mira Hershey Hall (Women Only)*

Mira Hershey Hall, made available by the will of the late Miss Mira Hershey, is the only residence hall operated by the University, and is located on the campus. Accommodations are available for 129 undergraduate students. Application for residence may be made to the Housing Office during the semester preceding that in which the student plans to enroll, and after the student is reasonably sure that she will be accepted for enrollment. The rate for board and room is \$300 per person per semester during the time the University is in session. Three meals are served daily with the exception of Sundays and holidays when two meals only are served.

#### *Privately Owned Residence Halls*

There are a number of privately owned and operated residence halls in the vicinity of the University (all but one for women only). Several provide room and board at rates varying from \$65 to \$80 per month. Two have apartments at rates ranging from \$16 to \$25 per month per person depending on the number of women sharing the apartment. Two provide rooms with kitchen privileges with rates from \$26 to \$40 per month. The one hall for men accommodates 60 students, providing room and 16 meals per week at \$75 per month.

All business dealings should be clearly understood by both the student and the owner since the University cannot assume any responsibility for arrangements to which it is not a party.

### *Coöperatives*

Five residence halls for women are on the coöperative plan with rates for board and room varying from \$35 to \$50 per month per person. Under this plan the students share in the work of operating the hall and work an average of four to five hours per week for part payment of their room and board.

The Coöperative Housing Association is a privately owned, nonprofit organization operating four houses accommodating about 187 men, each member being required to work from three to four hours per week. The cost for board and lodging with two, three, or four in one room is from \$40 to \$50 per month. Information concerning membership application may be secured from the manager at Landfair House, 500 Landfair Avenue, Los Angeles 24.

### *Fraternities and Sororities*

Most of the 35 fraternities and 23 sororities own or lease homes near the campus and provide lodgings and meals for their members and pledges. Monthly bills for residents range from \$47 to \$75 per month, depending upon the number of meals served and the social and recreational privileges included. Students interested in affiliating with a fraternity or sorority should register for rushing on forms available at the Office of the Dean of Students. Detailed information concerning membership may also be secured at this office.

### *Accommodations for Married Students*

A housing shortage still exists in the Los Angeles area, especially in low cost apartments and houses. Prevailing rates are as follows: furnished single apartments, \$45 to \$75; furnished and unfurnished one-bedroom apartments, \$50 to \$100; and furnished and unfurnished two-bedroom apartments, \$80 to \$120. Single family dwellings are appreciably higher. Although the facilities of the Housing Office are available to all students, listings cannot be sent through the mail inasmuch as most landlords desire to rent on a personal selection basis.

### *Veterans Housing*

The University operates a Veterans Emergency Housing Project on the campus consisting of 308 two-room apartments, renting at \$33 per month furnished and \$29 per month unfurnished. These are available only to World War II veterans of the United States Army, Navy, Marine Corps, or Coast Guard who are married or the head of a family, and who are "students" at the University of California, Los Angeles. *Applications from qualified veterans are acceptable only after they have enrolled as special, graduate, or regular undergraduate students at the University of California, Los Angeles.* Due to the very long list of applicants, it is impossible to make a commitment as to when one might be able to obtain an apartment, and new applicants are advised not to plan for too early occupancy of these units after entering the University.

A "student" means any veteran student (regular, special, or graduate) taking a combination of courses during the regular sessions, whose study-load determination under the formula of the Office of Veterans Affairs shows that he is entitled to a *full subsidy* under the Veterans Program.

Any combination student (carrying regular and extension courses) ranks as a regular student and is eligible, provided the Office of Veterans Affairs determines that he is eligible for *full subsidy* under the Veterans Program.

Persons not taking a sufficient amount of work to be classified under the Veterans Program for *full subsidy* will not be entitled to housing.

In case the veteran is not under subsidy, his eligibility under student status will be based on the same formulas used by the Office of Veterans Affairs in determining subsidies.

#### Motels and Trailer Courts

Good motels are located one to five miles from the campus with varying rates and accommodations. It is sometimes advisable for family groups to accept these accommodations temporarily until more permanent quarters can be located. Listings may be secured from the Housing Office.

No trailer parking areas are provided on or near to the campus. Information relative to such facilities is available at the Housing Office.

### PRINCIPAL ITEMS OF EXPENSE ESTIMATED ON A TWO-SEMESTER BASIS

Expense Items	Minimum		Moderate		Liberal	
	Men	Women	Men	Women	Men	Women
Incidental Fee.....	\$ 82	\$ 82	\$ 82	\$ 82	\$ 82	\$ 82
Books and Supplies.....	30	30	45	45	65	65
Board and Room.....	550	600	650	700	750	800
(or Housekeeping).....		(300)		(350)		(500)
Miscellaneous (Recreation, club dues, laundry, drugs, etc.).....	50	80	75	150	200	300
<b>Total.....</b>	<b>\$ 712</b>	<b>\$ 792</b>	<b>\$ 852</b>	<b>\$ 977</b>	<b>\$1097</b>	<b>\$1247</b>

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

### SELF-SUPPORT AND STUDENT EMPLOYMENT

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

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

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

(2) The regular undergraduate four-year course based on an average of 15 units of academic work a semester is organized on the supposition that students will give the major part of their time and attention to their studies while attending the University. Therefore, a student who must give considerable time and energy to outside work should consider at the outset the possibility that more than the usual eight semesters (four years) may be required to complete the program for the degree, if he is to maintain his scholastic standing and his health, and to enjoy the advantages of university life.

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

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

## **BUREAU OF OCCUPATIONS**

### **Student Employment**

Students desiring employment may register with the Bureau of Occupations, in Building 3P.

Since it is not always possible to secure employment immediately, the new student who plans to be self-supporting should not begin his University course without sufficient funds to cover the major expenses of at least the first semester.

Women students may obtain board, room, and \$15 to \$20 salary per month in exchange for three hours work daily in a private home. Opportunities of this type for men are limited; however, local boarding houses and restaurants often offer employment for board.

In addition, employment is available on an hourly basis in the fields of typing and stenography, bookkeeping, sales and clerical work, care of children, housework, manual labor, tutoring, and other specialized types of work.

### **Full-Time Placement**

Through its full-time placement service, the Bureau of Occupations recommends graduates and students for positions in business and professional fields other than teaching or educational research. This service is available to stu-

dents when they leave the University (if in attendance in regular sessions at least one year) or at any later date if they desire an improvement in their employment situation.

#### **OFFICE OF TEACHER PLACEMENT**

The Placement Executive recommends graduates, students, and former students for positions in universities, colleges, junior colleges, high schools, and elementary schools, and for educational research, thereby assisting qualified candidates to obtain permanent employment or promotion in the work for which they have prepared themselves. A fee of \$5 is charged each candidate for clerical services; there is no expense to school officials seeking teachers through this office. Communications should be addressed to the Office of Teacher Placement, 123 Education Building.

The University reserves the right to refuse its services to candidates who seek positions for which they are not fully qualified. In every recommendation the aim is to keep in mind the best available persons, remembering candidates already employed as well as those who may be out of employment.

Candidates for positions are urged to inform the office of the result of their candidacy, and of their desires for future promotion or change of occupation.

#### **BUREAU OF VOCATIONAL REHABILITATION**

Men and women who have a physical or mental disability which handicaps them vocationally or which might be expected to handicap them vocationally are eligible for the services of the Bureau of Vocational Rehabilitation of the State Department of Education. These services include vocational counseling and guidance, training (with payment of costs such as books, fees, tuition, etc.), and placement, and are available at no cost to the individual.

A Vocational Rehabilitation Officer is available on the Los Angeles campus for interviewing applicants. Appointments may be made in the Office of Veterans Affairs, 321 Administration Building, or by contacting the regular Vocational Rehabilitation Office at 811 Black Building, 357 South Hill Street, Los Angeles; telephone MAdison 7631. A counselor on these benefits is available Mondays, Tuesdays, and Fridays in Room 321, Administration Building. This service may be applied for by both veterans and nonveterans.

#### **SELECTIVE SERVICE (DRAFT)**

Selective service information and counseling on draft status are available Mondays and Fridays at the Office of Veterans Affairs (Division of Special Services), 321 Administration Building. Requests for deferments for status or for training or occupational deferment are made by this office upon application by the student.

#### **STUDENT COUNSELING CENTER**

The services of a staff of trained clinical counselors are available to regularly enrolled students of the University. Assistance in the choice of and preparation for educational and vocational objectives and with personal-social problems

is provided. Individual interviews are arranged by appointment in Room 324, Administration Building. Testing is done as a basis for counseling. A vocational library is available for reference.

Application forms for and information regarding the National Teachers Examinations, Graduate Record Examination, and the Medical College Admission Test are available in the Center. Certain special testing projects for departments and colleges within the University are also administered through the Center.

### **VETERANS AFFAIRS**

An Office of Veterans Affairs, in charge of a Coördinator of Veterans Affairs, has been established by the University to maintain liaison between veterans and the Veterans Administration, the State Department of Veterans Affairs, and other agencies offering veterans educational benefits and to assist veterans in becoming assimilated in the life and spirit of the University. In addition, a Veterans Administration Training Officer maintains an office on the campus for the purpose of supervising disabled veterans training under the provisions of Public Law 16. The office of the Coördinator of Veterans Affairs is located in Room 321, Administration Building; and the Veterans Administration Office is located in Room 115, Building 1L.

Counseling centers are located on or in the vicinity of each campus. Services of these centers are available to eligible veterans without cost. They offer vocational counseling which may include aptitude testing and the use of the center's library of occupational materials, as well as extensive interviewing.

In order to enroll under the provisions of Public Law 346 (G. I. Bill), veterans must present an original or supplemental Certificate of Eligibility (Veterans Administration Form 7-1953) and register within the University's announced registration period to obtain full veterans benefits. In order to enroll under the provisions of Public Law 16 (Rehabilitation), authorization to complete such enrollment must be obtained from the United States Veterans Administration Office and received by the Office of Veterans Affairs prior to registration. Veterans should apply to their local United States Veterans Administration Regional Office in sufficient time to receive their Certificates of Eligibility or proper authorization prior to registration, or be prepared to pay all expenses (tuition, books, fees, and supplies). Refunds of such expenditures may be made later to the veteran student based upon the effective date of the Certificate of Eligibility.

Information regarding educational benefits available from the State of California may be obtained from the State Department of Veterans Affairs located at 700 Capitol Avenue, Sacramento, California, or by writing to P. O. Box 1559, Sacramento, California.

Veterans who are transfers from any other campus of the University of California without a change of objective, and whose training under Public Law 346 has not been interrupted in excess of four months, need present only a Coördinator's Transfer Notice from the Office of Veterans Affairs on the campus last attended. Veterans whose training has been interrupted four or

more months must present a Supplemental Certificate of Eligibility. If the transfer is into a different Veterans Administration region, the veteran should request a transfer of his files to the proper Regional Office.

### **UNDERGRADUATE SCHOLARSHIPS**

The Committee on Undergraduate Scholarships and Prizes of the University of California, Los Angeles, annually recommends the award of a number of scholarships for undergraduate students. Because of the limited number of scholarships available, the Committee is constrained to restrict the awards primarily to students who have completed successfully at least one semester on the Los Angeles campus. A few awards will be recommended for students entering for the first time from accredited California high schools, California junior colleges, or other collegiate institutions in California. Application blanks which give all necessary information may be obtained from the Office of the Dean of Students. These blanks must be filed with the Office of the Dean of Students, 232 Administration Building, Los Angeles 24, during the periods December 15 to February 1 (for resident students) and December 15 to March 1 (for entering students) preceding the academic year for which the awards are to be made; if they are received later than the indicated deadlines they will not be considered. The Committee will accept applications from students meeting certain minimum requirements as to scholarship, financial need, and character and promise; will rate all candidates with respect to these items; and will base its recommendations for awards upon the relative ratings of all the candidates applying during the application period specified above. Some of the scholarships are available only to students with special qualifications in addition to those mentioned above; these special qualifications are listed on the application blank.

### **Alumni Scholarships**

The U.C.L.A. Alumni Association makes available each year a number of scholarships for entering freshmen from accredited California high schools, and a limited number for students entering for the first time from California junior colleges, or other acceptable collegiate institutions in California. These scholarships are tenable on any of the University of California campuses, with specification by the individual at the time of application. Application blanks which give all necessary information may be obtained from the Office of the Dean of Students, 232 Administration Building, Los Angeles 24. These blanks must be filed with the Office of the Dean of Students during the period December 15 to March 1 preceding the academic year for which the awards are to be made; if they are received later, they will not be considered. The Committee on Undergraduate Scholarships and Prizes will accept applications from students meeting certain minimum requirements as to scholarship, financial need, and character and promise. In the selection of individuals for recommendation for these awards, the Faculty Committee, with the advice of the Alumni Committee, will choose applicants with not only substantial scholas-

tic ability but also high character and outstanding qualities of leadership, who give promise of reflecting credit on themselves and the University.

The California (Berkeley) Alumni Association also makes available a number of scholarships for entering students, and they also are tenable on any of the campuses of the University, with the particular one specified at time of application. Blanks which give all necessary information for application for these scholarships may be obtained from the Committee on Undergraduate Scholarships, 201 Administration Building, Berkeley 4.

### **GRADUATE SCHOLARSHIPS AND FELLOWSHIPS**

For information concerning graduate scholarships, consult the **ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION.**

### **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.

All loans are repayable as soon as possible without defeating the purpose of the loan or seriously inconveniencing the students.

Applications should be filed at least ten days in advance. For further information, apply to the Dean of Students, 232 Administration Building.

### **PRIZES**

The generosity of alumni and friends of the University provides each year for competitive prizes and awards in several fields. These are ordinarily announced at Commencement in June of each year.

### **PUBLIC LECTURES, CONCERTS, AND ART EXHIBITS**

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

The musical interests of the University are served by the Artists' Concert Series and other specially announced musical events. Each year three young artists are chosen by competitive auditions and are presented as a special feature of the annual Concert Series. Tuesday Noon Recitals and Friday Noon Organ Recitals are presented weekly throughout the year. The Tuesday Recitals feature the A Cappella Choir, the Madrigal Singers, the Glee Clubs, the University Band, the University Symphony Orchestra, opera workshop, individual student artists, and members of the music faculty. All of these events are open to the public. The University Friends of Music, an organization for the promotion of chamber music, offers memberships to persons interested.

The Department of Art schedules a series of exhibitions of painting, design, and craftwork in its exhibition hall. These illustrate the work of students, local artists, national exhibitors, and occasionally of old masters.



Dance recitals are regularly presented under the auspices of the Department of Physical Education and the Dance Wing of the Campus Theater.

A season of four plays is presented each semester by the Department of Theater Arts and the Campus Theater.

### THE ASSOCIATED STUDENTS

Student self-government, with its accompanying co-curricular program, is organized and administered by the Associated Students, in which all undergraduates hold membership by virtue of paying at registration the regular University incidental fee. The organization has an executive council composed of a president, vice-president, three representatives-at-large, presidents of the Associated Women Students, Associated Men Students, Graduate Students Association, and the University Recreation Association, the National Students Association Coördinator, the Organizations Control Board Chairman, six student board chairmen, a faculty representative, an alumni representative, and the Graduate Manager. The Council administers the general business of the association. Activities of men's and women's affairs, and special interest fields such as publications, speech activities, the arts, athletics, recreation, and departmental and professional areas are coördinated by the executive council. Offices of the Associated Students are in Kerekhoff Hall, a gift to the University of Mrs. William G. Kerekhoff of Los Angeles.

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

The U.C.L.A. Students' Store is owned and operated by the Associated Students.

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

### STUDENT ORGANIZATION WORKSHOP AND CONSULTATION SERVICE

The University recognizes the important values of student participation in co-curricular activities. A professional consulting staff, work space, and reference materials are provided in the Student Organization Workshop to help all individual students and student leaders with their groups develop and execute plans for rich and satisfying social programs. A constant evaluation of co-curricular activities in relation to the total University educational program is the responsibility of this personnel service. Detailed information may be secured at Room 242, Administration Building.

**RELIGIOUS FACILITIES**

In the immediate vicinity of the campus, at 10845 LeConte Avenue, is the University Religious Conference, where official representatives of the Baptist, Catholic, Congregational, Disciple, Episcopal, Jewish, Latter-Day Saints, Lutheran, Methodist, and Presbyterian denominations have student headquarters. Additional facilities are available for Catholic students at the Newman Club, 840 Hilgard Avenue. The Y.W.C.A. occupies its own building, at 574 Hilgard Avenue, near the entrance to the campus; the Y.M.C.A. has its office in the same building, at 572 Hilgard Avenue. The Christian Science Organization reading room and headquarters are located at 560 Hilgard Avenue, near the entrance to the campus.

At these centers are held religious discussion groups, lectures, Bible classes, social gatherings, luncheons, dinners, and other student meetings.

# **REQUIREMENTS IN THE SEVERAL COLLEGES, SCHOOLS, AND CURRICULA**

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## **COLLEGE OF LETTERS AND SCIENCE**

THE curricula of the College of Letters and Science are designed to provide the student with opportunities to broaden his culture and to prepare him for specialized professional studies. These curricula lead to the degree of Associate in Arts, normally at the end of the fourth semester, and to the degree of either Bachelor of Arts or Bachelor of Science, normally at the end of the eighth semester.

A liberal education presupposes a reasonably wide distribution of courses that contribute to a desirable balance of intellectual interests. To this end the student is required to select courses in the lower division that deal with general fundamentals of human knowledge. In the more diverse offering of the upper division the student is relatively free to concentrate his attention upon courses in a field of interest best suited to his aptitudes and purposes.

Each student therefore chooses a field of concentration in the upper division which may be a program of related courses within a single department (departmental major), or a group of coördinated courses involving a number of departments (interdepartmental curriculum), or, under certain circumstances, an organized group of courses chosen to meet a student's special need (individual field of concentration). The pursuit of such definite courses of study necessarily requires a knowledge of antecedent courses known as "prerequisites." With the assistance of his counselor, the student is expected to select those lower division courses which are related to his proposed advanced study. Through such guidance and selection, continuity in a chosen field of learning is assured.

### **REQUIREMENTS FOR ADMISSION TO THE UPPER DIVISION AND FOR THE DEGREE OF ASSOCIATE IN ARTS**

In order to be admitted to the Upper Division of the College of Letters and Science, students must have completed at least 60 units of college work with a grade-point average in all work done in the University of not less than 1.00 (a C average), and must have satisfied requirements (A), (B), (C), (D), and at least three of the six requirements under (E), (F), and (G) below. However, the remaining requirements from (E), (F), and (G), must be completed prior to graduation. In fields of concentration requiring unusually heavy preparation, additional postponements are possible, as follows: requirements (B), (E), (F), and (G), or any portion of them, may be postponed to the upper division on recommendation of the department and approval of the Executive Committee of the College. These authorized postponements are listed

on page 60. While requirement (B) should, so far as possible, be satisfied by work done in the high school, work done prior to graduation from high school will not be counted as part of the 60 units. Students who transfer to the Los Angeles campus of the University of California with the requirements for upper division standing in the College of Letters and Science at Berkeley completed shall be admitted to the Upper Division in this College and not held for the requirements of this section.

(A) *General University Requirements.*†

- (1) *Subject A.* An examination in Subject A (English Composition) is required for all entrants at the time of their first registration in the University. For further regulations concerning Subject A, see page 35.
- (2) *Military Science* (6 units), or *Air Science* (6 units), or *Naval Science* (12 units), 4 semesters (men).
- (3) *Physical Education*, 4 semesters (2 units).

(B) *Foreign Language.* At least 16 units in not more than two languages.

- (1) The first two years of high school work in a foreign language will be counted in satisfaction of 4 units of this requirement; the third and fourth years in the same language will be counted in satisfaction of 4 units each. Only work of grade C or higher may be counted.§
- (2) If a new language is begun on the college level it may not apply on this requirement unless course 2, or the equivalent, with its prerequisites is completed.
- (3) This requirement may also be satisfied by passing a proficiency examination in one language.
- (4) Courses given in English by a foreign language department will not be accepted in fulfillment of this requirement.
- (5) College credit for the mother tongue of a foreigner and for its literature is allowed only for courses taken in native institutions of college grade, or for upper division and graduate courses actually taken at the University of California or at another English-speaking institution of approved standing.

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

(D) *English Composition.* At least 3 units in English composition with a grade of C or better. This requirement may also be satisfied by passing a proficiency examination in English composition set and administered by the

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

§ Any student who because of lapse of time or other circumstance feels unable to continue successfully a language begun in high school may consult the department of the language concerned regarding the possibility of repeating all or a part of the work for credit. Such credit would count on the 60 units required for the degree of Associate in Arts and on the 120 units required for the bachelor's degree; but credit is not allowed toward the required 18 units in foreign language for both the high school and college work thus duplicated.

Department of English with the approval of the Executive Committee of the College. A bona-fide student from abroad, who has learned English as a foreign language and in whose secondary education English was not the medium of instruction, may satisfy this requirement by completing English 33B with a grade of C or better.

**(E) *Natural Sciences.***

- (1) At least 5 units in physical science, chosen from the following list:

Astronomy 1A, 7, 100

Chemistry 1A, 2A, 2

Geography 1A

Geology 2, 3, 5, 101

Mathematics, one course from C, D, or 1, 3A, 5A, 5B, 37, Statistics 1

Meteorology 3

Physics 1A, 1B, 1C, 1D, 2A, 2B, 10

- (2) At least 5 units in biological science, chosen from the following:

Anthropology 1

Bacteriology 1, 6

Biology 12

Botany 1, 2

Life Sciences 1A-1B (both 1A and 1B must be completed to count on science requirement)

Paleontology 101, 111, 136, 137

Psychology 1B

Zoology 1A, 1B

**(F) *Social Sciences.***

- (1) A 6-unit lower division year-course in history, chosen from the following:

History 4A-4B or 5A-5B or 7A-7B or 8A-8B

- (2) At least 6 units in social sciences exclusive of history and including courses in at least two subjects, chosen from the following list:

Anthropology 2

Economics 1A, 12, 13, 101

Geography 1B

Political Science 1, 2, 101, 103

Psychology 1A, 101

Public Health 5

Sociology 3, 101

**(G) *Humanities.* Two of the following three groups:**

- (1) *Literature.* At least 4 units in English, American, or any foreign literature, in the original language or in translation, selected from the following list:

English 46A, 46B, 115, 117J, 125C, 125D, 130A, 130B, 133, 135, 136, 190A, 190B

French 109A, 109B, 109M, 109N

- German 104A, 104B, 118A, 118B, 121A, 121B  
 Greek 101, 114, 180A, 180B  
 Humanities 1A-1B  
 Italian 103A, 103B, 109A, 109B  
 Latin 5A, 5B, 180A, 180B  
 Oriental Languages 112, 182  
 Scandinavian 141A, 141B  
 Slavic Languages 130, 133  
 Spanish 102A, 102B, 103A, 103B, 104A, 104B
- (2) *Philosophy*. A 6-unit lower division year course in philosophy, selected from the following:  
 Philosophy 6A-6B, 20A-20B
- (3) *The Arts*. At least 4 units selected from the following:  
 Art 1, 10A, 10B, 11A, 11B, 31A, 31B, 131A, 131B  
 Music 20A, 20B, 30A, 30B, 127

The degree of Associate in Arts will be granted on the following conditions:

(A) The candidate shall have completed not less than 60 units which may be counted toward the bachelor's degree, with an average grade of C in all courses undertaken in this University.

(B) The candidate shall have completed either

(1) Requirements (A) to (G), inclusive, above; or

(2) The lower division courses specified as prerequisite for a field of concentration, plus requirements (A) to (G) less exemptions authorized for that field of concentration by the Executive Committee of the College.

(C) The candidate shall have completed at least the two final semesters (24 units of work) in residence at the University and at least the final semester in the College of Letters and Science.

(D) The above requirements shall have been completed at least one semester prior to receipt of the bachelor's degree.

#### Authorized Exemptions and Deferrals

The following exemptions and deferrals have been authorized in the fields of concentration listed below. Exemptions granted for the Associate in Arts in one of these fields become requirements for the bachelor's degree if the student changes his field of concentration after receipt of the Associate in Arts degree. Requirements deferred to the upper division must be completed before receipt of the bachelor's degree.

#### Major in Chemistry

##### Exemptions:

1. Either (F-1), or (F-2); and
2. Either (E-2), or one of the two required groups under (G).

##### Deferrals:

Requirements (B), (E), (F), and (G) may be postponed to the upper division. Upper division standing and the Associate in Arts degree will

be granted to chemistry majors who have completed 60 units of college work with an average grade of C (1.0); who have completed requirements (A), (C), (D), and all but 4 units of (B); who have completed the preparation for the major in chemistry except for German (3PS) or Physics (1C) (not both); and who have completed any two of the following requirements: (E-2), (F-1), (F-2), (G-1), (G-2), (G-3), and Chemistry 6B.

*Curriculum in Earth Physics and Applied Geophysics*

**Exemptions:**

1. Requirement (F-2); and
2. One of the two groups required under (G).

**Deferments:**

Requirements (B), (E-2), and (G).

*Major in Geology*

**Exemptions:**

1. Requirement (F-2); and
2. One of the two groups required under (G).

**Deferments:**

Requirements (B) and (G).

*Major in Mathematics*

**Exemption:** Requirement (F-1).

**Deferments:**

Requirements (E-2) or (F-2), and both of the groups required under (G).

*Major in Meteorology*

**Deferments:**

1. 4 units of requirement (B).
2. Requirement (F-2), and
3. One of the two groups required under (G).

*Premedical Curriculum*

**Exemptions:**

1. (F-1) or (F-2); and
2. One of the two groups required under (G).

**REQUIREMENTS FOR THE BACHELOR'S DEGREE**

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

(A) The minimum number of units for the bachelor's degree shall be 120, of which at least 108 shall be in courses taken from the Letters and Science List of Courses (see page 62), and at least 42 shall be in upper division courses from the Letters and Science List. At least 12 of these upper division units shall be outside a single department, and not more than 42 units of upper division courses taken in one department may be counted toward the bachelor's degree. Not more than 4 units in prescribed lower division courses in physical education may be counted toward the bachelor's degree. No credit will be allowed for work completed at a junior college after the student has completed 70 units toward the degree.

A grade-point standing of C (1.00) or higher must be maintained in all courses undertaken in this University.

(B) The candidate shall have completed requirements (A) to (G), inclusive, above, except for exemptions authorized for his field of concentration (see page 60).

Students who transfer to the Los Angeles campus of the University of California having completed the requirements for upper division standing of the College of Letters and Science at Berkeley shall not be held for the above requirements.

(C) The candidate shall have met the University requirement in American History and Institutions (see page 36).

(D) The candidate shall have satisfied the requirements of a field of concentration in the College of Letters and Science. Before the degree is granted, the department or committee in charge of the student's field of concentration must certify that the student has completed the requirements for the field of concentration.

(E) The candidate shall have been registered in the College of Letters and Science while completing the final 24 units of work. This regulation applies to students entering this University from other institutions or from University of California Extension, and to students transferring from other colleges of this University (see degree residence, page 37).

The degree of Bachelor of Arts shall be granted to all candidates who qualify for the bachelor's degree, except that the degree of Bachelor of Science shall instead be granted to candidates who have completed such fields of concentration as the Executive Committee of the College may designate as leading to that degree.

### **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 42 units in upper division courses (numbered 100-199) required in the upper division must be selected from the same list.

Any course not included in the Letters and Science List of Courses but required or accepted as part of a field of concentration or as a prerequisite therefor, will, for students in that field of concentration, but for no others, be treated as if it were on the Letters and Science List of Courses.

The following list refers to the courses as given in the departmental offerings for the fall and spring semesters, 1950-1951.

#### **Agriculture:**

Agricultural Economics. 101A, 116.

Botany. All undergraduate courses.

Entomology. 1, 126, 134, 144.

Irrigation and Soils. 110A.

Plant Pathology. 120.

Subtropical Horticulture. 111.

**Air Science.** All undergraduate courses.



**Anthropology and Sociology:**

Anthropology. All undergraduate courses.

Sociology. All undergraduate courses.

Art. 1, 10A, 10B, 11A, 11B, 12A, 12B, 31A, 31B, 42, 45, 110A, 110B, 111A, 111B, 120A, 120B, 130A, 130B, 131A, 131B, 141A, 141B, 151A, 151B, 161A, 161B, 171A, 171B, 180, 181A, 181B, 191A, 191B.

Astronomy. All undergraduate courses.

Bacteriology. All undergraduate courses.

Business Administration. 1A-1B, 131, 133, 135, 160.

Chemistry. All undergraduate courses.

**Classics:**

Latin. All undergraduate courses.

Greek. All undergraduate courses.

Economics. All undergraduate courses.

Education. 101, 102, 106, 110, 111, 170, 197.

Engineering. 11A-11B, 1FA, 2, 15A-15B, 15AB, 102B, 102C.

**English:**

English. All undergraduate courses.

Speech. All undergraduate courses except 142A, 142B.

Folklore. All undergraduate courses.

French. All undergraduate courses.

Geography. All undergraduate courses.

**Geology:**

Geology. All undergraduate courses.

Mineralogy. All undergraduate courses.

Paleontology. All undergraduate courses.

**Germanic Languages:**

German. All undergraduate courses.

Scandinavian Languages. All undergraduate courses.

History. All undergraduate courses.

Home Economics. 113, 114, 143, 154, 170.

Humanities. All undergraduate courses.

Italian. All undergraduate courses.

Linguistics. All undergraduate courses.

**Mathematics:**

Mathematics. All undergraduate courses.

Statistics. All undergraduate courses.

Meteorology. All undergraduate courses.

Military Science and Tactics. All undergraduate courses.

Music. All undergraduate courses except 108A, 108B, 110, 111A, 111B, 112, 116, 140A, 140B, 141A, 141B, 142A, 142B, 158, 161, 164, but not more than 8 units from 40A, 40B, 41A, 41B, 42A, 42B, 43A, 43B, 44A, 44B, 48A, 48B, 52A, 52B, 53A, 53B, 60, 61, 62, 63, 64.

Naval Science. All undergraduate courses.

Oceanography. All undergraduate courses.

Oriental Languages. All undergraduate courses.

Philosophy. All undergraduate courses.

Physical Education. 1, 26, 44, 130, 139, 150, 151, 155.

Physics. All undergraduate courses.

Political Science. All undergraduate courses.

Psychology. All undergraduate courses.

Public Health. 5, 100A, 106, 110, 145, 147A.

Slavic Languages. All undergraduate courses.

Spanish and Portuguese:

Spanish. All undergraduate courses.

Portuguese. All undergraduate courses.

Theater Arts. 7, 8, 9, 24, 103, 104, 105, 169.

Zoölogy:

Zoölogy. All undergraduate courses except 4, 136, 136C.

Life Sciences. 1A-1B.

Biology. All undergraduate courses.

## HONORS

*Honorable Mention with the Degree of Associate in Arts.*

1. Honorable mention is granted with the degree of Associate in Arts to students who attain at least an average of two grade points for each unit undertaken.
2. The list of students who receive honorable mention with the degree of Associate in Arts is sent to the chairmen of departments.
3. A student who gains honorable mention has thereby attained the honor 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. The department of the student's major is named in the list.
2. The honor list includes the names of:
  - (1) Students who have received honorable mention with the degree of Associate in Arts and who are in their first semester of the upper division.
  - (2) Upper division students who have an average of at least two grade points for each unit undertaken in all undergraduate work at the University of California, Los Angeles.
  - (3) Other upper division students specially approved for listing in the honor 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 field of concentration with distinction, and who have a general record satisfactory to the Committee on Honors.
2. Before Commencement each department determines, by such means as it

deems best (for example, by means of a general final examination), which students it will recommend for honors at graduation, and reports its recommendations to the Registrar.

3. Students who in the judgment of their departments display marked superiority in their major subject may be recommended for the special distinction of highest honors.
4. The Committee on Honors will consider departmental recommendations and will confer with the several departments about doubtful cases. The Committee is empowered at its discretion to recommend to the Committee on Graduation Matters that honors be not granted to any student who has failed to attain a B average in the field of concentration, 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 annual COMMENCEMENT PROGRAMME.

*Honors Privilege Course.* An honor student pursuing a departmental field of concentration may have (subject to the approval of the instructor concerned and the Dean of the College) the privilege of taking each semester one elective course not offered by him in satisfaction of requirements in the field of concentration and not related to the field of concentration, in which he shall be marked "passed" or "not passed." The quality of work required of an honor student to be marked "passed" will be higher than that required for a barely passing letter grade. In calculating grade-point standing, units gained in this way shall not be counted. The maximum number of units which may be earned under this provision is 12. Petitions for such credit will not be accepted later than the first week in the semester.

### REGULATIONS GOVERNING THE FIELD OF CONCENTRATION

(A) A field of concentration shall consist of not less than 24, nor more than 42 units of upper division courses.

(B) The fields of concentration shall be designated as *departmental*, *interdepartmental*, or *individual*.

- (1) A departmental field of concentration (or major) shall consist of a group of coördinated upper division courses, of which at least two-thirds of the units are in one department, set up and supervised by a department.
- (2) An interdepartmental field of concentration (or curriculum) shall consist of at least 36 units of coördinated upper division courses, of which less than two-thirds are in one department, set up and supervised by a committee appointed by the Executive Committee of the College.
- (3) A student who has some unusual but definite academic interest, for which no suitable major or curriculum is offered in the University of California, and who has completed at least two semesters of work (a minimum of 24 units) in the University with a grade-point aver-

age of 2.00, or higher, may, with the consent of the Dean of the College and with the assistance of a faculty adviser appointed by the Dean, plan his own field of concentration.

(C) Each upper division student must designate his field of concentration on his study-list card, he must register with the department or committee in charge of his field of concentration, and his study list must be approved by a representative of the department or committee before it will be accepted by the Registrar. A department or committee may designate the Dean of the College as its representative.

(D) An upper division student may change his field of concentration only by permission of the Dean of the College and of the department or committee in charge of the field of concentration to which the student petitions to transfer. No change of field of concentration will be permitted after the opening of the student's last semester.

(E) Students who fail to attain a grade-point average of at least 1.00 in work taken in the prerequisites for the field of concentration, or in courses in the field of concentration, may, at the option of the department or committee in charge, be denied the privilege of continuing in that field of concentration.

(F) All students must take at least one course in their field of concentration each semester during their last, or senior year.

(G) Students who are admitted to senior standing in the College of Letters and Science (Los Angeles) on the basis of credit from another institution, from University Extension, or from another college or school of the University must complete, subsequent to such admission, at least 18 units of upper division courses, including at least 12 units in their field of concentration. The Executive Committee of the College shall have authority to reduce this requirement in the case of students transferring from the College of Letters and Science at Berkeley.

In the College of Letters and Science a student may take any course for which he has completed the prerequisites, if he has attained upper division standing or such other standing as may be required for the course.

Only the following courses may be counted in satisfaction of the field of concentration: (1) courses in resident instruction\* at the University of California, Los Angeles campus, or at another college or university; (2) courses in University Extension with numbers having the prefix "X," "XB," "XL," or "XSB."

#### **ORGANIZED FIELDS OF CONCENTRATION IN THE COLLEGE OF LETTERS AND SCIENCE**

A field of concentration consists of a substantial group of coordinated upper division courses in one or more departments. The details of the student's program in his field must be approved by his official adviser. Before undertaking this program the student must, in most cases, complete the special courses which are essential requirements for the completion of his work and which are listed as preparation for it.

\* Resident instruction is defined as that which is offered to students in regular attendance during the fall and spring semesters and the Summer Session.

Not more than 42 units of upper division courses taken in one department after receiving upper division standing will be counted toward the bachelor's degree. **NOTE.**—In economics, this limitation is inclusive of courses in business administration.

The field of concentration must, in its entirety, consist (1) of courses taken in *resident instruction* at this or another university, or (2) of courses taken in the University of California Extension with numbers having the prefix XL, XB, XSB, or X.

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

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

See Study-List Limits on page 38.

The College offers majors or curricula leading to the degree of Bachelor of Arts in the following fields:

#### *Majors Leading to the Bachelor's Degree*

The College offers majors (departmental fields of concentration) in the following fields. These majors lead to the degree of Bachelor of Arts unless otherwise noted.

Anthropology	Geography	Oriental Languages
Applied Physics†	Geology	Philosophy
Art History	German	Physics
Astronomy	Greek	Political Science
Bacteriology	History	Psychology
Botany	Italian	Slavic Languages
Chemistry†	Latin	Sociology
Economics	Mathematics	Spanish
English	Meteorology	Speech
French	Music	Zoology

#### *Curricula Leading to the Bachelor's Degree*

The College offers curricula (interdepartmental fields of concentration) leading to the degree of Bachelor of Arts in the following fields:

Astronomy-Mathematics  
 Astronomy-Physics  
 Earth Physics and Applied Geophysics  
 Elementary and Kindergarten-Primary Teaching  
 International Relations  
 Latin-American Studies  
 Prelibrarianship  
 Premedical Studies  
 Presocial Welfare  
 Pretheology  
 Public Service

Requirements of these curricula are listed in detail in the following pages.

† Leading to degree of Bachelor of Science.

*Individual Fields of Concentration Leading to the Bachelor's Degree*

A student with an unusual but definite academic interest, for which no suitable curriculum is offered in this University, and who has completed at least two semesters of work (a minimum of 24 units) in the University with a grade-point average of 2.00 or higher may, with the consent of the Dean and the assistance of a faculty adviser appointed by the Dean, plan his own field of concentration. Conditions: (1) the plan must be approved by the Executive Committee of the College; (2) the faculty adviser shall supervise the student's work and sign his study list; (3) the Dean must certify the student for graduation. All rules for fields of concentration not in conflict with this provision apply to individual fields of concentration.

**CURRICULA LEADING TO DEGREES****CURRICULUM IN ASTRONOMY-MATHEMATICS**

*Committee in Charge of the Curriculum:* J. Kaplan (chairman), Samuel Herick, Angus E. Taylor.

**Lower Division**

Required: Astronomy 2 (2), 4 (3), 7 (3), Physics 1A-1B-1C-1D (12) or, with the consent of the adviser, Physics 2A-2B; Mathematics 5A-5B, 6A-6B or 1-3A, 3B, 4A-4B (14).

**Upper Division**

The curriculum comprises 36 upper division units in astronomy, mathematics and physics of which at least 12 units must be taken in each of the first two departments.

I. Required: Astronomy 112, 115 (6 units), Mathematics 119A and three of the courses 108, 124, 125, 126 (12 units), Physics 105.

II. Electives in astronomy, mathematics, and physics. The following courses are recommended: Astronomy 108 or Mathematics 135, Astronomy 117A-117B, Mathematics 119B, 122A-B, Physics 108B, 121.

**CURRICULUM IN ASTRONOMY-PHYSICS**

*Committee in Charge of the Curriculum:* J. Kaplan (chairman), J. W. Green, D. M. Popper.

**Lower Division**

Required: Astronomy 2 (2), 4 (3), 7 (3), Physics 1A-1B-1C-1D (12) or, with the consent of the adviser, Physics 2A-2B, Mathematics 5A-5B, 6A-6B or 1-3A, 3B, 4A-4B (14).

**Upper Division**

The curriculum comprises 36 upper division units, distributed as follows:

I. Required: Astronomy 117A-117B (6), Physics 105 (3), 108B (3), 121 (3), Mathematics 110A-110B (4) or 119A (3).

II. Electives in astronomy, mathematics, and physics, of which at least 6 units must be in astronomy, and all of which must be in courses approved for the individual.

**CURRICULUM IN EARTH PHYSICS AND APPLIED GEOPHYSICS**

*Committee in Charge of the Curriculum:* L. B. Slichter (chairman), J. B. Ramsey, D. S. Saxson.

This curriculum is designed to provide training in physics, chemistry, mathematics, and geology, which are basic to geophysics. The requirements of the petroleum and mining industries for exploration experts, and the demands of educational and research institutions, indicate the desirability of a broad training in the physical sciences for those intending to enter either the field of applied geophysics or the general field of the physics of the earth. The curriculum below is subject to modification to meet the needs or interests of individual students.

**Lower Division**

Required: Chemistry 1A-1B (10), Geology 5 (4), 3 (3), Mineralogy 6 (4), Mathematics 5A-5B (8), 6A-6B (6), or Mathematics 1-3A, 3B, 4A-4B (14), Physics 1A-1B-1C-1D (12).

**Upper Division**

Required: Geology 102A-102B (6), 103 (4), Geophysics 122 (3), Mathematics 110A-110B (4), Physics 107 (3), 107C (2). Recommended: Chemistry 110A-110B (6), 111 (4), Geology 110 (3), 111 (3), 116 (3), Mathematics 126 (3), 135 (3), Physics 105 (3), 110 (3), 112 (3), 116A (3), 116C (2).

**CURRICULUM IN ELEMENTARY AND KINDERGARTEN-PRIMARY TEACHING**

*Committee in Charge of the Curriculum:* A. E. Longueil (chairman), John Hockett, G. F. Lehner, F. P. Rolfe, C. M. Zierer, Miss Virginia Richard (secretary).

Adviser: Miss Virginia Richard.

Consult Mr. Hockett or Miss Richard concerning requirements.

**CURRICULUM IN INTERNATIONAL RELATIONS**

*Committee in Charge of the Curriculum:* J. E. Spencer (chairman), W. Gorter, M. W. Graham, T. P. Jenkin, J. W. Olmsted.

This curriculum is designed primarily for students in the College of Letters and Science whose interests, while not specialized, fall in the field of international relations and modern diplomacy. Students interested in preparing for the American Foreign Service examinations should consult the adviser with respect to additional courses.

**Lower Division**

Required: Political Science 1-2 (3-3); History 4A-4B, 5A-5B, or 8A-8B (3-3); Economics 1A-1B (3-3); Geography 1A-1B (3-3). Recommended: Anthropology 1-2 (3-3); Economics 12 (3).

**Upper Division**

The curriculum comprises 36 upper division units, distributed as follows:

I. General requirements (24 units): (a) Political Science 125 (3), and 127 (3), or Political Science 130A-130B (3-3); (b) Political Science 133A-133B (3-3); (c) Geography 181 (3); (d) History, 6 units from 140B (3), 147 (3), 178 (3), or 148A-148B (3-3); (e) Economics 107, 108 or 195 (3).

II. Field requirements: At least 12 units in one of the four following fields of specialization (to be distributed in not less than two departments):

- (a) *Far Eastern Affairs*: Political Science 136 (3), 138 (3), 159 (3); History 191A-191B (3-3), 192A-192B (2-2), 194A-194B (3-3), 195A-195B (2-2); Geography 124A-124B (3-3).
- (b) *Latin-American Affairs*: Political Science 126 (3), 150A-150B (3-3); History 160 (3), 161 (3), 162A-162B (3-3), 166A-166B (2-2), 169 (3); Geography 122A-122B (3-3).
- (c) *European Affairs*: Political Science 154 (3), 155 (3), 157 (3); History 143 (3), 144 (3), 145 (3), 147 (3) [if not offered under I, above], 148A-148B (3-3) [if not offered under I, above], 149A-149B (3-3), 149C (3); Geography 123A-123B (3-3), 173 (3).
- (d) *British Empire Affairs*: Political Science 152 (3), 153 (2); History 153A-153B (3-3), 156 (3), 157 (3), 158A-158B (3-3), 159 (3), 196B (3); Geography 125 (3).

Recommended: Political Science 112 (3), 120 (2); Economics 196 (3), 197 (3).

Candidates for the degree in this curriculum will be required to give evidence, normally by examination, of their ability to read current literature on international relations in one modern language: French, German, Spanish, Russian, or Italian. With permission, candidates may offer other languages not native to them.

#### CURRICULA IN LATIN-AMERICAN STUDIES

*Committee in Charge of the Curriculum*: H. J. Bruman (chairman), R. L. Beals, J. A. Crow.

The curricula in Latin-American Studies are designed to serve the needs of the following classes of students: (1) students preparing to teach Spanish in the secondary schools; (2) students preparing for advanced study in the social sciences, primarily in the Latin-American field; (3) students planning careers which will necessitate residence in or knowledge of Latin America, such as teaching, business, scientific research, engineering, journalism, or government service; (4) students desiring a general education focused on this particular area. Selection of courses should be governed in part by the objective of the student.

#### Lower Division

Required: Spanish 4 and 44A-44B; Portuguese 1 and 2; Geography 1A; Anthropology 1; History 8A-8B; 9 units chosen from: Economics 1A-1B; Geography 1B, Political Science 1, 2.

#### Upper Division

*Curriculum I* (for students preparing to be teachers of Spanish, including candidates for the general secondary credential with a teaching major in Spanish and a teaching minor in social sciences): Spanish 101A-101B (may be omitted if 20 or 25A-25B have been completed with a grade of A or B), 102A-102B (prerequisite: Spanish 42A-42B), 104A-104B, 116A-116B; 18 to 24 units of additional courses chosen from the list below. Courses must be chosen from at least three departments, with at least 6 units from each of two departments other than Spanish, and at least 15 units of courses of Latin-American content (indicated below by asterisks).

Candidates for the general secondary credential may complete a teaching minor in social science by meeting the requirements of this curriculum. Com-



pletion of the teaching major in Spanish also requires 6 units of graduate courses in Spanish after completion of the A.B. degree. Candidates for the credential must take Psychology 1A, 1B (or 33) and 18 units of prescribed courses in Education. For further information consult the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION and the appropriate adviser.

*Curriculum II* (for students desiring a general education or careers in business, research, or government service): Spanish 104A-104B; 6 units chosen from Spanish 101A-101B, 116A-116B, Portuguese 101A-101B; 30 units of additional courses chosen from the list below. Courses must be chosen from at least three departments, with at least 9 units from each of two departments other than Spanish, and at least 20 units of courses of Latin-American content (indicated below by asterisks).

*Additional Courses:* Anthropology 101, 105, 140\*, 141\*; Economics 195, 196, 197, 199; Folklore 145; General Philology 170, 171; Geography 113, 122A-122B\*, 131, 165, 175, 199\*; History 160\*, 161, 162A-162B\*, 166A-166B\*, 169\*, 178, 188, 199\* (Section 9); Music 136; Political Science 126\*, 150A-150B\*, 199A-199B\* (Section 7); Portuguese 123\*; Sociology 143, 144, 150\*, 186; Spanish 108\*, 114\*, 124\*, 134\*, 140\*.

#### MEDICAL TECHNOLOGY

*Adviser:* Mrs. Meridian G. Ball.

For requirements, see program given under the Department of Bacteriology in later pages of this bulletin.

#### CURRICULUM IN PRELIBRARIANSHIP

*Committee in Charge of the Curriculum:* R. G. Vosper (chairman), J. C. King, J. E. Phillips.

*Advisers:* Mr. Powell in charge.

The prelibrarianship curriculum is designed to meet the needs of students who plan to pursue a general course in a graduate library school. The requirements of library schools and the demands of the profession indicate the desirability of a broad background in liberal arts subjects for students who plan to enter the general field of public and university library work. Proficiency in at least one foreign language is advantageous.

Students who intend to specialize in scientific, industrial, or other technical fields of librarianship should complete a major in the appropriate subject under the direction of the department concerned, rather than pursue the prelibrarianship curriculum. Students primarily interested in public school librarianship are advised to complete the requirements for a general teaching credential as described in the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

Students interested in librarianship as a career should be advised that, in general, applications for admission to the accredited library schools from persons more than thirty-five years of age are considered only when the applicants hold responsible library positions from which they can obtain leaves of absence.

To be admitted to the prelibrarianship curriculum a student must file a "Prelibrarianship Plan" which has been approved by an authorized library adviser, and which meets general requirements stated on the following page.

- (1) One year in each of two of the following languages: French, German, Italian, Russian, Spanish. Additional study in at least one of the two languages is strongly recommended.
- (2) Lower division courses:
- (a) Requirements of the College of Letters and Science.
- (b) Prerequisites for upper division courses selected by the student.
- (c) Recommended electives:
- |                  |                         |
|------------------|-------------------------|
| Astronomy 1      | Economics 2             |
| Bacteriology 6   | English 1B, 31, 46A-46B |
| Life Sciences 1A | Speech 1A               |
| Botany 1         | Philosophy 6A-6B        |
| Chemistry 2      | Physics 10              |
| Geology 2        |                         |
- (d) Ability to type is recommended by many library schools and is generally recognized as an asset to the professional librarian.
- (3) Upper division courses: At least 36 upper division units chosen from the fields listed below, with no less than 12 units in one field, and no less than 6 units in each of four other fields. The particular choice of courses should be determined by the student in consultation with a library adviser on the basis of the student's individual interest and needs. (Courses marked with asterisks have lower division prerequisites.)

I. *Art and Music:*

Art 131A\* (2), 131B\* (2), 161A-161B\* (4); Music 111A-111B\* (6), 127 (2), 130\* (2), 136 (2), 142\* (2).

II. *Education:*

Education 101 (3), 102 (3), 106 (3), 110\* (3), 147 (3), 180 (3).

III. *English and American Literature:*

English 110 (3), 114A-114B\* (6), 117J (3), 122A-122B\* (6), 125C-125D (6), 125G-125H\* (6), 130A-130B (4), 190A-190B (4).

IV. *Foreign Language and Literature:*

French 109MN (6); German 121A-121B (4); Greek 180A-180B (4); Italian 103A-103B\* (6); Latin 180A-180B (4); Spanish 102A-102B\* (6), 103A-103B\* (6); Folklore 145\* (3); General Philology 170 (3).

(Note: Upper division survey courses in the foreign language itself may be substituted for survey courses in translation.)

V. *History, Economics, and Political Science:*

History 101 (3), 153A-153B\* (6), 162A-162B\* (6), 179\* (3), 188\* (3), 191A-191B\* (6), 198\* (3); Economics 100A\* (3), 103\* (3), 108\* (3), 135\* (3); Political Science 103\* (3), 110 (3), 127 (3), 143\* (2), 146 (2), 148\* (3), 172\* (3), 181\* (3), 184\* (3), 185\* (3).

VI. *Psychology, Anthropology, and Sociology:*

Psychology 110\* (3), 120\* (2), 126\* (2), 134\* (2), 143\* (2), 145A-145B\* (4), 147\* (3), 168\* (3), 175\* (3); Anthropology 101\* (3), 103\* (3), 125 (3); Sociology 161\* (3), 143\* (3), 144\* (3), 145\* (3), 189\* (3).

**CURRICULUM IN PREMEDICAL STUDIES**

(Leading to the Degree of Bachelor of Arts)

*Committee in Charge of the Curriculum:* R. M. Dorcus (chairman), G. H. Ball, F. Crescitelli, M. S. Dunn, J. A. Gengerelli, G. J. Jann, N. B. Nelson.

A premedical student who plans to earn the bachelor's degree before entering a medical school may major in any one department in which he fulfills the departmental requirements. On the other hand, if he desires to make use of the Interdepartmental Field of Concentration, he should choose *one* of the course combinations listed below.

**Preparation:** English 1A-1B (6), Chemistry 1A-1B, 8, 9, 5A (19), Zoölogy 1A-1B, 4, 100 (14), Physics 2A-2B (8), or 2A, 1C, 1D (10), or 1A, 1B, 1C, 1D (12), French 1, 2 (8), or German 1, 2 (8).

**Curriculum:** At least 36 units of coördinated upper division courses in two of the following departments—Bacteriology, Chemistry, Physics, Psychology, Public Health, Zoölogy. Not more than 21 units may be taken in one of these departments. The combinations of departments which may be chosen are as follows:

- (1) **Bacteriology and Chemistry:** Bacteriology 1,\* 103; Chemistry 5A, 8, 9 (only 6 of these 9 units may be counted as upper division); 4 units chosen from Chemistry 108A-108B, 109A-109B, 110A-110B. Additional upper division units chosen from: any upper division course or courses in bacteriology; Chemistry 107, 131, 112A-112B, 110A, 110B, 111, 111B, 108A, 108B, 109A, 109B, 137.
- (2) **Bacteriology and Physics:** Bacteriology 1,\* 103; Mathematics 3B,\* 4A;\* Physics 107, 107C, 121. Additional upper division units chosen from: any upper division course or courses in bacteriology; Physics 105, 108A, 108B, 108C, 116A, 116C, 114A, 124.
- (3) **Bacteriology and Psychology:** Bacteriology 1,\* 103; Psychology 106A, 108, 168. Additional upper division courses chosen from any upper division course or courses in bacteriology and/or psychology.
- (4) **Bacteriology and Public Health:** Bacteriology 1,\* 103; Public Health 5;\* 12 units chosen from 100A, 106, 110, 125, 186, 145, 160A, 162, 170. Additional upper division courses chosen from any upper division course or courses in bacteriology.
- (5) **Bacteriology and Zoölogy:** Bacteriology 1,\* 103; Zoölogy 100, 111, 111C, 130. Additional upper division courses chosen from any upper division course or courses in bacteriology and/or zoölogy.
- (6) **Chemistry and Physics:** Chemistry 5A, 8, 9 (only 6 of these 9 units may be counted as upper division); Chemistry 109A-109B; Physics 107, 107C, 121; Mathematics 3B,\* 4A.\* Additional upper division courses chosen from: Chemistry 103, 107, 131, 132, 137, 112A, 112B, 108A, 108B, 110A, 110B, 111, 111B, 130A, 130B; Physics 105, 108A, 108B, 108C, 116A, 116C, 114A, 124.
- (7) **Chemistry and Psychology:** Chemistry 5A, 8, 9 (only 6 of these 9 units may be counted as upper division); 4 units chosen from Chemistry 108A, 108B, 109A-109B, 112A, 112B; Psychology 106A, 108, 185. Additional upper division units chosen from: Chemistry 107, 131, 112A (course 112A-112B

\* Preparation for field of concentration and may not count on 36 units of upper division courses.

may be substituted for courses 8 and 9); Chemistry 112B, 110A, 110B (Course 110A-110B may be substituted for course 109A-109B); Chemistry 111, 111B, 108A, 108B, 109A, 109B, 137; any upper division course or courses in psychology.

- (8) *Chemistry and Public Health*: Chemistry 5A, 8, 9 (only 6 of these 9 units may be counted as upper division); 4 units chosen from: Chemistry 108A, 108B, 109A-109B; Public Health 100A, 106, 110, 125, 186, 145, 160A, 162, 170 (note prerequisite: 5\*). Additional upper division courses chosen from: Chemistry 107, 108A, 108B, 109A, 109B, 110A, 110B (course 110A-110B may be substituted for course 109A-109B), 111, 111B, 131, 112A, 112B, 137.
- (9) *Chemistry and Zoölogy*: Chemistry 5A, 8, 9 (only 6 of these 9 units may be counted as upper division); 4 units chosen from courses 108A, 108B, or 109A-109B; Zoölogy 100, 101A, 101B, 118A, 130. Additional upper division units chosen from: Chemistry 107, 131, 112A, 112B (courses 112A and 112B may be substituted for courses 8 and 9); Chemistry 110A, 110B (may be substituted for course 109A-109B); Chemistry 111, 111B, 108A, 108B, 109A, 109B, 126A, 126B, 137; any upper division course or courses in zoölogy.
- (10) *Physics and Psychology*: Mathematics 3B,\* 4A;\* Physics 107, 107C, 121; Psychology 106A, 131, 185. Additional upper division units chosen from: Physics 105, 108A, 108B, 108C, 116A, 116C, 114A, 124; any upper division course or courses in psychology.
- (11) *Physics and Public Health*: Mathematics 3B,\* 4A;\* Physics 107, 107C, 121; Public Health 5;\* 12 units from 100A, 106, 110, 125, 186, 145, 160A, 162, 170. Additional upper division units chosen from: Physics 105, 108A, 108B, 108C, 116A, 116C, 114A, 124.
- (12) *Physics and Zoölogy*: Mathematics 3B,\* 4A;\* Physics 107, 107C, 116A, 116C, 121; Zoölogy 100, 101A, 101B, 118A, 130. Additional upper division courses chosen from: Physics 105, 108A, 108B, 108C, 116A, 116C, 114A, 124; any upper division course or courses in zoölogy.
- (13) *Psychology and Public Health*: Psychology 105A, 108, 145A-145B, 147; Public Health 5;\* 12 units from 100A, 106, 110, 125, 186, 145, 160A, 162, 170. Additional upper division courses chosen from any upper division course or courses in psychology.
- (14) *Psychology and Zoölogy*: Psychology 106A, 108, 168; Zoölogy 100, 106, 118A, 130. Additional upper division courses chosen from any upper division course or courses in psychology and/or zoölogy.
- (15) *Public Health and Zoölogy*: Public Health 5;\* 12 units from 100A, 106, 110, 125, 186, 145, 160A, 162, 170; Zoölogy 100, 106, 118A, 130. Additional upper division courses chosen from any upper division course or courses in zoölogy.

\* Preparation for field of concentration and may not count on 86 units of upper division courses.

**CURRICULUM IN PRESOCIAL WELFARE**

*Committee in Charge of the Curriculum:* G. Hildebrand (chairman), D. S. Howard, E. M. Lemert.

The field of concentration in social welfare is designed to give the student what is currently regarded as the most suitable background for professional training at the graduate level in a school of social welfare. Completion of this curriculum does not guarantee admission to such a school, and the student is expected to consult his adviser regarding the specific requirements of the school of social welfare he expects to enter.

*Preparation:* Anthropology 1-2 (6); Life Sciences 1A-1B (6); Sociology 101 (3); Psychology 1A-1B (6) or 101 (3); Economics 1A-1B (6) or 101 (3); Political Science 1-2 (6) or 103 (2); Statistics 1 (2).

*Basic Requirements:*

The curriculum in social welfare shall consist of 42 units in upper division Letters and Science courses of which 31 (or 32) units shall be distributed in the fields indicated below. The remaining 10 (or 11) units shall be elective and selected from the list below.

*Sociology*, at least 12 units, including Sociology 185 and 9 units of upper division sociology.

*Psychology*, at least 8 units selected from the following courses: Psychology 112, 113, 134, 144, 145A, 145B, and 147.

*Economics*, at least 5-6 units (two courses) selected from the following: Economics 131A, 150, 152.

*Political Science*, at least 6 units, including Political Science 181, and the remaining units to be selected from the following: Political Science 171, 172, 184, 185, and 187.

*Electives:*

Ten (or 11) units to complete the field shall be chosen from the following list of courses in consultation with, and approval of, an adviser. Courses in the list above, if not used to satisfy the Basic Requirements, may be added to the list of electives below.

Anthropology 103, 125, 151, 165; Economics 100A, 103, 106, 107, 131B, 133, 151, 156A-156B; History 131A-131B, 174, 176; Philosophy 104A-104B, 114, 183; Political Science 113, 166, 186; Psychology 105, 148, 168; Sociology 120, 126, 142, 143, 144, 145, 161, 168, 181, 182, 186, 189; Home Economics 113, 116, 143, 144; Public Health 106, 110, 125, 170.

**CURRICULUM IN PUBLIC SERVICE**

*Committee in Charge of the Curriculum:* W. W. Crouch (chairman), P. Neff, H. A. Turner.

The curriculum in public service is designed to be of assistance to students who wish to qualify themselves for positions in government work. It should be noted that a large percentage of government positions are open only through

competitive examinations. The curriculum, therefore, is designed to allow the student to coördinate a program drawn from several departments in preparation for a general class of positions. Although the curriculum is primarily related to political science, it is designed to allow a broader training in administrative work than is permitted a departmental major.

### Lower Division

Required: Business Administration 1A-1B (3-3), Economics 1A-1B (3-3), Political Science 1-2 (3-3), Statistics 1 (2). In certain fields, other courses are prerequisite to upper division courses included in the curriculum:

*Public Personnel*—Psychology 1A-1B.

*Public Relations*—Six units of lower division history.

Recommended: Economics 2 (3), English 1A-1B (3-3), Speech 1A-1B (3-3), Mathematics D (3) or 1 (3), Psychology 33 (3).

### Upper Division

Required: Thirty-six units of upper division work, including: Political Science 141, 166 or 187, 172 or 184, 181, 185. (NOTE: If Statistics 1 or Economics 2 is not taken in the lower division, Business Administration 140 (4) may be taken in the upper division.) The program must be selected from one of the four fields:

#### I. *Public Personnel Administration*

Political Science 141 (3), 166 (3), 171 (3), 172 (3), 184 (3), 181 (3), 183 (3), 185 (3), 186 (3), 187 (3); Psychology 105A-105B (3-3), 185 (3); Business Administration 115 (3), 150 (4); Economics 150 (3), 152 (3), 155 (3).

#### II. *Public Management*

Political Science 113 (3), 141 (3), 143 (2), 146 (2), 166 (3), 168 (3), 171 (3), 172 (3), 181 (3), 183 (3), 184 (3), 185 (3), 186 (3), 187 (3); Business Administration 115 (4), 150 (3); Economics 131A-131B (2-2), 150 (3), 152 (3).

#### III. *Public Relations*

Political Science 125 (3), 127 (3), 141 (3), 142 (2), 143 (2), 146 (2), 148 (3), 166 (3), 167A-167B (3-3), 171 (3), 172 (3), 181 (3), 183 (3), 184 (3), 185 (3), 186 (3), 187 (3); Business Administration 115 (4), 150 (3); Economics 150 (3); History 171-172 (3-3) or 172-173 (3-3).

#### IV. *Financial Administration*

Political Science 141 (3), 143 (2), 166 (3), 167A-167B (3-3), 171 (3), 172 (3), 181 (3), 183 (3), 184 (3), 185 (3), 186 (3), 187 (3); Business Administration 115 (4), 120 (3), 121 (3); Economics 131A-131B (2-2), 133 (3).

Variations in the programs may be made with the approval of the adviser.

The curriculum in public service, which combines work of the departments of Political Science, Economics, Psychology, and Business Administration, prepares students for positions in governmental work other than foreign serv-

ice. The curriculum is of value also for students interested in careers as public relations counselors, personnel managers, etc.

During the past few years, governmental employment, both in the federal and local governments, has offered an attractive field to young men and women who have the proper training and interest. Governmental positions increasingly require specialized training in fields such as budgeting, personnel, engineering, and in government management. In addition to regular positions with the government, there are openings for part-time or full-time internship training in various governmental agencies in the Los Angeles area.

#### CURRICULUM IN RELIGION

*Committee in Charge of the Curriculum:* D. K. Bjork (chairman), A. Kaplan, Miss A. B. Nisbet.

*Preparation:* Greek and Latin, 16 units; English 1A-1B (6), 31 (2), 46A-46B (6); Psychology 1A-1B (6); Philosophy 20A-20B (6). Recommended: History 4A-4B.

*Upper Division:* 36 units from (A) and (B), with prescribed prerequisites.

(A) *Required Courses* (22 units): Speech 122 (3); History 121A-121B (3-3), 141A-141B (2-2); philosophy: 6 units from 104A-104B (3-3), 112 (3), 121 (3), 146 (3), 147 (3); Psychology 168 (3).

(B) *Selective Requirements* (14 units chosen from the following list): Economics 101 (3); Education 101 (3); English 106F (2), 156 (3), 157 (3); Greek 117A-117B (2-2); History 114 (2); Music 130 (2); philosophy: 3 units from the courses listed under (A); political science: 3 units from 110 (3), 112 (3), 127 (3).

(C) *Recommended Courses:* Anthropology 101 (3); Sociology 142 (3), 143 (3), 144 (3), 189 (3); Economics 150 (3), 155 (2), 158 (2); English 117J (3), 167 (3); History 142 (3), 147 (3), 176 (3), 178 (3), 191A-191B (3-3); Music 111A-111B (3-3), 131 (2); Philosophy 157 (3); Political Science 146 (2), 148 (3); Psychology 134 (2), 138 (2), 143 (2), 145A-145B (2-2), 175 (3).

#### PREPARATION FOR VARIOUS PROFESSIONAL CURRICULA

In addition to the curricula described in the preceding pages, all of which lead to the bachelor's degree, certain courses given at the University of California, Los Angeles, may be used as preparation for admission to the professional colleges and schools of the University in Los Angeles, in Berkeley, and in San Francisco.

##### PREBUSINESS CURRICULUM: TWO YEARS

The School of Business Administration, Los Angeles, offers a two-year undergraduate curriculum leading to the degree of Bachelor of Science and a graduate curriculum leading to the degree of Master of Business Administration. The prebusiness curriculum offered in the lower division of the College of Letters and Science, Los Angeles, is designed to prepare students to meet the entrance requirements specified by the Faculty of the School of Business Administration, Los Angeles. Applications for acceptance by the School of

Business Administration should be filed at the Dean's Office, Room 250, Business Administration-Economics Building, not later than July 1 for the fall semester and not later than December 1 for the spring semester.

Applicants for acceptance by the School of Business Administration, Los Angeles, must have completed an organized program of college work fulfilling the requirements for upper division standing in one of the colleges of the University, or the equivalent elsewhere (60 units with a C average). An organized program embraces a broad general education in the natural sciences, the social sciences, and the humanities—fields of knowledge that provide a useful foundation for students preparing themselves for positions of responsibility in business. Such a program is fulfilled by meeting the requirements for the Associate in Arts degree in the College of Letters and Science or by completing the prebusiness curriculum for upper division standing in the College of Letters and Science, Los Angeles. The following specific courses, however, are prerequisite to acceptance by the School of Business Administration, Los Angeles:

Business Administration 1A-1B, Principles of Accounting

Economics 1A-1B, Principles of Economics

Mathematics 2, Mathematics of Finance, or Mathematics 3B, First Course in Calculus

English 1A, English Composition

Completion of course 2 (or the equivalent) in a foreign language

Completion of at least one laboratory course in natural science at the college level

The prebusiness curriculum differs from the requirements for the Associate in Arts degree in the College of Letters and Science in the following respects:

1. The specific courses which are required for acceptance by the School of Business Administration, Los Angeles;
2. Completion of course 2 in a foreign language is required, rather than completion of 16 units in not more than two languages.

#### The Prebusiness Curriculum

The curriculum as set forth below includes the specific requirement for acceptance by the School of Business Administration and provides for meeting all of the requirements for the Associate in Arts degree in the College of Letters and Science with the exception of the language requirement. The specific courses acceptable on this curriculum must be selected from the courses listed under the Associate in Arts requirements for the College of Letters and Science (see pages 57-61). Students who wish to qualify for the Associate in Arts degree must complete all requirements (including the 16-unit language requirement in full) before transferring to the School of Business Administration.

(A) General University Requirements	Units
(1) Subject A .....	0
(2) Military, air, or naval science (minimum) .....	6
(3) Physical education .....	2



(B) Foreign language (completion of course 2)*	4
(C) Elementary algebra and plane geometry	0
(D) English composition (English 1A)	3
(E) Natural science	
(1) Physical science†	5
(2) Life science†	5
(F) Social sciences	
(1) Lower division year-course in history (History 7A-7B recommended)	6
(2) Social science exclusive of history, including courses in at least two subjects: Economics 1A (required for prebusiness curriculum) Elective (to be selected from list on page 59)	3 3
(G) Humanities. Two of the following three groups:	
(1) Literature	} 8-12
(2) Philosophy	
(3) The arts	
(H) Additional courses required for acceptance by School of Business Administration:	
Economics 1B	3
Business Administration 1A-1B	6
Mathematics 2 (prerequisites are Mathematics D, E, or 1)	6

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*Total Units 60-64*

#### DENTISTICAL CURRICULA

The College of Dentistry in San Francisco offers two curricula leading to the degree of Bachelor of Science and to the degree of Doctor of Dental Surgery. The student has the option, at the close of the second semester in the dental college, of registering in either one of two major curricula: (1) restorative dentistry, or (2) preventive dentistry. At the end of the sophomore year (fourth semester), a selected small group of students may enter the Honors Curriculum, which is designed to train outstanding students in the fields of dental research and teaching. In addition to these, there is a curriculum for the training of dental hygienists, leading to the degree of Bachelor of Science.

Classes are admitted to the College of Dentistry once a year, in September. Applications must be filed not later than April 15. Upon the satisfactory completion of all junior requirements and a bachelor's thesis, the dental student will be eligible for the degree of Bachelor of Science, and for the degree of Doctor of Dental Surgery upon the completion of two additional semesters. The degree of Bachelor of Science will be granted the student in the dental hygiene curriculum at the end of the fourth semester.

#### Admission to Dental Curricula†

All applicants for admission to the dental curricula must have completed at least 60 units of college work with a scholarship average satisfactory to the

\* Completion of course 2 in a foreign language or 3 years of one language in high school is required for the prebusiness curriculum. Sixteen units in not more than two languages are required for those students who desire to qualify for the Associate in Arts degree.

† Students in the prebusiness curriculum must include at least one laboratory course in meeting either requirement E-1 or E-2.

‡ Only the first two years of this curriculum are available on the Los Angeles campus.

Admissions Committee (approximately a B average), including the requirements (2)-(5) listed below. In addition, all applicants who meet the subject requirements must pass a performance test, designed to test manual dexterity. This test must be taken on the San Francisco campus, and is given during the period between the fall and spring semesters, and again as soon after the close of the spring semester as possible. The College of Dentistry reserves the right to limit enrollment on the basis of scholarship, results of the performance test, recommendations, and interviews. At the present time, because of limited facilities and the large number of applications, it is not possible for the College of Dentistry to act favorably upon applications from persons who have not had the major portion of their high school and preprofessional education and residence in California or in one of the far western states which does not have a dental school. The student will find himself more adequately prepared for the dental curricula if he has taken in high school the following subjects: English, 3 units; history, 1 unit; mathematics, 3 units (algebra, plane geometry, and trigonometry); chemistry, 1 unit; physics, 1 unit; foreign language, 2-4 units.

*Requirements for First and Second Years*

(1) *General University requirements:*

Subject A

Military science or air science (four semesters)

Physical education (four semesters)

American History and Institutions is prerequisite to the bachelor's degree. (Although this requirement may be satisfied in the College of Dentistry, it is preferable that it be completed in the pre dental program.)

(2) English or Speech (1A-1B)..... 6 units

(3) Science ..... 32 units

(a) Chemistry 1A, 1B, 8, 9..... 16

(b) Physics 2A, 2B..... 8

(c) Zoology 1A, 1B..... 8

(4) Trigonometry (Mathematics O)  
(if not completed in high school)

(5) Electives selected as indicated from the following groups... 15-20 units

(a) *Group I:* 2 year-courses selected from Anthropology 1, 2; Economics 1A-1B; Geography 1A-1B or 5A-5B; History 4A-4B, 7A-7B, 8A-8B; Mathematics, any 2 sequential courses, not including course C; Political Science 1, 2; Psychology 1A, and 1B or 33.

(b) *Group II:* Either (a) one year-course or year-sequence in foreign literature in translation, a year-sequence of any foreign language, English 46A-46B, Music 30A-30B, Philosophy 6A-6B, 20A-20B; or (b) Art 10A-10B, 11A-11B; or any two semesters of a foreign language in which at least 6 units have previously been completed or are completed concurrently.

The applicant who wishes to qualify for the degree of Bachelor of Science in addition to the degree of Doctor of Dental Surgery must complete satisfac-

torily a special project in the College of Dentistry and a thesis in the field of his major interest under the supervision of a faculty committee, and receive passing grades in 4 units of special instruction selected by the committee.

### Admission to the Dental Hygiene Curriculum\*

(Open to Women Only)

Applicants for admission to the dental hygiene curriculum must have completed at least 60 units of college work with a scholarship average satisfactory to the Admissions Committee, including the requirements (2)-(5) listed below. Students planning to enter this curriculum should make this fact known at the time of their first registration. The College of Dentistry reserves the right to limit enrollment if applications exceed the available facilities. The student will find herself more adequately prepared if she has taken in high school the following subjects: English, 3 units; history, 1 unit; mathematics, 3 units (algebra and plane geometry); chemistry, 1 unit; physics, 1 unit; foreign language, 3 or, preferably, 4 units).

(1) *General University requirements:*

Subject A

American History and Institutions (required for the bachelor's degree.

The examination in American History and Institutions may be taken in the College of Dentistry, but it is preferable to satisfy the requirement in the pre dental program. See page 36).

- |  |             |
|--|-------------|
| (2) English or Speech 1A-1B.....   | 6 units     |
| (3) Chemistry 1A, 8.....   | 8 units     |
| (4) Zoölogy 1A-1B.....   | 8 units     |
| (5) Either the degree of Associate in Arts from the University of California (or its equivalent), or the following program of courses: |             |
| (a) A year-course selected from each of the following groups:  |             |
| Group I: Anthropology 1, 2, Economics 1A-1B, History 4A-4B, 7A-7B, 8A-8B, Political Science 1, 2.                                      |             |
| Group II: Psychology 1A-1B, Home Economics 1A-1B, any two courses in public health,  |             |
| Group III: Philosophy, art, music, literature, foreign language .....  | 18-20 units |
| (b) Six additional units selected from any of the three groups listed under (a).....   | 6 units     |
| (c) Electives.....   | 12-16 units |

#### PRELIGAL CURRICULA

The University of California offers instruction in law in the School of Law in Los Angeles, in the School of Law in Berkeley, and in the Hastings College of Law in San Francisco.

\* Only the first two years of this curriculum are available on the Los Angeles campus.

Applicants for admission to the professional curricula of the *School of Law in Los Angeles* and *School of Law in Berkeley* leading to the degree of Bachelor of Laws must have received the degree of Bachelor of Arts or Bachelor of Science from the University of California, or an equivalent degree from a college or university of approved standing.

Applicants to the schools are also required (1) to have pursued a program of prelegal study in substantial conformity with the essentials of a satisfactory prelegal education as summarized below, (2) to have achieved a minimum grade-point average of 2.0 (B average) in the work of the last two prelegal years, and (3) to have achieved a satisfactory score on the Law School Admission Test given by the Educational Testing Service, P. O. Box 592, Princeton, New Jersey. Applicants having somewhat less than the B average but otherwise qualified may be admitted if the score on the Law School Admission Test gives exceptional evidence of capacity for the work of the professional curriculum. Applicants having substantially less than the B average will ordinarily be denied admission without reference to the Law School Admission Test.

Applicants must also submit satisfactory references as to character, including the names and addresses of not fewer than three disinterested and responsible persons to whom the applicant is well known and to whom the faculty may appropriately address inquiries with respect to the applicant's character. Wherever possible, the character references should include a member of the Bar who is a graduate of a law school approved by the American Bar Association.

In general, the law schools do not prescribe a prelegal curriculum. However, for the guidance of students who are looking forward to the study of law, the essentials of a satisfactory prelegal education are effectively summarized by the schools as follows:

In the first place, *the prelegal student should follow a plan of study which will assure adequate foundations for a broad culture.* Such a plan should include among its objectives: (1) a well-grounded facility in the use of English, written and spoken, and a wide acquaintance with the best of English literature; (2) a familiarity with at least the outlines of human history and a thorough knowledge of the history of our own country and people; (3) an acquaintance with the great philosophers and an understanding of the progress and significance of philosophic thought; (4) a mastery of elementary logic and mathematics and some acquaintance with their applications in contemporary life; (5) an introduction to natural science and an appreciation of its tremendous importance in the modern world; and (6) a thorough knowledge of the elements of social science, including the essentials of economics, government, psychology, and other important social studies. Foundations must be laid in high school for the study of English, history, mathematics, and natural science. The prelegal student normally will be well advised to defer philosophy and the social studies until he has entered college. If prelegal study is planned effectively, the foundations for a broad culture may be laid in high school and in the first two years of college.

In the second place, *the prelegal student should acquire the intellectual discipline and experience which are to be derived from intensive work for a substantial period of time in a selected field of study.* This work should be carefully planned, and a special competence should be achieved in the selected field. It has been found that a well-chosen group of courses in economics may be related effectively to later professional study in law. An effective preprofessional training may also be planned with emphasis upon political science, history, business administration, psychology, English, philosophy, or similar fields. College courses in commercial or business law, planned primarily for non-prelegal students, should be included in the prelegal program only when they are prerequisites to other college work.

In the third place, *the prelegal student should begin the cultivation of professional standards of study as early as possible.* Few ideas are more fallacious or harmful than the notion that it is possible to dawdle through high school and college and then make the adjustment to high standards promptly upon entering the professional school. Essential habits of concentration and effective methods of study must be acquired and developed during the prelegal years. Careful reading and the constant exercise of practice in writing should be cultivated assiduously. Intelligently selected private reading should supplement the work of the classroom at all times. The law as a process of social adjustment is reflected in all aspects of life and the student who carelessly wastes the opportunities of his prelegal years cannot possibly present himself well prepared for professional training. A large proportion of failures in the professional school may be traced directly to the neglect of opportunities in high school and college. Distinguished achievement in high school and college is usually followed by distinction in the professional school and in later practice.

The ANNOUNCEMENT OF THE SCHOOL OF LAW and further information about the School of Law, Los Angeles, may be obtained by writing the School of Law, University of California, Los Angeles 24, California.

Further information about the professional curriculum in the School of Law, Berkeley, is contained in the ANNOUNCEMENT OF THE SCHOOL OF LAW, to be obtained from the Secretary of the School of Law, University of California, Berkeley 4, California.

*The Hastings College of Law, San Francisco*

Applicants for admission to the professional curriculum of The Hastings College of Law leading to the degree of Bachelor of Laws must present evidence of good moral character and must have completed at least 90 units of work acceptable for a bachelor's degree in the College of Letters and Science of the University of California, Berkeley, or of the University of California, Los Angeles.

An applicant who has taken academic work at educational institutions other than the University of California, Berkeley, or the University of California, Los Angeles, but who has not yet completed sufficient work to entitle him to a bachelor's degree, must have completed the equivalent of at least 90

units of work acceptable for a bachelor's degree in one of the colleges of Letters and Science of the University of California. Unless the holder of a bachelor's degree, each such applicant is required to submit a transcript of his record for evaluation by the Director of Admissions of the University of California, Berkeley, in order that his equivalent standing in one of the University's colleges of Letters and Science may be determined.

While none of the courses in the prelegal curriculum is prescribed by The Hastings College of Law, the student who intends to study law should first acquire a background of knowledge in history, economics, and current political and social theories. A knowledge of accounting and business methods will also be helpful. Moreover, a thorough training in English expression is essential. For these reasons, a student who contemplates the study of law at The Hastings College of Law is advised first to complete a full college or university course in nonprofessional subjects.

Further information concerning the professional curriculum is contained in the ANNUAL ANNOUNCEMENT, which may be secured from The Hastings College of Law, 515 Van Ness Avenue, San Francisco 2, California.

#### **PREMEDICAL CURRICULUM: THREE YEARS\***

It is assumed that as preparation for this curriculum the student will have completed in the high school the following subjects: English, 3 units; history, 1 unit; mathematics, 2 units (elementary algebra and plane geometry); chemistry, 1 unit; physics, 1 unit; foreign language (preferably French or German), 2 units. The requirements for the degree of Associate in Arts may be met more easily if the foreign language has been pursued four years in the high school. It is desirable that a course in freehand drawing be taken in high school. If possible, the student should also complete in high school intermediate algebra,  $\frac{1}{2}$  unit, and trigonometry,  $\frac{1}{2}$  unit, although these courses may be taken in the University.

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

#### **Admission to School of Medicine**

The minimum requirements of the University of California call for a combined seven-year course—three years spent in the academic departments of

\* This section applies both to the existing School of Medicine at San Francisco and to the newly created School of Medicine at Los Angeles which latter, however, will not be ready to admit first-year students to the professional curriculum before 1952.

the University and four years in the School of Medicine. These arrangements allow time for general cultural as well as medical studies and lead toward both the A.B. and M.D. degrees. Students who are able to do so are urged to spend four years or longer in the academic departments because there are many advantages in a premedical course of more than three years. This should not be interpreted as advising a student to apply for admission to the School of Medicine at the end of his junior year and, if he is not accepted then, to reapply at the end of the senior year. Candidates for the bachelor's degree, having the privilege of broad election from the various departments of the University, are advised to choose elective subjects not related to requirements specific to medicine in order that they may acquire a sound background in the humanities.

Applications for admission to the *September, 1951*, first-year class may be obtained *after October 1, 1950*, from the Admissions Office, 103 Pharmacy Building, The University of California Medical Center, San Francisco 22, California.

In order to be considered for the *September, 1951*, class, the student must file his formal application blank with the Admissions Office by *November 30, 1950*.

In addition, credentials of work already completed should be filed by *November 30, 1950*. Students are urged to obtain and file application blanks and to request credentials from other universities and colleges as *soon as possible after October 1, 1950*. The applicant is advised that a request to another university or college for his transcript should be made early, so that the university or college concerned will be able to get his record to the Admissions Office by *November 30, 1950*, at the latest.

An unofficial statement of courses in progress and of the work to be completed prior to admission to the School of Medicine should also be sent in.

*No application blanks will be issued by the Admissions Office after November 15, 1950.*

Applications must be accompanied by a draft or money order for \$5 in payment of the application fee.\* A deposit of \$50, which will apply on the first semester's tuition, will be required at the time of acceptance of an applicant to the School of Medicine. This deposit may be refunded if the student fails to meet the requirements, but it is not refundable if he accepts an appointment to another medical school, or for any other reason.

*Completion of requirements.* All requirements should normally be completed by the end of the regular semester just preceding that in which the student hopes to matriculate in the School of Medicine. A student entering the School of Medicine with only senior standing must meet the senior standing requirements of the College of Letters and Science at the University of California in Berkeley. Particular attention is called to the fact that these requirements include 16 units of a foreign language.

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\* Veterans who expect to enroll under the provisions of Public Law 346 (G.I. Bill of Rights), or Public Law 16, are not required to remit this fee with their applications, but should enclose a photostatic copy of their separation papers. A student who is enrolled on any campus of the University of California as an undergraduate student does not have to pay the application fee, nor does a student who has paid this fee at some time in the past have to pay it a second time.

**Basis of selection.** Enrollment in the School of Medicine is limited. Candidates for admission to the first-year class must present evidence of satisfactory high aptitude and scholarship, especially in the required subjects.† Applicants must take the Medical College Admission Test, administered for the Association of American Medical Colleges by the Educational Testing Service, Princeton, New Jersey. Two personal interviews are also required. The Committee on Admissions to the School of Medicine is authorized to refuse admission to a student with a low academic record, and reserves the right to reject any applicant on the ground of obvious physical, mental, or moral disability. The faculty of the School of Medicine also has the right to sever at any time the connection with the School of Medicine of any student who is considered to be physically, morally, or mentally unfit for a career in medicine.

**Medical College Admission Test.** Applicants for the September, 1951, class must take the Medical College Admission Test in the fall of 1950 unless this has been taken previously (see paragraph below). Placards announcing the date, time, and place of the test will be posted at the University of California, Los Angeles.

Ordinarily, no applicant may substitute his grade in a second or third test because it is higher than his first grade. However, the test should be repeated if, at the time of application, more than two years have elapsed since the first test.

**Personal interviews.** Appointments for personal interviews are made by the Dean's Office of the School of Medicine after (1) a formal application has been filed and (2) credentials checked and found satisfactory as to subjects and grades. Applicants whose scholarship and/or Medical College Admission Test score fall below the standards of the School of Medicine are rejected without being interviewed.

It is anticipated that interviews for the September, 1951, class will be held at the School of Medicine in San Francisco beginning about December 1, 1950, and continuing until the class has been selected. Each applicant is seen by two interviewers.

No student will be considered who cannot arrange to come to San Francisco to be interviewed. However, an applicant coming from a distance for the interview will do so entirely on his own responsibility. Merely appearing for the interviews will not guarantee admission.

**California applicants.** With the exception of the five places mentioned below, under "Out-of-State Applicants," selection of the class will be limited to California applicants.

To be considered a *California applicant*, a student must meet one of the following requirements:

(a) He must have completed *sixty* units or more of premedical work in an accredited college or university in the State of California, or

(b) He must be a *legal resident* of the State of California, who lived in the State *prior* to beginning of his premedical work and who left the State *temporarily* for the completion of all or part of his premedical work.

† See separate paragraph on Medical College Admission Test.



*Out-of-state applicants.* Not more than *five* students will be accepted who have taken their premedical work outside of the State of California.

(a) Of these five, *four* will ordinarily be selected from the following western states not having medical schools: Nevada, Arizona, Idaho, Montana, Wyoming, and New Mexico, or from the Territories of Alaska and Hawaii. To be considered in this category, *the applicant must be a legal resident of the state or territory concerned.*

(b) Ordinarily not more than one applicant will be accepted from outside of the continental United States, Alaska, and Hawaii. This applicant must have completed at least one year at the University of California or at an equivalent institution in the United States, one semester of which must have been completed previous to February 15 of the year of admission.

*Acceptance.* As soon as possible after the completion of the interviews, applicants will be notified by the Dean's Office of acceptance or rejection. *In the meantime, no student will be given notice of tentative acceptance.* A successful applicant who is unable to start work or who enters but finds it necessary to withdraw within the first year, loses his place and—if he desires to begin work in a later year—is required to reapply with that year's applicants.

Successful candidates must pass a satisfactory medical examination before registering in the School. Students in attendance in San Francisco are examined annually.

The State law governing the practice of medicine in California prescribes that every person, before practicing medicine or surgery, must produce satisfactory testimonials of good moral character and a diploma issued by some legally chartered medical school, whose requirements meet in every respect the Medical Practice Act of California as attested by the last annual approval of the California State Board of Medical Examiners. The requirements for matriculation in the University of California School of Medicine cover those set by the Association of American Medical Colleges, provided the high school program includes physics and chemistry.

For further information see the annual ANNOUNCEMENT OF THE SCHOOL OF MEDICINE, to be obtained from the Dean's Office, University of California School of Medicine, Medical Center, San Francisco 22.

*Premedical subjects.* For matriculation in the School of Medicine—the four-year course leading to the M.D. degree—the applicant must give evidence of sufficient training in physics, chemistry, biology, and in English literature and composition to enable him to undertake with profit the medical curriculum. He must have a good reading knowledge of a modern foreign language. A knowledge of Latin is also of great value.

The following courses given in the University on the Los Angeles campus represent the minimum preparation required in the subjects named: English 1A-1B or Speech 1A-1B; Chemistry 1A-1B (general inorganic chemistry), 5A (quantitative analysis), 8 (elementary organic chemistry); Physics 2A-2B (general physics); Zoölogy 1A-1B (general zoölogy), 4 (microscopic technique), 100 (vertebrate embryology). While 8 units of credit in a modern

foreign language will be accepted as fulfilling the requirement of reading knowledge, the attention of the student is directed to the advantages of having a more complete knowledge of a foreign language than may be acquired with this limited amount of work. Psychology 168 and Public Health 160A-160B are strongly recommended, though not required. The requirement of American History and Institutions must also be satisfied.

Besides taking the above-listed specific premedical subjects, the student must also be eligible for admission to senior standing in the College of Letters and Science of the University of California. This includes the attainment of the degree of Associate in Arts (or upper division standing), and the completion, after receiving the A.A. degree (or upper division standing), of a minimum of 24 units, 6 units of which must be in upper division courses. The total number of units of college credit which the student must present for senior standing must be at least 90.

After completing the work of the first year in the School of Medicine with the required scholarship average (reckoned in grade points), and having received as many grade points as units undertaken, the student will be recommended to receive the degree of Bachelor of Arts in the College of Letters and Science. (Thirty units of credit are allowed for the first year's work in the School of Medicine which, with the 90 units required for admission to the School, fulfill the 120-unit requirement for the A.B. degree.) Every candidate for the bachelor's degree must have fulfilled the requirement of American History and Institutions.

#### OTHER PROFESSIONAL CURRICULA IN THE UNIVERSITY

*Architecture.* Students in good standing having a minimum of 60 units of University credit will be admitted to the School of Architecture upon formal application filed with the Secretary of the School. In order to complete the prescribed curriculum in the indicated time, such students should also have completed the prerequisites to the work of the junior year. Only the academic courses in this program may be taken in the College of Letters and Science at Los Angeles; consequently, the student desiring a major in architecture is advised to enroll at Berkeley in order to complete the curriculum in four years.

*Journalism.* The graduate Department of Journalism at Los Angeles offers a one-year curriculum leading to the Master of Arts or the Master of Science degree in journalism. The A.B. degree of the University of California (Los Angeles or Berkeley), or its equivalent, and acceptance by the Graduate Division of the University of California are minimum requirements for admission. For full particulars consult the Courses of Instruction section of this bulletin, or write to the Chairman of the Graduate Department of Journalism, University of California, Los Angeles.

*Librarianship.* The School of Librarianship in Berkeley offers two separate curricula of two years subsequent to the bachelor's degree, leading at the end of the first year to the degree of Bachelor of Library Science, and at the end of the second year to a master's degree—ordinarily the Master of Library Science, but in certain cases the Master of Arts. The A.B. degree of the University of

California (Los Angeles or Berkeley) or its equivalent, a minimum grade-point average of 1.5 in the last two years of academic work, full graduate standing in the University, a satisfactory score on the Graduate Record Examination (Profile and Aptitude Tests) and a college year of each of two modern languages (preferably French and German) are required for admission to the B.L.S. program. For admission to the master's program the same requirements obtain except that a minimum 2.0 grade-point average in an accredited graduate library school is required.

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## COLLEGE OF AGRICULTURE

THE COLLEGE OF AGRICULTURE of the University of California offers at Los Angeles the plant science curriculum with the majors in subtropical horticulture, ornamental horticulture, and general horticulture leading to the degree of Bachelor of Science. The first two mentioned majors are not available on the other campuses where the College of Agriculture offers instruction. Graduate work is also offered at Los Angeles leading to the degrees of Master of Science and Doctor of Philosophy in horticultural science.

Students electing other majors in the plant science curriculum—agronomy, genetics, irrigation, plant pathology, pomology, truck crops, and viticulture—may spend the freshman and sophomore years at Los Angeles and then transfer to the campus, Berkeley or Davis, where their major work is offered. The same is true of students electing certain other curricula in the College of Agriculture—agricultural economics, agricultural education (general agriculture), entomology and parasitology, food science, soil science, preforestry, and pre-veterinary medicine. Students electing the animal science and landscape design curricula are advised to transfer after one year at Los Angeles. The first three years of the agricultural engineering curriculum are available in the College of Engineering at Los Angeles. Students who register 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 those offered at Los Angeles are requested to consult the PROSPECTUS OF THE COLLEGE OF AGRICULTURE (obtainable from the Office of the Dean) and the appropriate advisers in agriculture at Los Angeles.

Every student *must* consult his adviser each semester for guidance in meeting the requirements of the curriculum of his choice.

The Division of Botany of the College of Agriculture, Los Angeles, offers the major in botany in the College of Letters and Science. Graduate work is also offered which leads to the degrees of Master of Arts and Doctor of Philosophy in botanical science. Students who elect the major in botany are directed to register in the College of Letters and Science. Each student will be required to consult an educational counselor during his freshman and sophomore years, and thereafter an official adviser in the Division of Botany.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN AGRICULTURE

### PLANT SCIENCE CURRICULUM, MAJORS IN SUBTROPICAL HORTICULTURE, ORNAMENTAL HORTICULTURE, AND GENERAL HORTICULTURE

The candidate for the degree of Bachelor of Science in the College of Agriculture must complete the following requirements:

(1) The equivalent of four years of university residence. The senior year must be spent in the College of Agriculture, University of California.

The student should note that in order to complete the work in agriculture within the normal four-year period, prerequisites must be systematically met and the proper sequence of courses followed. Unnecessary delay will thereby be avoided. It is advisable, therefore, for the student who wishes to receive his bachelor's degree in agriculture at the University of California to take as much of his undergraduate program as possible in this University.

(2) One hundred and twenty-four units of university work, with at least an equal number of grade points, in addition to matriculation units and Subject A. (The Subject A examination in English Composition is required of every undergraduate student on or before his first registration in the University. Further regulations concerning Subject A are given on page 35.)

(3) Thirty-six of the 124 units must be in upper division courses (courses numbered 100-199). Not more than 4 units may be in lower division physical education courses.

(4) Nine units of mathematics, including trigonometry. Matriculation work may be offered toward this requirement, with each year of high school work valued at 3 units. The student normally satisfies this requirement before the end of his sophomore year in the University.

(5) American History and Institutions. The student may meet this requirement by passing an examination for which no credit is given, or by completing certain prescribed courses or course sequences. For details, see page 36.

(6) In addition, every student must complete the requirements as listed under the following curriculum:

#### PLANT SCIENCE CURRICULUM

(a) Students must complete the following:	Units
Chemistry (may include biochemistry) .....	16
Botany (including plant physiology) .....	9
Physics .....	6
Bacteriology .....	4
Economics .....	3
English or Speech .....	6
Genetics .....	4
Plant Pathology .....	4
Soils and/or Irrigation .....	6
Entomology .....	4
Zoölogy .....	3
Military, Air, or Naval Science and Physical Education .....	8-14

- (b) Students must also complete a major, the minimum requirement of which consists of 12 units of approved upper division courses in the field of the major.

**Freshman and Sophomore Years**

During the freshman and sophomore years the following schedule will normally be followed. For examples of programs in other curricula of the College of Agriculture students should consult the PROSPECTUS OF THE COLLEGE OF AGRICULTURE and the appropriate advisers for agricultural students at Los Angeles.

The College of Agriculture requirements for graduation are the same whether the student registers at Berkeley, Davis, or Los Angeles.

**Example of Minimum Program—Plant Science Curriculum**

	Units First Semester	Units Second Semester
<i>Freshman Year</i>		
*Military or Air Science (for men).....	1½	1½
Physical Education .....	½	½
English 1A or Speech 1A.....	..	3
Botany 1, 6 .....	5	4
Chemistry 1A-1B .....	5	5
Zoölogy 12.....	3	..
History 7A .....	..	3
	<hr/>	<hr/>
	15	17
<i>Sophomore Year</i>		
*Military or Air Science (for men).....	1½	1½
Physical Education .....	½	½
Physics 2A-2B .....	4	4
Chemistry 8 or 10, 5A.....	3 or 4	3
Subtropical Horticulture 2, 110.....	3	2
Economics 1A .....	..	3
Bacteriology 1 .....	..	4
English 1B or Speech 1B.....	3	..
	<hr/>	<hr/>
	15 or 16	18

There is no degree of Associate in Arts in the College of Agriculture. Consequently students who are unable to meet the above-outlined program of study during the first two years may take some of the requirements in their junior or senior years. It should be noted, however, that any great departure from the above program will delay graduation beyond the normal four-year period.

**Junior and Senior Years**

The additional required courses—Entomology 134 or 144; Botany 140 (Plant Genetics); 6 units from Irrigation and Soils 105, 110A, and 126; Plant Pathology 120 or 130; and American History and Institutions—together with such electives in any department as may be approved by the major adviser, will be

\* Or Naval Science (3 units per semester).

taken during the junior and senior years. For elective courses in other departments, see later pages of this bulletin.

Students should consult the major advisers concerning the 12 units required for the majors.

### 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** (obtainable from the Office of the Dean). Programs suitable for the conditions at Los Angeles may be had from the appropriate advisers in agriculture, who should be consulted.

## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

### MAJOR IN BOTANY

Since the major in botany is given in the College of Letters and Science, the requirements for the degree of Bachelor of Arts with the major in botany will be found under College of Letters and Science (see page 61).

### HONORS

Students who become candidates for the bachelor's degree in the College of Agriculture may be recommended for honors on the basis of the quality of the work done in the regular curriculum.

I. *Honorable Mention with Junior Standing* (that is, to students who have completed 64 units in their freshman and sophomore years).

- (1) Honorable mention is granted with junior standing to students who attain at least an average of two grade points for each unit of credit undertaken. Such students will remain in honors status unless their average for all work at the end of any semester falls below two grade points for each unit undertaken.
- (2) The list of students who receive Honorable Mention is sent to the chairman or study-list officer of the College before the beginning of the next semester.

II. *Honors with the Bachelor's Degree.*

- (1) Honors are granted at graduation only to students in honor status who have completed the major with distinction, and who have a general record satisfactory to the Study-Lists Committee.
- (2) Students who, in the judgment of the Study-Lists Committee, show marked superiority in their major subject may be recommended for the special distinction of Highest Honors.
- (3) A list of students to whom Honors or Highest Honors in the College have been awarded is published in the **COMMENCEMENT PROGRAMME**.

## COLLEGE OF ENGINEERING

THE COLLEGE OF ENGINEERING on the Los Angeles campus was established in November, 1944, under the terms of a special appropriation made by the State Legislature in the spring of 1943. Course offerings by the Department of Engineering were instituted in February, 1945.

The College of Engineering, Los Angeles campus, offers five curricula in Engineering leading to the degree of Bachelor of Science. The expansion of upper division course offerings now allows the completion of the Engineering Curriculum (leading to the bachelor's degree) on the Los Angeles campus by those students who have completed the junior year in engineering. This curriculum has been inspected recently for purposes of accreditation by the Engineers' Council for Professional Development. Students who wish to complete a curriculum in Agricultural, Civil, Electrical, or Mechanical Engineering will transfer to the Berkeley or Davis campus for the senior year. These four curricula have been accredited by the Engineers' Council for Professional Development.

The Department of Engineering, Los Angeles, also offers graduate courses in Engineering leading to the degrees of Master of Science and Doctor of Philosophy. Another building now under construction and an augmented staff will permit a greater number of students to engage in graduate study and research.

The student is advised to study carefully the course offerings and curricular arrangements in order that he may achieve the kind of training he desires. For example, the general field "Agricultural Engineering" is so presented as to provide experiences with machines, structures, processes, and the application of electricity to the farm. The functions stressed are operations, and to a lesser degree, design, maintenance, and management. Other curricular arrangements will provide different combinations of training for function utilizing various engineering systems. Elective courses may be chosen to fulfill the training requirements originally undertaken by the student. Because the courses and curricula are based upon the principle of complementary offerings on the several campuses of the University of California, students will often find it distinctly advantageous to transfer to other campuses to take courses which fit into their plan and to study under the faculty members who are experts in a given field. Such a transfer is effected most appropriately at the end of the junior year, with careful attention given to completion of course prerequisites. Faculty advisers will provide counsel and assistance in curricular and professional matters.

The College of Engineering and the Bureau of Occupations cooperate to place graduates. Undergraduates often obtain off-semester employment in engineering fields and many students are employed part time during their college residence. Students who are self-supporting proceed more slowly toward graduation than those who follow the regular schedule. Students who engage in

part-time employment or extracurricular activities may plan to spend more than four years by securing permission to register for fewer units each semester.

### ADMISSION TO ENGINEERING

*Matriculation requirements.\** A statement concerning matriculation requirements will be found on pages 24-26. High school subjects prerequisite to college courses required in all engineering curricula include: plane geometry, 1 unit; algebra, 2 units; trigonometry,  $\frac{1}{2}$  unit; mechanical drawing, 1 unit; chemistry, 1 unit, or physics, 1 unit (both are desirable). Without this preparation it will be necessary for the student to take equivalent courses in college, thereby barring him from regular courses and delaying his graduation.

*Admission to the College of Engineering.* Satisfaction of the matriculation requirements admits the student to the University but not necessarily to the College of Engineering. Admission to the College of Engineering is based primarily on the combined results of an entrance examination and a further consideration of previous scholastic achievement. There are two qualifying examinations: the Freshman Status Examination for admission to the lower division, and the Junior Status Examination for admission to the upper division. Students who do not have facility in the use of the English language will usually find it necessary to acquire this training before undertaking the engineering course of study.

The Junior Status Examination is given to all students just prior to completion of the sophomore year, irrespective of the school or campus in which the student has completed the first two years. Admission to upper division courses and continuation in the College of Engineering is based on satisfactory completion of this examination and a consideration of the student's grades in required freshman and sophomore subjects. Each undergraduate student transferring to the College of Engineering at the junior level must also take the Junior Status Engineering Examination and his admission to the college will be based upon satisfactory completion of the examination and upon his grades in required freshman and sophomore subjects. Places and times for the examination may be obtained from the Dean of the College of Engineering.

*Advanced standing.* For general information, see page 27. Many graduates of California high schools will find it desirable to complete the first and second years at junior college. Students transferring from other colleges and universities to the University of California for the study of engineering should have adequate training in the basic subjects of the curricula as outlined in the following pages.

*Inter-campus transfer.* Application blanks may be obtained at the Office of Admissions. Transfer will be restricted to students who are in good standing (C average or better) and who can also present adequate reason for wishing to transfer.

\* Enrollment in engineering courses is restricted to students registered at the University of California in the College of Engineering. A student registered in another college undertaking curricula in which engineering courses are prescribed will be admitted to these courses by petition approved by the Dean of his College and by the Dean of the College of Engineering.



**CURRICULA IN ENGINEERING**

Students who wish to graduate under the jurisdiction of the College of Engineering, Los Angeles, and who undertake their senior year on the Los Angeles campus must complete 140 units in accordance with the curriculum in engineering as published on the succeeding pages.

Students majoring in agricultural engineering and graduating under the jurisdiction of the College of Engineering, Los Angeles, must transfer to the Davis campus for their senior year and must complete 140 units substantially in accordance with the curriculum in agricultural engineering as published on the succeeding pages.

Students majoring in civil, electrical, or mechanical engineering and graduating under the jurisdiction of the College of Engineering, Los Angeles, must transfer to the Berkeley campus for their senior year and must complete 140 units in accordance with the curricula in civil, electrical, or mechanical engineering as published on the following pages.

Students who wish to complete the work for the degree under the jurisdiction of the College of Engineering on the Berkeley campus must complete all of the requirements of that college as printed in the **GENERAL CATALOGUE, DEPARTMENTS AT BERKELEY**. They may choose from the several curricula listed therein and they must transfer at the appropriate time.

Degree requirements may be completed in four years of residence. Each of the curricula leads to the degree of Bachelor of Science. In order to complete the requirements for the degree in four years students must register each semester for the number of units shown in the curriculum selected.

Upon admission to the University, engineering students are assigned to faculty advisers, and are under the guidance of the Dean of the College of Engineering. Study programs are arranged in conference with the adviser and must be approved by the Dean.

Students who plan to seek advanced degrees are referred to the **ANNOUNCEMENTS OF THE GRADUATE DIVISION, SOUTHERN AND NORTHERN SECTIONS**.

*Honors with the Bachelor's Degree.* In the College of Engineering students may receive honors with the bachelor's degree for high scholarship in the curriculum or for distinction in advanced work in any curriculum in the College of Engineering.

Students who in the judgment of the proper authorities display marked superiority may be recommended for the special distinction of highest honors.

## ENGINEERING CURRICULUM\*

	Units First Semester	Units Second Semester
<i>Freshman Year (Los Angeles Campus)</i>		
Subject A (if required).....	..	..
†Military or Air Science.....	1½	1½
Physical Education.....	½	½
Chemistry 1A-1B.....	5	5
Engineering 1LA, 1FA-2 (or 2-1LA, 1FA).....	3	3
Engineering 8.....	..	2
Engineering 48.....	1	..
Mathematics 5A-5B.....	5	3
Physics 1A.....	..	3
	16	18
<i>Sophomore Year (Los Angeles Campus)</i>		
†Military or Air Science.....	1½	1½
Physical Education.....	½	½
Engineering 15A-15B.....	3	3
Mathematics 6A-6B.....	3	3
Physics 1D-1C.....	3	3
•Electives (at least 8 units must be sociohumanistic).....	7	7
	18	18
(Satisfactory completion of the Junior Status Examination is prerequisite to upper division work in engineering.)		
<i>Junior Year (Los Angeles Campus)</i>		
Engineering 100A-100B.....	3	3
Engineering 102B.....	3	..
Engineering 103A.....	..	3
Engineering 104A-104B.....	2	2
Engineering 105A-105B.....	3	3
Engineering 108B.....	2	..
Engineering 108F.....	..	1
Mathematics 110C.....	3	..
•Electives.....	2	6
	18	18
<i>Senior Year (Los Angeles Campus)</i>		
Engineering 104C-104D.....	4	4
Engineering 113A.....	2	..
•Electives.....	12	12
	18	16

\* See asterisk (\*) footnote, page 97.

† See dagger (†) footnote, page 97.

\* A minimum of 24 units, of the total number of indicated units, must be pertinent to a declared major field of engineering endeavor. At least 18 of these units must be upper division courses (numbered above 100), and 6 units must be in the fields of engineering design and engineering economics.

A minimum of 18 units, of the total number of indicated electives, must be chosen from fields other than the declared major field of engineering endeavor, of which 8 units must be in the life sciences and the rest should be selected from the sociohumanistic offerings. Each student must satisfy the University requirement in American History and Institutions and any credits so earned will apply toward the completion of this nonmajor field elective requirement.

The major field in engineering and all electives are to be chosen by the student with the consent of his adviser.

## AGRICULTURAL ENGINEERING\*

	Units First Semester	Units Second Semester
<i>Freshman Year (Los Angeles Campus)</i>		
Subject A (if required).....	..	..
†Military or Air Science.....	1½	1½
Physical Education.....	½	½
Chemistry 1A-1B.....	5	5
Engineering 1LA, 1FA-2 (or 2-1LA, 1FA).....	3	3
Engineering 8.....	..	2
Engineering 48.....	1	..
Mathematics 5A-5B.....	5	3
Physics 1A.....	..	3
	16	18
<i>Sophomore Year (Los Angeles Campus)</i>		
†Military or Air Science.....	1½	1½
Physical Education.....	½	½
Engineering 15A-15B.....	3	3
Mathematics 6A-6B.....	3	3
Physics 1D-1C.....	3	3
**Electives.....	6	6
	17	17
Agricultural Engineering 49 (required field course at Davis, first Summer Session).....	6	..

(Satisfactory completion of the Junior Status Examination is prerequisite to upper division work in engineering.)

*Junior Year (Los Angeles Campus)*

Engineering 100A-100B.....	3	3
Engineering 102B.....	3	..
Engineering 103A.....	..	3
Engineering 104A-104B.....	2	2
Engineering 105A-105B.....	3	3
Engineering 108B.....	2	..
Engineering 108F.....	..	1
Mathematics 110C.....	3	..
**Electives.....	..	5
	16	17

\* This curriculum indicates the course requirement for graduation. However, certain variations may be made in the sequence of courses. Reductions in programs may be obtained in case of verified work commitments, health problems, etc. Increased programs may be attempted by students of proven, exceptional capacity. The consent of the student's counselor is required for all variations from the printed curriculum.

† Naval science may be substituted for military or air science and the excess units credited to nonmajor field electives. Additional elective courses may be substituted for military or air science by those students who are exempt from the requirement.

\*\* A minimum of 18 units, of the total number of indicated electives, must be chosen from fields other than the declared major field of engineering endeavor, of which 3 units must be in the life sciences and the rest should be selected from the sociohumanistic offerings. Each student must satisfy the University requirement in American History and Institutions and any credits so earned will apply toward the completion of this nonmajor field elective requirement.

The major field in engineering and all electives are to be chosen by the student with the consent of his adviser.

	Units First Semester	Units Second Semester
<i>Senior Year (Davis Campus)</i>		
Agricultural Engineering 113 .....	..	4
Agricultural Engineering 114 .....	3	..
Agricultural Engineering 115 .....	3	..
Agricultural Engineering 130 .....	..	1
Agronomy 1 .....	3	..
Irrigation 120 .....	3	..
Mechanical Engineering 151 (or Physics 112) .....	3	..
Mechanical Engineering 152A (or Chemistry 109) .....	..	3
Soil Science 106 .....	..	4
**Electives .....	3	3
	<hr/> 18	<hr/> 15

**CIVIL ENGINEERING\***

<i>Freshman Year (Los Angeles Campus)</i>		
Subject A (if required) .....	..	..
†Military Science .....	1½	1½
Physical Education .....	1	1
Chemistry 1A-1B .....	5	5
Engineering 11A, 1FA-2 (or 2-11A, 1FA) .....	3	3
Engineering 8 .....	..	2
Engineering 48 .....	1	..
Mathematics 5A-5B .....	5	3
Physics 1A .....	..	3
	<hr/> 16	<hr/> 18

<i>Sophomore Year (Los Angeles Campus)</i>		
†Military Science .....	1½	1½
Physical Education .....	1	1
Engineering 11B, 1FB .....	3	..
Engineering 15A-15B .....	3	3
Geology 5 .....	..	4
Mathematics 6A-6B .....	3	3
Physics 1D-1C .....	3	3
‡Electives .....	4	3
	<hr/> 18	<hr/> 18

\*\* See double asterisk (\*\*) footnote, page 97.

\* See asterisk (\*) footnote, page 97.

† See dagger (†) footnote, page 97.

‡ A minimum of 18 and a maximum of 22 units, of the total number of indicated electives, must be chosen from fields other than the declared major field of engineering endeavor, of which 3 units must be in the life sciences and the rest should be selected from the sociohumanistic offerings. Each student must satisfy the University requirement in American History and Institutions and any credits so earned will apply toward the completion of this nonmajor field elective requirement.

All other electives must be pertinent to a declared major field of engineering endeavor. One course in engineering economics must be included.

The major field in engineering and all electives are to be chosen by the student with the consent of his adviser.

(Satisfactory completion of the Junior Status Examination is prerequisite to upper division work in engineering.)

	Units First Semester	Units Second Semester
<i>Junior Year (Los Angeles Campus)</i>		
Engineering 100A-100B .....	3	3
Engineering 102B .....	3	..
Engineering 103A .....	..	3
Engineering 104A-104B .....	2	2
Engineering 105A-105B .....	3	3
Engineering 106C .....	..	3
Engineering 107A .....	..	3
Engineering 108B .....	2	..
Engineering 108F .....	..	1
Mathematics 110C .....	3	..
Electives .....	2	..
	18	18
<i>Senior Year (Berkeley Campus)</i>		
Civil Engineering 106 .....	2	..
Civil Engineering 108E .....	2	..
Civil Engineering 109A .....	2	..
Civil Engineering 111A .....	..	2
Civil Engineering 113 .....	2	..
Civil Engineering 116 or Engineering 113 .....	..	2
Civil Engineering 136 or 137 .....	3	..
Civil Engineering 161 .....	..	2
‡Electives .....	7	10
	18	16

#### ELECTRICAL ENGINEERING\*

<i>Freshman Year (Los Angeles Campus)</i>		
Subject A (if required) .....	..	..
†Military Science .....	1½	1½
Physical Education .....	½	½
Chemistry 1A-1B .....	5	5
Engineering 11A, 1FA-2 (or 2-11A, 1FA) .....	3	3
Engineering 8 .....	..	2
Engineering 48 .....	1	..
Mathematics 5A-5B .....	5	3
Physics 1A .....	..	3
	16	18
<i>Sophomore Year (Los Angeles Campus)</i>		
†Military Science .....	1½	1½
Physical Education .....	½	½
Engineering 15A-15B .....	3	3
Mathematics 6A-6B .....	3	3
Physics 1D-1C .....	3	3
‡Electives (at least 8 units must be sociohumanistic) .....	7	7
	18	18

‡ See double dagger (‡) footnote, page 98.

\* See asterisk (\*) footnote, page 97.

† See dagger (†) footnote, page 97.

(Satisfactory completion of the Junior Status Examination is prerequisite to upper division work in engineering.)

	Units First Semester	Units Second Semester
<i>Junior Year (Los Angeles Campus)</i>		
Engineering 100A-100B .....	3	3
Engineering 102B .....	3	..
Engineering 103A .....	..	3
Engineering 104A-104B .....	2	2
Engineering 105A-105B .....	3	3
Engineering 108B .....	2	..
Engineering 108F .....	..	1
Engineering 112 .....	..	3
Mathematics 110C .....	3	..
‡Electives .....	2	3
	18	18

<i>Senior Year (Berkeley Campus)</i>		
Engineering 113 .....	..	2
Electrical Engineering 111A .....	3	..
Electrical Engineering 116A .....	3	..
Electrical Engineering 132A .....	2	..
Electrical Engineering 133 .....	2	..
Mechanical Engineering 107 .....	..	3
‡Electives .....	8	11
	18	16

### MECHANICAL ENGINEERING\*

#### *Freshman Year (Los Angeles Campus)*

Subject A (if required) .....	..	..
†Military Science .....	1½	1½
Physical Education .....	½	½
Chemistry 1A-1B .....	5	5
Engineering 1LA, 1FA-2 (or 2-1LA, 1FA) .....	3	3
Engineering 8 .....	..	2
Engineering 48 .....	1	..
Mathematics 5A-5B .....	5	3
Physics 1A .....	..	3
	16	18

#### *Sophomore Year (Los Angeles Campus)*

†Military Science .....	1½	1½
Physical Education .....	½	½
Engineering 6 .....	..	3
Engineering 10B .....	2	..
Engineering 15A-15B .....	3	3
Mathematics 6A-6B .....	3	3
Physics 1D-1C .....	3	3
‡Electives (at least 8 units must be sociohumanistic) .....	5	4
	18	18

‡ See double dagger (‡) footnote, page 98.

\* See asterisk (\*) footnote, page 97.

† See dagger (†) footnote, page 97.

(Satisfactory completion of the Junior Status Examination is prerequisite to upper division work in engineering.)

	Units First Semester	Units First Semester
<i>Junior Year (Los Angeles Campus)</i>		
Engineering 100A-100B .....	3	3
Engineering 102B .....	3	..
Engineering 103A .....	..	3
Engineering 104A-104B .....	2	2
Engineering 105A-105B .....	3	3
Engineering 108B .....	2	..
Engineering 108F .....	..	1
Mathematics 110C .....	3	..
†Electives .....	2	6
	18	18
<i>Senior Year (Berkeley Campus)</i>		
Engineering 113 .....	..	2
Engineering Design 106 .....	4	..
Mechanical Engineering 124A-124B .....	3	3
Mechanical Engineering 131A-131B .....	4	4
†Electives .....	7	7
	18	16

## COLLEGE OF APPLIED ARTS

THE COLLEGE OF APPLIED ARTS was established on the Los Angeles campus of the University of California in 1939 in order to meet the demand for training of a specialized character which has a technical or professional appeal, to organize certain scientific and scholarly studies into suitable curricula which may be applied in the fields of industry and the arts, and to provide curricula for the training of teachers in specialized areas.

The College now offers majors in art, music, and theater arts, leading to the degree of Bachelor of Arts; and majors in business education, home economics, nursing, and physical education, leading to the degree of Bachelor of Science. Interdepartmental curricula leading to the degree of Bachelor of Science are offered in apparel design, apparel merchandising, and dance.

Nondegree curricula are offered in prenursing, preoccupational therapy, preoptometry, prepharmacy, and prepublic health.

By completing additional requirements set up by the School of Education, students may secure *teaching credentials* in connection with the majors in art, business education, home economics, music, physical education, and theater arts.

† See double dagger (‡) footnote, page 98.

## REQUIREMENTS FOR GRADUATION

### Lower Division

#### *Requirements for Upper Division Standing and the Degree of Associate in Arts*

The work of the lower division comprises the studies of the freshman and sophomore years, while the upper division refers to the junior and senior years. In order to be admitted to upper division work a student must have attained upper division standing.

Upper division standing is granted to students who have completed at least 60 units of college work, including requirements (A) to (D) below, with a C average in all work done in the University. Students transferring from other colleges in the University or from other institutions with 60 or more units of credit are given upper division standing, and subject shortages, if any, may be completed concurrently with the requirements for the bachelor's degree.

The degree of Associate in Arts will be granted to students who have completed not less than 60 nor more than 90\* units of college work, including requirements (A) to (D) below, with at least a C average in all work done in the University. In addition, the last two semesters (24 units) must be spent in residence at the University and at least the final semester must be completed in the College of Applied Arts.

Certain courses taken in the high school are accepted as fulfilling in part or in whole some of the lower division requirements. However, the fulfillment of lower division requirements in the high school does not reduce the number of units required in the University for the degree of Associate in Arts (60) or for the bachelor's degree (120).

#### (A) *General University requirements.*†

##### Subject A.‡

Military, Naval, or Air Science, 6 to 12 units (men).

Physical Education, 2 units.

#### (B) **ETHERE:**

(B,) *Foreign Language.* At least 16 units in one foreign language. Without reducing the total number of units required for the degree of Associate in Arts or the bachelor's degree, high school work with grades of C or better and not duplicated by college work§ will count

\* If a student fails to satisfy the requirements for the degree of Associate in Arts by the time he completes 90 units of work, he will proceed toward the bachelor's degree without the degree of Associate in Arts.

† 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 35.

§ Any student who because of lapse of time or other circumstance feels unable to continue successfully a language begun in high school may consult the department of the language concerned regarding the possibility of repeating all or a part of the work for credit. Such credit would count on the 60 units required for the degree of Associate in Arts and on the 120 units required for the bachelor's degree; but credit is not allowed toward the required 16 units in foreign language for both the high school courses and the college work duplicating them.



as follows: 4 units for the first two years together, and 4 units each for the third and fourth years. The requirement may also be met by passing a proficiency examination in one language. Courses given in English by a foreign language department may not be applied on this requirement.

OR

(B<sub>2</sub>) *Natural Science*. At least 12 units chosen from the following list, of which not less than one unit must be in laboratory work. Courses marked with an asterisk (\*) meet the laboratory requirement. Only college courses may apply on the natural science requirement.

Anthropology 1\*.

Astronomy 1A or 10, 2\*, 7.

Bacteriology 1\*, 6.

Biology 12.

Botany 1\*, 2\*, 3\*, 6\*.

Chemistry 1A\*, 1B\*, 2, 2A\*, 5A\*, 5B\*, 8, 9\*, 10\*.

Entomology 1\*.

Geography 1A\*, 3, 5A\*.

Geology 2, 3, 5\*.

Life Sciences 1A, 1B.

Meteorology 3 or Geography 3.

Mineralogy 6\*.

Physics 1A\*, 1B\*, 1C\*, 1D\*, 2A\*, 2B\*, 10, 21\*.

Zoölogy 1A\*, 1B\*, 4\*, 15\*, 25\*, 36\*.

OR

(B<sub>2</sub>) A combination of *Foreign Language and Natural Science* to be distributed as follows:

*Foreign Language*. At least 16 units in not more than two languages. Without reducing the total number of units required for the degree of Associate in Arts or the bachelor's degree, high school work with grades of C or better and not duplicated by college work<sup>§</sup> will count as follows: 4 units for the first two years together, and 4 units each for the third and fourth years. If a new language is begun in college, it may not apply on this requirement unless course 2 with its prerequisites is completed. The requirement may also be met by passing a proficiency examination in one language. Courses given in English by a foreign language department may not be applied on this requirement.

*Natural Science*. At least 9 units chosen from the natural science list set forth above, of which not less than one unit must be in lab-

\* May be used on natural science or year-course requirement, but not on both.

§ Any student who because of lapse of time or other circumstance feels unable to continue successfully a language begun in high school may consult the department of the language concerned regarding the possibility of repeating all or a part of the work for credit. Such credit would count on the 60 units required for the degree of Associate in Arts and on the 120 units required for the bachelor's degree; but credit is not allowed toward the required 16 units in foreign language for both the high school courses and the college work duplicating them.

oratory work. Three units of mathematics not offered in satisfaction of (D) may be substituted for three units of this requirement if Astronomy 10 is not also offered.

- (C) *Matriculation Mathematics.* Elementary algebra and plane geometry. If these subjects were not completed in the high school, they may be taken in University of California Extension, but will not be counted as a part of the 60 units.
- (D) *Three Year Courses.* A year course chosen from three of the following seven groups, one sequence to be selected from group 1, 2, or 3.

Only the courses specified below are acceptable.

1. English, Speech:

English 1A-1B, 46A-46B.

Speech 1A-1B, 3A-3B.

English 1A and Speech 1A or 3A.

2. Foreign language. Courses offered in satisfaction of this requirement may not include any of the work offered as part of requirement (B) above. No high school work may be counted on this requirement.

French, any two consecutive courses from the following: 1, 2, 3, 4 (or 1R, 2R, 3R, 4R), 25, 25A, 25B.

German, any two consecutive courses from the following: 1, 2, 3, 3LS, 3PS, 3SS, 4 or 4H.

Greek 1, 2.

Italian, any two consecutive courses from the following: 1, 2, 3, 4.

Latin, any two consecutive courses from the following: 1, 2, 3, 5A, 5B.

Oriental Languages 1A, 1B or 9A, 9B.

Portuguese 1, 2.

Scandinavian, any two consecutive courses from the following: 1, 2, 11, 12.

Slavic Languages 1, 2.

Spanish, any two consecutive courses from the following: 1, 2, 3, 4, 20, 25A, 25B.

3. Mathematics.

Any two of the following courses: Mathematics C, D or E or 1, 2, 3A, 3B, 4A, 4B, 37; Statistics 1.

4. Social Sciences:

Anthropology 1°, 2.

Economics 1A-1B.

Geography 1A°-1B, 5A°-5B.

History 4A-4B, 5A-5B, 7A-7B, 8A-8B.

Political Science 1, 2.

\* May be used on natural science or year-course requirement, but not on both.

5. Psychology:

Psychology 1A, and 1B or 33.

6. Philosophy:

Philosophy 6A-6B, 20A-20B, 30 and 31.

7. Music, Art (acceptable only when the specific sequence is not the student's major):

Art 2A-2B, 10A-10B, 11A-11B, 16A-16B.

Music 1A-1B, 3A-3B, 5A-5B, 20A-20B, 30A-30B.

*University Extension.* Courses in University of California Extension (either class or correspondence) may be offered in satisfaction of requirements for the degree of Associate in Arts provided they bear the same number as acceptable courses in the regular session. (Equivalent courses bear the prefix "X," "XL," "XB," or "XSB.") Extension courses may not, however, be offered as a part of the residence requirement.

### Upper Division

#### *Requirements for the Bachelor's Degree*

The bachelor's degree will be granted upon the following conditions:

1. The minimum number of units for the degree is 120. The student must attain at least a C average, that is, he must obtain as many grade points as units attempted in the University of California.
2. He must complete all the lower division requirements of the College of Applied Arts.
3. The requirement of American History and Institutions must be met by passing an examination or courses accepted as satisfactory for this purpose.
4. All candidates for the degree must be registered in the College of Applied Arts while completing the final 24 units.
5. After admission to the upper division, the candidate must complete at least 50 units of college work, of which at least 42 must be in upper division courses.
6. The candidate must complete a minor of not less than 20 units of coordinated courses, of which at least 6 units must be in *closely related* upper division courses. Courses used on the major or teaching credential may not apply on the minor.
7. The candidate must complete, with a scholarship average of at least one grade point per unit, a major† or curriculum in the College of Applied Arts, and must be recommended by the appropriate department or curriculum committee.

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

† With the approval of the department chairman, six units of "800" courses may be used on both the major and the teaching credential.

No student is permitted to change his major after the opening of the last semester of the year in which he intends to graduate.

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

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

Any department offering a major in the College of Applied Arts may require from candidates for the degree a general final examination in the department.

Students transferring from other institutions or from University of California Extension with senior standing must complete in the College of Applied Arts at least 18 units in upper division courses, including 12 or more units in the major department. This regulation does not apply to students transferring from other colleges within the University.

### HONORS

*Honorable Mention with the Degree of Associate in Arts.* Honorable Mention is granted with junior standing to students who attain an average of at least two grade points for each unit of work undertaken. Such students remain in honor status for the rest of the undergraduate course unless the average for all work at the end of any semester falls below two grade points for each unit undertaken.

The list of students who receive Honorable Mention with the degree of Associate in Arts is sent to the chairmen of the departments.

*Honor Students in the Upper Division.* The honor list includes the names of:

- A. Students who received Honorable Mention with the degree of Associate in Arts and who are in their first semester of the upper division.
- B. Upper division students who have an average of at least two grade points for each unit undertaken in all undergraduate work in the University of California.
- C. Other upper division students specially approved for listing in the honor 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.*

- A. 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. Departmental recommendations are reported to the Registrar.
- B. 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. Departmental recommendations are reported to the Registrar.

- C. The Committee on Honors is empowered at its discretion to recommend to the Committee on Graduation Matters that Honors be granted only to students who have attained a B average or higher in the major, or in the upper division, or in all undergraduate work.
- D. A list of students to whom Honors or Highest Honors in the various departments have been awarded is published in the COMMENCEMENT PROGRAMME.

### ORGANIZED MAJORS AND CURRICULA

A major or a curriculum consists of at least 36 units of coördinated upper division courses. A major is composed of courses from one or more departments arranged and supervised by a department, whereas a curriculum is a program of study made up of courses from several departments and supervised by a special committee.

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

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

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

Departmental *majors*, with opportunities for specialization as indicated, are offered in the following fields:

#### MAJOR IN ART

History and Application of Art  
 Painting  
 Advertising Art  
 Industrial Design  
 Interior and Costume Design  
 Interior Design  
 Teaching

#### MAJOR IN BUSINESS EDUCATION

Office Administration  
 Accounting  
 General Business  
 Merchandising  
 Office Administration, Accounting,  
 and General Business  
 Accounting, General Business,  
 and Merchandising

#### MAJOR IN HOME ECONOMICS

Clothing and Textiles  
 Foods and Nutrition (Commercial)  
 Foods and Nutrition (Research)

#### General

Teaching

#### MAJOR IN MUSIC

General

Teaching

#### MAJOR IN NURSING

(Open only to qualified graduate nurses)

Nursing

Industrial Nursing

#### MAJOR IN PHYSICAL EDUCATION

Physical Education

Health Education

Physical Therapy

Recreation

#### MAJOR IN THEATER ARTS

Motion Pictures

Radio

Theater

Theater Arts—English

Detailed statements of the requirements for these majors, as well as the work to be taken in preparation for them, will be found in the GENERAL CATALOGUE, DEPARTMENTS AT LOS ANGELES.

Special *curricula*, each involving work in several departments, are offered as follows:

Curriculum in Apparel Design                      Curriculum in Dance  
Curriculum in Apparel Merchandising

#### CURRICULUM IN APPAREL DESIGN

The curriculum in apparel design is planned to provide students with the knowledge, taste, originality, and technical skill essential to the successful designer in either the wholesale or retail trade, or for the stage and screen.

*Preparation for the Major.*—Art 2A-2B, 4B, 21A, 32A-32B, 33A, Economics 1A-1B, Home Economics 6, 7.

*The Major.*—Thirty-six units of coördinated upper division courses, including Art 101B, 183A-183B-183C, 187, Home Economics 161, 170, 171A, 175, 176A, 177A, and additional courses chosen from: Anthropology 140, 141, Art 147A-147B, 173, 175A-175B, Business Administration 150, 160, Psychology 180, 185, and upper division English courses. Recommended: at least one summer of practical experience in a factory or retail store.

#### CURRICULUM IN APPAREL MERCHANDISING

The curriculum in apparel merchandising is designed for students interested in the retailing of clothing, preparing them for positions as salespeople, buyers, or department managers with manufacturers, retail stores, and custom shops.

*Preparation for the Major.*—Art 2A-2B, 21A, 32A-32B, Business Administration 1A, Economics 1A-1B, Home Economics 6, 7.

*The Major.*—Thirty-six units of coördinated upper division courses, including Art 101B, 183A-183C. Business Administration 150, 160, 162, 163, Home Economics 161, 170, 175, and additional courses chosen from: Art 173, 183B, 187, Economics 153, 170, Home Economics 171A, 176A, 177A, Psychology 180, 185, and upper division English courses. Recommended: at least one summer of practical experience in a factory or retail store.

#### CURRICULUM IN DANCE

The curriculum in dance is designed to give students an opportunity to study in an area involving art, English, music, philosophy, physical education, and psychology as related to dance. This curriculum is not planned to train professional dancers, but rather to offer those interested in dance a program of study in contributing fields.

*Preparation for the Major.*—Art 1, 2A-2B, Theater Arts 28B, English 1A-1B, 46A-46B, Philosophy 6A-6B, or 20A-20B, or 30 and 31, Physical Education 34, Psychology 1A-1B. Recommended: Chemistry 2, French 1, 2, Music 30A-30B, Zoölogy 15, 25.

*The Major.*—Thirty-six units of coordinated upper division courses, including Art 101B, English 114A-114B, Philosophy 136, Psychology 135, 177, Physical Education 130, 150, 151, 153A-153B, 155, 327A-327B, and additional courses selected from 105, 131, 140, 141, 142, 145A, 146, 152.

### PREPARATION FOR PROFESSIONAL CURRICULA

Certain courses given on the Los Angeles campus of the University of California may be used as preparation for curricula of professional colleges and schools of the University in Berkeley and in San Francisco.

#### PRENURSING CURRICULA

The University offers a five-year curriculum leading to the degree of Bachelor of Science and the Certificate of Completion in Nursing. The first two years may be taken in the College of Applied Arts (Los Angeles) or the College of Letters and Science (Berkeley), and the final years in the School of Nursing at the Medical Center, San Francisco. The two-year preparatory course is given below.

	<i>First Year</i>	Units First Semester	Units Second Semester
Subject A (if required) .....	..	..	..
Physical Education 26 .....	..	½	½
Chemistry 2A .....	5	..	..
Bacteriology 1 .....	..	..	4
English 1A .....	3	..	..
English 1B or Speech 1A or 3A .....	..	..	3
†Electives .....	6	6	8
		14½	15½
	<i>Second Year</i>		
Physical Education 26 .....	..	½	½
Zoölogy 15 .....	5	..	..
Zoölogy 36 .....	..	..	2
Zoölogy 25 .....	..	..	3
Psychology 1A-1B .....	3	3	3
Year Course .....	3	3	3
Anthropology 2 .....	3	..	..
†Electives .....	..	..	4
		14½	15½

#### PREOCCUPATIONAL THERAPY CURRICULUM

The University does not offer a complete course in occupational therapy. The following two-year program meets the requirements for the degree of Associate in Arts and includes those subjects recommended by the American Occupational Therapy Association for the freshman and sophomore years. It does not, however, necessarily meet the lower division requirements of all schools of occu-

† Recommended: Economics 1A-1B, Sociology 3, foreign language, and courses to satisfy the requirement of American History and Institutions.

pational therapy, and each student should ascertain the requirements of the professional school where he plans to take his advanced work and adjust his program accordingly.

	Units First Semester	Units Second Semester
<i>First Year</i>		
Subject A (if required).....	..	..
Physical Education 26.....	1	1
Chemistry 2.....	3	..
Zoölogy 15.....	..	5
English 1A-1B.....	3	3
Art 2A-2B.....	2	2
Speech 1A or 3A.....	3	..
American History and Institutions.....	3	3
Elective.....	..	2
	14½	15½

*Second Year*

Physical Education 26.....	1	1
Zoölogy 25.....	3	..
Physical Education 44.....	2	..
English 46A-46B.....	3	3
Psychology 1A, 1B or 33.....	3	3
Sociology 3.....	..	5
Physical Education 43.....	1	..
Art 27A-27B.....	2	2
Bacteriology 6.....	..	2
	14½	15½

**PREOPTOMETRY CURRICULUM**

The University offers a five-year program in optometry leading to the degree of Bachelor of Science at the end of the fourth year, and to the Certificate in Optometry and the Master of Optometry degree at the end of the fifth year. The first two years may be taken at Los Angeles; the last three years must be taken in the School of Optometry† at Berkeley.

As prerequisites, students should offer the following high school subjects for matriculation: algebra, plane geometry, trigonometry, chemistry, physics, and three years of foreign language.

During the first two years, the following curriculum outline should be followed, with such choice of electives as will meet the requirements for the degree of Associate in Arts in the College of Letters and Science at Berkeley, which is prerequisite to admission to the School of Optometry. For further information see the ANNOUNCEMENT OF THE SCHOOL OF OPTOMETRY.

† Enrollment in the School of Optometry is limited. Candidates for admission to the first year (junior) class are accepted primarily on the basis of scholarship, particular emphasis being placed on the required subjects. In addition, each applicant may be required to take a professional aptitude test. Not more than five students will be accepted who have taken their preoptometry work outside of the State of California. These five students will be selected from states west of the Mississippi or from foreign countries not having optometry schools. Not more than one foreign applicant will be accepted each year. Applications for admission for any year must be filed with the Director of Admissions by May first of that year.



	<i>First Year</i>	Units First Semester	Units Second Semester
Subject A (if required) .....		..	..
Military, Air, or Naval Science.....		1½-3	1½-3
Physical Education .....		½	½
Chemistry 1A-1B .....		5	5
Speech 1A-1B .....		3	3
Foreign Language .....		4	4
Mathematics D or 1, 3A.....		3	3
		*	*

*Second Year*

Military, Air, or Naval Science.....	1½-3	1½-3
Physical Education .....	½	½
Bacteriology 1 .....	..	4
Psychology 1A-1B, or 33.....	3	3
Zoology 15, 25.....	5	3
Physics 2A-2B .....	4	4
Chemistry 8 .....	3	..
	*	*

**PREPHARMACY CURRICULUM**

The College of Pharmacy offers a four-year curriculum leading to the degree of Bachelor of Science in Pharmacy. Hitherto the first year has been offered on the Berkeley, Los Angeles, and Davis campuses of the University, but recent enactments of the State Legislature have created uncertainty as to whether the first year can be continued on these campuses. Those who are interested in this first-year curriculum are advised to keep in touch with the College of Applied Arts or with the Dean of the College of Pharmacy, Medical Center, San Francisco 22, California. Information concerning the courses offered in the College of Pharmacy will be found in the ANNOUNCEMENT OF THE COLLEGE OF PHARMACY, which may be obtained from the College of Applied Arts or the College of Pharmacy.

**PREPUBLIC HEALTH CURRICULUM**

The University offers a four-year program in public health leading to the degree of Bachelor of Science. Options are available in the fields of sanitation, public health statistics, and preadministration.

The high school preparation should include chemistry and trigonometry; physics and second-year algebra are recommended.

On the Los Angeles campus it is recommended that the first two years' work be taken in the College of Applied Arts, following the program outlined below. The last two years' work is given under the School of Public Health. For further information see the ANNOUNCEMENT OF THE SCHOOL OF PUBLIC HEALTH.

\* Normal total, 15 or 16 units. Many students find it advisable to attend Summer Session to avoid excess programs.

	<i>First Year</i>	Units First Semester	Units Second Semester
Subject A (if required) .....		..	..
Physical Education .....		$\frac{1}{2}$	$\frac{1}{2}$
Military, Air, or Naval Science .....		1 $\frac{1}{2}$ -3	1 $\frac{1}{2}$ -3
†Chemistry 1A-1B .....		5	5
English 1A-1B or Speech 1A-1B .....		3	3
Psychology 1A or 33 .....		3	..
Mathematics D or 1 .....		..	3
Social Science Elective .....		3	..
		*	*
	<i>Second Year</i>		
Physical Education .....		$\frac{1}{2}$	$\frac{1}{2}$
Military, Air, or Naval Science .....		1 $\frac{1}{2}$ -3	1 $\frac{1}{2}$ -3
Zoölogy 15 .....		5	..
Bacteriology 1 .....		..	4
Public Health 5 .....		..	3
Social Science Elective .....		..	3
†‡Chemistry 8 .....		3	..
†Physics 2A-2B .....		4	4
		*	*

## SCHOOL OF BUSINESS ADMINISTRATION

THE SCHOOL OF BUSINESS ADMINISTRATION at Los Angeles, replacing the College of Business Administration, was established in the spring of 1950. The School admits students of junior or higher standing, and offers curricula leading to the undergraduate degree of Bachelor of Science and to the graduate degree of Master of Business Administration.

The School of Business Administration, in general, continues the tradition of the College of Business Administration as a professional school of the University whose purpose is to provide for qualified students a well-balanced education for careers in business at the management and administrative levels. The general and specific requirements of the School are designed to furnish a broad preparation for careers of management, rather than a highly specialized proficiency in particular occupations. The two-year curriculum leading to the degree of Bachelor of Science consists of a basic program of professional education for business management plus specialization in one field. The basic program attempts to create an understanding of the operation of the business enterprise within the whole economy; to develop proficiency in the use of such tools of management as accounting, business law, statistical and economic analysis; and to provide knowledge of the principles of management in several functional fields. Upon completing the basic program, students

† Majors in preadministration should take Business Administration 1A-1B, Economics 1A-1B, Political Science 1, but may omit Chemistry 1B, 8, Physics 2A-2B.

\* Normal program, 15 or 16 units.

‡ Majors in public health statistics should take Mathematics 3A-3B, but may omit Chemistry 1B, 8.

undertake a minimum of four courses in their chosen field of emphasis. Opportunity for concentration is offered in the fields of accounting, finance, insurance, production management, personnel management and industrial relations, marketing, and office management.

Under the jurisdiction of the Graduate Division, Southern Section, the School of Business Administration administers a program leading to the degree of Master of Business Administration. This program affords opportunity for integration of business policies, investigative activities, and further specialization in an elective major. For further information about the graduate program in business administration, consult the **ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION**, and the **ANNOUNCEMENT OF THE SCHOOL OF BUSINESS ADMINISTRATION, LOS ANGELES**.

**Admission.** Unlike its predecessor, the College of Business Administration, the School does not administer the program of education in the lower division, but accepts students who have completed an organized program of college work fulfilling the requirements for upper division standing in one of the colleges of the University or the equivalent elsewhere (60 units with a C average). An organized program embraces a broad general education in the natural sciences, the social sciences, and the humanities—fields of knowledge that provide a useful foundation for students preparing themselves for positions of responsibility in business. Such a program may be fulfilled by meeting the requirements for the Associate in Arts degree in the College of Letters and Science, or by completing the prebusiness curriculum for upper division standing in the College of Letters and Science, Los Angeles (see page 77). The following specific courses, however, are prerequisite to acceptance by the School of Business Administration, Los Angeles.

Business Administration 1A-1B, Principles of Accounting.

Economics 1A-1B, Principles of Economics.

Mathematics 2, Mathematics of Finance, or, Mathematics 3B, First Course in Calculus.

English 1A, English Composition.

Completion of course 2 (or the equivalent) in a foreign language.

Completion of at least one laboratory course in natural science at the college level.

There are cases in which the first two years of work in a professional college, such as Agriculture, Applied Arts, or Engineering, may provide a satisfactory preparation for students whose careers in business are expected to be related to the technical foundation thus provided. Such specialized preparation, however, must include the specific courses listed above, required for acceptance by the School. In exceptional cases, some of the courses listed as prerequisite for acceptance by the School may be completed during the first semester of residence in the School.

Applications for acceptance by the School of Business Administration (Los Angeles) should be filed with the Director of Admissions not later than July 1 for the fall semester and not later than December 1 for the spring semester.

In order to fulfill commitments to students pursuing the Associate in Arts degree program in the College of Business Administration prior to July 1, 1950, the Faculty of the School of Business Administration (Los Angeles) will recommend candidates for the Associate in Arts degree in business administration until September, 1952. For these students and for students in other colleges pursuing this degree program, the Associate in Arts degree in business administration will meet the curricular requirements for acceptance by the School of Business Administration (Los Angeles) until September, 1952.

#### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE

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

- (1) A minimum of 128 units are required for the degree of Bachelor of Science. A candidate must have attained at least a C average or as many grade points as units attempted.
- (2) A candidate for the degree must be registered in the School of Business Administration while completing the final 24 units of work. This regulation applies both to students entering the School of Business Administration from another university and to students transferring from other divisions of this University.
- (3) Completion of requirements (a) to (e) below is required of all candidates.
  - (a) *University requirement of American History and Institutions.*
  - (b) *Basic Courses* (required of all students in the School of Business Administration):

Business Administration 100 (Theory of Business)

Business Administration 101 (The Enterprise in an Unstable Economy)

Business Administration 105A-105B (Business Law)

Business Administration 115 (Business Statistics)

Business Administration 120 (Intermediate Accounting)

Economics 135 (Money and Banking)

Business Administration 140 (Elements of Production Management)

Business Administration 150 (Elements of Personnel Management)

Business Administration 160 (Elements of Marketing)

Business Administration 190 (Organization and Management Policy)

Courses 101 and 150 are required of all students graduating on and after June, 1950.

Courses 140 and 190 are required of all students graduating on and after February, 1951.

In the period from September, 1949, to February, 1951, students may offer either Business Administration 190 or the course in business organization (old number, Business Administration 120) in satisfaction of this requirement.

- (c) *The field of concentration*: At least four courses aggregating not less than 10 units in one of the seven following fields (may not include basic required courses listed under b):

Accounting

Finance

Insurance

Production Management

Personnel Management and Industrial Relations

Marketing

Office Management

Students specializing in accounting who graduate on and after June, 1950, are required to take the course in accounting laboratory (Business Administration 2A-2B) in addition to the four courses required in the field of concentration.

Students who do not wish to specialize in any one of the fields of concentration must complete four upper division business administration courses beyond the basic required courses listed under (b), each one of which must be in a separate subject-matter field.

- (d) *Special electives in business administration and economics*: Three units from upper division business administration and economics courses other than those used to meet requirement (b) or (c). (May not include courses which are listed in the student's field of concentration.)

- (e) *Scholarship requirements*:

(1) At least a C average in all work undertaken in the University.

(2) At least a C average in all upper division courses taken under requirements (b), (c), and (d) above and any other upper division courses in business administration, business education, and economics.

(3) At least a C average in all subjects undertaken in the field of concentration (c) above.

### HONORS

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

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## SCHOOL OF EDUCATION

THE SCHOOL OF EDUCATION, established on the Los Angeles campus July 1, 1939, offers professional curricula to students preparing for teaching service in elementary and secondary schools, and for experienced teachers desiring preparation for educational administration, research, or other specialized phases of public school education. The School of Education makes provision for all types of teacher training formerly offered in the Teachers College, which was discontinued on June 30, 1939.

Applicants for admission to the School of Education must be students in good standing in the University of California, must have completed the requirements for the degree of Associate in Arts in one of the colleges of the University, or the equivalent, and must be approved by a physician of the University of California as having met the health requirements of the State Board of Education.

Although admission to curricula of the School of Education is contingent upon the attainment of full junior standing, as defined above, representatives of the School will be glad to advise students interested in the most effective preparation for various teaching fields, during their freshman and sophomore years. All such students are urged to consult the Credentials Counselor of the School of Education, 123 Education Building, as early as possible in their academic careers.

The School of Education offers curricula leading to certificates of completion and State credentials authorizing service in the following fields:

1. Kindergarten-Primary
2. General Elementary
3. Junior High School
4. Special Secondary in the fields of:
  - a. Art
  - b. Business Education
  - c. Homemaking
  - d. Music
  - e. Physical Education
  - f. Trade and Industrial Education
5. General Secondary
6. Junior College
7. Attendance Officer
8. Special Supervision
9. Elementary School Supervision
10. Elementary School Administration
11. Secondary School Supervision
12. Secondary School Administration
13. General Administration
14. Supervising School Budgets.

In addition to maintaining the foregoing curricula, the School of Education provides opportunity for individual programs of study meeting the requirements of the State Board of Education for credentials in educational research, educational counseling, and certain other limited fields.

Students planning to prepare for kindergarten-primary or elementary school teaching may enroll either in the College of Letters and Science, or if their major interests lie in the fields of art, homemaking, industrial arts, music, or physical education, in the College of Applied Arts. Those enrolling in the College of Letters and Science should choose the general elementary curriculum including an interdepartmental field of concentration, or a departmental field of concentration related to the curriculum of the elementary schools.

Students desiring to prepare for the special secondary credential, which is limited to one field, should enroll in the College of Applied Arts if the proposed major is art, homemaking, industrial arts, music, or physical education. Those desiring the special secondary credential in business education may register either in the School of Business Administration, the College of Applied Arts, or the College of Letters and Science with a major in economics.

Candidates for the general secondary credential may enroll for their undergraduate work in the College of Letters and Science, the College of Agriculture, the School of Business Administration, or the College of Applied Arts (if the major is art, business education, homemaking, music, or physical education).

It is highly desirable that all students preparing for teaching should consult the Credentials Counselor of the School of Education as early as possible in their academic careers, in order that their programs of study may be efficiently planned.

A complete statement of curricula, requirements, and procedures in the School of Education will be found in the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES, which may be obtained at the office of the Dean, 231 Education Building on the Los Angeles campus, or by mail upon application to the Registrar of the University of California, Los Angeles 24, California.

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## SCHOOL OF LAW

THE SCHOOL OF LAW on the Los Angeles campus of the University of California opened in September, 1949. A first-year class of fifty students was admitted. The work during this first academic year has been, and during part of the next academic year will be conducted in temporary quarters while the new Law Building is under construction. It is hoped that the new building will be completed by January, 1951. Applicants for admission to the School of Law must have a bachelor's degree from an accredited institution and must have taken the Law School Admission Test. The application for admission to the School of Law must be made on forms supplied by the School of Law, Los Angeles 24, California, and should be filed with the School not later than May 1, 1950. Transcripts of all college, university, or professional school records including the records of work completed on the Los Angeles campus of the University of California must be sent from the institutions of origin to the School of Law, University of California, Los Angeles 24. If the applicant is currently enrolled in a college or university, the transcripts should cover all work completed to date, including a statement showing work in progress. The transcripts should be accompanied by a statement indicating the date on which it is expected the work in progress will be completed, and the necessary supplementary transcripts will be sent to the School of Law.

The Educational Testing Service will supply each applicant with a bulletin of information giving details with respect to administration, and including practice questions. For permission to take the Law School Admission Test, applicants should write directly to the Educational Testing Service, P. O. Box

592, Princeton, New Jersey, requesting an application blank and bulletin of information listing places where the test may be taken.

Admissions will be on a competitive basis. Official notice of admission, or denial of admission, will be sent at the earliest possible date.

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## **SCHOOL OF MEDICINE**

THE SCHOOL OF MEDICINE on the Los Angeles campus is in the process of organization and planning. It is estimated that the School of Medicine building program will not be completed before the fall of 1952. Regular undergraduate medical students will not be accepted until these facilities are available.

Students who are beginning their premedical work and planning to enroll eventually in the School of Medicine at Los Angeles should meet the requirements of the University of California School of Medicine at San Francisco. The two medical schools of the University of California will have essentially the same admission requirements.

Facilities are available for a limited number of students to do research which might be accepted for fulfilling the thesis requirements toward graduate work in other departments of the University. Students are referred to the Office of the Graduate Division for further information.

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## **SCHOOL OF NURSING**

THE DEPARTMENT OF NURSING, College of Applied Arts, at Los Angeles offers a program of study leading to the Master of Science degree. Students admitted in regular graduate status may specialize in nursing school administration, nursing service administration, pediatric nursing, and public health nursing.

Graduate registered nurses who have completed 60 units of lower division work (24 units granted for hospital nursing course) may enroll for the Bachelor of Science degree in the Department of Nursing. This program of study includes theory and practice in public health and psychiatric nursing, and prepares the nurse for staff positions in public health agencies, the public school system, and industry.

A School of Nursing is now in the process of development. Plans are going forward for the organization of a basic university program of study for college students who have completed the two-year lower division prenursing curriculum. Students will not be accepted for this program until the Medical School, Nursing School, and Hospital buildings are completed—not before the fall of 1952. Students who are beginning their prenursing work and are planning to enroll in the new School of Nursing at Los Angeles should meet the requirements as outlined in the ANNOUNCEMENT OF THE COLLEGE OF APPLIED ARTS.



## **SCHOOL OF PUBLIC HEALTH**

THE SCHOOL OF PUBLIC HEALTH is a University-wide school. Instruction is given on the campuses at Berkeley, Los Angeles, and San Francisco, leading to the degrees of Bachelor of Science, Master of Public Health, and Doctor of Public Health. A Department of Public Health has been established on the Los Angeles campus which offers courses leading to the degree of Bachelor of Science (with options in the respective fields of sanitation, public health statistics, and preadministration) and a number of courses that carry credit toward the advanced degrees. The graduate program is administratively centered in the School of Public Health at Berkeley.

### **BACHELOR OF SCIENCE DEGREE**

*Admission:* To be admitted to the School of Public Health, students must have completed the requirements for the degree of Associate in Arts or an equivalent thereof satisfactory to the Faculty of the School of Public Health. It is recommended that on the Los Angeles campus the first two years be taken in the College of Applied Arts under the Prepublic Health Curriculum. (See page 111.)

*Requirements:* Candidates for the degree of Bachelor of Science must have completed at least 120 units of college work, of which at least the last 24 units shall have been completed in the School of Public Health. The student must have obtained at least as many grade points as there are units in the total credit value of all courses undertaken by him in the University of California. He must have satisfied the requirement of American History and Institutions. (See page 36.)

For upper division course requirements for the Bachelor of Science degree, students should consult the Department of Public Health.

### **GRADUATE DEGREES**

#### **(Master of Public Health; Doctor of Public Health)**

The Department of Public Health at Los Angeles offers courses in the University's graduate program in public health, but does not offer the full curriculum leading to a graduate degree. However, graduate students may be enrolled on this campus for special work or for work constituting a part of the program leading to either the Master of Public Health or the Doctor of Public Health degree. All applications for graduate study in public health should be addressed to the Dean of the School of Public Health, University of California, Berkeley 4.

## THE GRADUATE DIVISION

### SOUTHERN SECTION

THE UNIVERSITY OF CALIFORNIA offers in the Graduate Division, Southern Section, advanced study leading to the degrees of Master of Arts, Master of Business Administration, Master of Education, Master of Science, Doctor of Philosophy, and Doctor of Education, to the Certificate in Social Welfare, and to the certificates of completion for the general secondary and junior college teaching credentials. For more complete information concerning the work of the Division, and concerning the requirements for higher degrees, consult the ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION, which may be had upon application to the Registrar of the University of California, Los Angeles 24, California.

### DEFINITION OF ACADEMIC RESIDENCE

Every regular graduate student must register for, attend, and complete upper division courses (courses in the 100 series) or graduate courses (200 series) amounting to at least 4 units for each semester or 2 units for each summer session, in order to satisfy the minimum residence requirement in candidacy for any higher degree or certificate issued by the University.

### STUDY-LIST LIMITS

In order to counteract the tendency to accumulate credits by sacrificing thoroughness and the high scholarly attainment which comes only through intense application, the University restricts the number of units in which a student may enroll.

A graduate student in a regular semester is limited to 16 units when he takes only upper division courses, to 12 units when he takes only graduate courses, and to a total made up in the proper proportion of 12 to 16—as for example, 6 graduate and 8 upper division—when he takes both upper division and graduate courses.

Teaching assistants and others employed approximately on half time are limited to three-fourths of these totals. Four units of upper division or graduate courses is the program limit for graduate students engaged on full time in other occupations.

### REQUIREMENTS FOR THE MASTER'S DEGREE

*Preparation.* The candidate's preliminary training for the master's degree should be substantially the equivalent of that represented by the corresponding bachelor's degree. In the University of California, the bachelor's degree indicates eight years of systematic high school and college work distributed according to the University's requirements for the particular college or course in which the degree is offered.

If the candidate's undergraduate course has been deficient in breadth of fundamental training and fails to provide a proper foundation for advanced work in the department or departments of his choice, it probably will be necessary for him to take specified undergraduate courses before he may be admitted to regular graduate status.

*The degree.* The degree of Master of Arts is awarded for the completion of requirements in any of the major subjects of graduate study at the University of California, Los Angeles, except applied physics, chemistry, engineering, home economics, horticultural science, nursing, oceanography, physical education, and social welfare, in which the degree of Master of Science is given, and business administration, in which the degree of Master of Business Administration is given. Work is offered also in the School of Education leading to the degree of Master of Education. In the Department of Journalism and the Department of Theater Arts both the degree of Master of Arts and the degree of Master of Science are given.

*Major fields.* The major fields for the master's degree are:

Anthropology	German	Philosophy
Anthropology-Sociology	Greek	Physical Education
Applied Physics	History	(including Health
Art	Home Economics	Education and Rec-
Botanical Science	Horticultural Science	reation)
Business Administration	Journalism	Physics
Chemistry	Latin	Political Science
Economics	Mathematics	Psychology
Education	Meteorology	Social Welfare
Engineering	Microbiology	Sociology
English	Music	Spanish
French	Nursing	Theater Arts
Geography	*Oceanography	Zoölogy
Geology		

*Application for advancement to candidacy.* Advancement to candidacy must occur not later than one semester prior to the completion of requirements for the degree. Students are warned that such advancement is not automatic, but requires a formal application distinct from registration. A date approximately two weeks after the opening date is set each semester for application for candidacy by those who hope to qualify for degrees at the close of that session.

*Amount and distribution of work.* A student must pursue one of the following plans at the option of the department of his major field for fulfillment of the requirements for the master's degree. Under either plan all requirements for the degree must be satisfied within a calendar year from the time of completion of the course requirement.

*Plan I: Thesis Plan.* At least 20 units and a thesis are required. The units must be taken in graduate or upper division undergraduate courses, and at

\* At Scripps Institution of Oceanography, La Jolla.

least 8 of the 20 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 not be less than half of the work presented for the degree. After these general and the special departmental requirements are met, the student may take any course in the 100 or 200 series, although he is subject to his major department's guidance in the distribution of his work among the departments. In addition, the major department may require any examination which seems necessary to test the candidate's knowledge of his field.

*Plan II: Comprehensive Examination Plan.* Twenty-four units of upper division and graduate courses are required, of which at least 12 units must be in strictly graduate courses in the major subject. After these general and the special departmental requirements are met, the student may take any course in the 100 or 200 series, although he is subject to his major department's guidance in the distribution of his work among the departments. A comprehensive final examination in the major subject, its kind and conduct to be determined by the department concerned, is taken by each candidate.

*Scholarship.* Only courses in which the student is assigned grades A, B, or C are counted in satisfaction of the requirements for the master's degree. Furthermore, the student must maintain an average of two grade points a unit in those courses and also in all others elected at the University subsequent to the bachelor's degree; this includes upper division or lower division courses taken in unclassified status. Three grade points for each unit of credit are given to grade A, two points to grade B, one point to grade C, none to grades D, E, and F. (See under Grades of Scholarship, page 39.)

*Foreign language.* A reading knowledge of a foreign language (other than that of the major subject, if the major is a foreign language) is required of each candidate for the degree of Master of Arts and for the degree of Master of Science in chemistry and in oceanography; for other master's degrees the foreign language requirement is optional with the major department. This requirement must be satisfied before the student is advanced to candidacy. The department of the candidate's major must approve the language selected. The examination is to be conducted by the language department in question.

*Residence.* The minimum period of academic residence required is two semesters, of which at least one semester must be spent at Los Angeles. The requirement may be satisfied in part by residence in the Graduate Division, Northern Section.

A student is not regarded as in residence unless he is actually attending regularly authorized university exercises amounting to at least 4 units of upper division or graduate work in a regular session, or 2 units in a summer session.

Ordinarily all the work for the master's degree is expected to be done in residence, but a graduate of this University or any other approved candidate may complete part of his work in absence, subject to the approval of the Graduate Council, the regulations on study in absence, and the minimum residence requirement of one year.

*The thesis.* The thesis is the student's report, in as brief a form as possible,

of the results of his original investigation. Although the problems for master's degree candidates are of limited scope, they must be attacked in the same systematic and scholarly way as problems of greater magnitude, as, for example, one under investigation by a candidate for the doctor's degree. Before beginning his work on a thesis, the student must receive the approval of his major department and the instructor concerned, on the subject and general plan of investigation. Detailed instructions concerning the physical form in which theses must be submitted may be had upon application to the Dean of the Graduate Division.

### REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Students who desire to become candidates for the doctor's degree should bear in mind that the degree of Doctor of Philosophy is granted by the University of California not for the fulfillment of technical requirements alone, such as residence and the completion of fundamental courses within a chosen field, but more for the student's general grasp of the subject matter of a large field of study and his distinguished attainments within it, for his critical ability, his power to analyze problems and to coordinate and correlate the data from allied fields to serve the progress of ideas. In addition, he must demonstrate, through his dissertation, the ability to make an original contribution to the knowledge of his chosen field, and throughout his career as a graduate student must prove himself capable of working independently.

*Fields of study.* The fields of study open to candidates for the degree of Doctor of Philosophy are:

Anthropology	History	Plant Science (including
Anthropology-Sociology	Mathematics	Botanical Science and
Chemistry	Meteorology	Horticultural Science)
Economics	Microbiology	Political Science
Engineering	Music	Psychology
English	Oceanography	Romance Languages
Geography	Philosophy	and Literature
Geology	Physical-Biological	Sociology
Germanic Languages	Science	Zoology
Hispanic Languages	Physics	
and Literature		

Other fields and departments will be added as circumstances warrant.

*Preparation.* A prospective candidate for this degree must hold a bachelor's degree from one of the colleges of this University, based on a curriculum that includes the requirements for full graduate status in the department of his major subject, or must have pursued successfully an equivalent course of study elsewhere.

*Residence.* The minimum residence requirement for the doctor's degree is two academic years (or four semesters), one of which, ordinarily the second, must be spent in continuous residence at the University of California, Los Angeles. (See also *Program of study*, below.)

**Foreign language.** A reading knowledge of two foreign languages is required of every candidate for the Ph.D. degree and this requirement must be satisfied before he takes the qualifying examinations for advancement to candidacy. The department of the candidate's major and the Dean of the Graduate Division must approve the languages selected, which should have a clear bearing on the candidate's field of research. The examinations are to be conducted by the language departments in question.

**Program of study.** The student's program of study must be approved by the Graduate Council, must embrace a field of investigation previously approved by his department or interdepartment group, and must extend over the full period of study. However, recommendation for the degree is based on the attainments of the candidate rather than duration of his study, and ordinarily not less than three full years will be needed to finish the work.

**Notice of Ph.D. degree candidacy.** As early as possible, preferably at the end of the first semester of graduate study, the student should declare his intention of proceeding to candidacy for the Ph.D. degree. Statement of such intention should be made in duplicate on Form 1, which is available at the Office of the Dean of the Graduate Division. One copy of the form should be filed with the department or interdepartment group of the student's field of study and the other with the Dean.

**Guidance committees.** On receiving such notification an informal guidance committee will be appointed by the department or interdepartment group of the student's field of study to assist the student in making out his program and in preparing him for the qualifying examinations. This committee must give its written approval to the department before the student is permitted to take these examinations and it ceases to exist as soon as he has passed the qualifying examinations.

**Doctoral committees.** Upon nomination of the department or interdepartment group of the student's field of study a doctoral committee will be appointed by the Graduate Council. Nomination of the doctoral committee should be made on Form 2, which is available at the Graduate Division Office. This committee shall consist of not fewer than five members, three of whom shall be from the department of the candidate's major and two from a department or departments other than the major. The doctoral committee conducts the qualifying oral examination (in some cases also the written examinations), supervises and passes upon the student's dissertation, and conducts the final oral examination. For this final oral examination additional members may be appointed to the committee by the Dean of the Graduate Division in consultation with the department.

**Qualifying examinations.** Before he is admitted to candidacy, the student must pass a series of qualifying examinations, both written and oral. The written examinations may be administered by the department of the student's field of study, but the oral examination must be conducted by his doctoral committee. The qualifying oral examination is never open to the public. The report on the qualifying examinations should be made on Form 3, which is available at the

Graduate Division Office. The report form must be signed by the members of the doctoral committee.

*Advancement to candidacy.* Upon receipt of the report on the qualifying examinations an application form for advancement to candidacy (Form 4) will be sent to the candidate. The candidate must file his application, properly approved by the committee conducting the qualifying examinations, and must report in person to the Dean of the Graduate Division who determines whether all formal requirements have been met.

A minimum period of resident study approximately equivalent to two semesters must intervene between the date of formal advancement to candidacy and the date of the final examination.

*The dissertation.* A dissertation on a subject chosen by the candidate, bearing on his principal study and showing his ability to make independent investigation, is required of every candidate for the degree. In its preparation the candidate is guided by his doctoral committee, which also passes on the merits of the completed dissertation, and the approval of this committee, as well as that of the Graduate Council, is required before he is recommended for the degree. Special emphasis is laid on this requirement. The degree is never given merely for the faithful completion of a course of study, however extensive.

The dissertation must be typewritten or printed. Specific instructions concerning the form may be obtained from the Dean of the Graduate Division. Two copies\* of the approved dissertation (if it is typewritten, the original and the first carbon, both on bond paper—onionskin paper is not acceptable) must be filed with the Dean two weeks before the proposed date of the final examination, for later deposition in the University Library. In certain instances, however, the Graduate Council may authorize the final examination to be taken before the dissertation is accepted.

*Final examination.* The candidate's final examination is conducted by his doctoral committee. The examination is oral and deals primarily with the relations of the dissertation to the general field in which its subject lies. Admission to the final examination may be restricted to committee members, members of the Academic Senate, and guests of equivalent academic rank from other institutions. The report on the final examination should be made on Form 5, which is available at the Graduate Division Office. The report form must be signed by the members of the doctoral committee.

## REQUIREMENTS FOR THE DEGREE OF DOCTOR OF EDUCATION

The requirements for the degree of Doctor of Education are similar in general outline to those for the degree of Doctor of Philosophy; for a detailed statement consult the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

\* If the thesis is prepared by Ozalid process, the candidate is required to submit to the Dean of the Graduate Division the original copy on vellum and two Ozalid copies. Candidates for degrees in engineering are required to submit the original on vellum and three Ozalid copies.

**THE BACHELOR'S DEGREE FOR GRADUATE STUDENTS**

Graduate students may be recommended as candidates for the degree of Bachelor of Arts or Bachelor of Science on completing at least 24 units during one or more years of attendance upon such courses of instruction as are regularly pursued by seniors in the University of California, and on performing such additional work and passing such examinations as may appear necessary to the Executive Committee of the appropriate college. Graduate students may, with the permission of the Graduate Council and the approval of the college concerned, register as candidates for a bachelor's degree, but their course of study will be subject to the jurisdiction of the college concerned, which college shall set requirements and shall also make recommendation for the degree. In all cases candidates must satisfy the requirement of 42 units of advanced studies in the College of Letters and Science, or their equivalent in the colleges of applied science, not all of which, however, need have been completed while in residence at this University. No person will be recommended for a bachelor's degree who shall not have satisfied substantially, at the time of procedure to the degree, the conditions imposed upon undergraduate students at the University of California.



# COURSES OF INSTRUCTION OFFERED AT LOS ANGELES, FALL AND SPRING SEMESTERS, 1950-1951

The course offerings listed in this Catalogue are subject to  
change without notice

## CLASSIFICATION AND NUMBERING

COURSES ARE CLASSIFIED and numbered as follows:

*Undergraduate courses.* These are of two kinds, lower division and upper division.

A lower division course (numbered 1-49, or sometimes indicated by a letter if the subject is one usually given in high school) is open to freshmen and sophomores, and does not count as upper division work in any department.

An upper division course (numbered 100-199) is advanced study in a field which has been pursued in the lower division, or elementary work in a subject of sufficient difficulty to require the maturity of upper division students. A lower division student (except in agriculture) may not take an upper division course without written permission of his dean.

*Graduate courses* (numbered 200-299) are open only to students accepted in regular graduate status. As a condition for enrollment in a graduate course the student must submit to the instructor in charge of the course evidence of satisfactory preparation for the work proposed; adequate preparation will consist normally of the completion of at least 12 units of upper division work basic to the subject of the graduate course. Students in unclassified graduate status are not admitted to graduate courses.

*Teachers' courses* (numbered 300-399) are highly specialized courses dealing with methods of teaching specific subjects, and are acceptable toward academic degrees only within the limitations prescribed by the various colleges.

## ABBREVIATIONS

In the following list of courses, the credit value of each course in semester units is indicated by a number in parentheses after the title. A unit of registration is one hour of the students' time at the University, weekly, during one semester, in lecture or recitation, together with the time necessary in preparation therefor; or a longer time in laboratory or other exercises not requiring preparation. The session in which the course is given is shown by Roman numerals: I for the fall semester, and II for the spring semester. A course given throughout the period September to June is designated Yr. The assignment of hours is made in the SCHEDULE OF CLASSES to be obtained at the time of registration.

*Year courses.* A course given in a period of two semesters is designated by a double number. Economics 1A-1B is an example. Each half of the course constitutes a semester's work. The first half is prerequisite to the second unless there is an explicit statement to the contrary. The instructor makes a final report on the student's work at the end of each semester. Unless otherwise noted, the student may take the first half only and receive final credit for it.

## AGRICULTURE

CLAUDE B. HUTCHISON, M.S., LL.D., D.Agr. (hon.c.), Professor of Agriculture (Chairman of the Department), Berkeley.

ROBERT W. HODGSON, M.S., Professor of Subtropical Horticulture (Vice-Chairman of the Department), Los Angeles.

*Letters and Science List.*—Agricultural Economics 101A, 116; all undergraduate courses in botany; Entomology 1, 126, 134, 144; Irrigation and Soils 110A; Plant Pathology 120; and Subtropical Horticulture 111. For regulations governing this list, see page 62.

*Upper Division Courses.*—All upper division courses announced by this department presuppose at least junior standing. Juniors and seniors in colleges other than Agriculture may elect such courses in the Department of Agriculture as they are qualified to pursue.

*Majors Offered.*—Four majors are offered on the Los Angeles campus, the majors in general horticulture, subtropical horticulture, and ornamental horticulture in the plant-science curriculum of the College of Agriculture (for requirements see sections under the College of Agriculture and the divisions of Subtropical Horticulture and Ornamental Horticulture) and the major in botany in the College of Letters and Science (for requirements see sections under the College of Letters and Science and the Division of Botany).

*Preparation for Other Majors in the Plant Science Curriculum and for Other Curricula in the College of Agriculture.*—See the PROSPECTUS OF THE COLLEGE OF AGRICULTURE and consult the appropriate advisers for students in agriculture.

*Course Offerings.*—On the Los Angeles campus courses are offered by the following divisions of the Department of Agriculture:

Agricultural Economics (see page 128). Botany (see page 150). Entomology (see page 213). Floriculture and Ornamental Horticulture (see page 214). Irrigation and Soils (see page 247). Plant Pathology (see page 307). Subtropical Horticulture (see page 337).

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## AGRICULTURAL ECONOMICS

A Division of the Department of Agriculture

ROY J. SMITH, Ph.D., Associate Professor of Agricultural Economics.

KENNETH D. NADEN, Ph.D., Assistant Professor of Agricultural Economics.

*The Major.*—The major is offered only on the Berkeley campus. See the PROSPECTUS OF THE COLLEGE OF AGRICULTURE and consult the appropriate adviser for students in agriculture.

### UPPER DIVISION COURSES

101A. Principles of Marketing Agricultural Products. (3) II. Mr. Naden

Lectures and discussions, three hours. Three field trips to be arranged.

Prerequisite: Economics 1A-1B.

Nature of the problems, types of marketing agencies, principal marketing functions and their combination, marketing costs and margins, price quotations and speculation in farm products. Government in its relation to marketing; consideration of proposals for improvement.

**\*116. Agricultural Policy. (3) II.**

Mr. Smith

Lectures and discussions, three hours.

Prerequisite: Economics 1A-1B.

The evolution of agricultural policy in the United States. Historical and analytical treatment of principal farmer movements, legislative provisions for the betterment of agriculture, and current policy problems.

**118. Farm Management: Business Organization. (3) I.**

Mr. Smith

Lectures and discussions, three hours. Three field trips to be arranged.

The place, purpose, and scope of organization; community and farm basis; farm enterprise; selecting farms; planning and equipping; capital needs; earnings.

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## AIR SCIENCE AND TACTICS

HAROLD F. WILSON, Lt. Colonel, U. S. Air Force, Professor of Air Science and Tactics.

PAUL R. HAYES, Captain, U. S. Air Force, Assistant Professor of Air Science and Tactics.

RICHARD M. HURLEY, Captain, U. S. Air Force, Assistant Professor of Air Science and Tactics.

ALBERT T. WARD, Captain, U. S. Air Force, Assistant Professor of Air 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.

### Air Force Reserve Officers' Training Corps

In accordance with the provisions of the National Defense Act of 1920, as amended by the Act of 1940, and the National Security Act of 1947 and with the concurrence of the Regents of the University of California, a unit of the Air Force Reserve Officers' Training Corps was established on the Los Angeles campus of the University of California in September, 1947.

*Objectives.*—The mission of the Air Force Reserve Officers' Training Corps is to develop in prospective college graduates the qualities of leadership and other attributes essential to their progressive advancement to positions of increasing responsibility as commissioned officers, and to prepare them for immediate assignment to specific duties in the Regular Air Force, the Air Force Reserve, and the Air National Guard.

Courses are prescribed by the Department of the Air Force and are standard in all Air Force R.O.T.C. units. Specialized courses in administration and logistics are offered at U.C.L.A. The United States furnishes arms, equipment, uniforms, and textbooks on a loan basis for the use of regularly enrolled students in this department.

*Basic course.*—The purpose of this course is to qualify the student as a leader whether in peace or in war, and to help prepare him to discharge his duties as a citizen.

The basic course is prescribed for all first-year and second-year undergraduate male students. Any such student may claim exemption by petition on the prescribed form if he is not a citizen, has physical disability, has served in the armed forces of the United States, or is over twenty-four years old at the time of admission. Pending action on his petition, the student will enroll in the course prescribed for his year.

The Professor of Air Science and Tactics may at his discretion allow up to two years credit in the basic course for prior active service in the armed forces,

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\* Not to be given, 1950-1951.

and up to one year's credit in the basic course for high school R.O.T.C. training. Any student desiring credit for previous R.O.T.C. training should present a transcript of his R.O.T.C. training before he enrolls in the basic course.

**1A-1B. First-Year Basic Air Science (1½-1½) Yr.** The Staff  
Two hours classroom instruction and one hour drill instruction each week. Elements of national power; problems of warfare; leadership, drill, and exercise of command.

This course is identical to Military Science 1A-1B as to scope, units, and class hours. Students may enroll in either course.

**21A-21B. Second-Year Basic Air Science (1½-1½) Yr.** The Staff  
Two hours classroom instruction and one hour drill instruction each week. Elements of aeronautics; applied air power; administration in air units; leadership, drill, and exercise of command.

*Advanced course.*—The purpose of this course is to produce junior officers for the Air Force Reserve and the Regular Air Force. Upon completion of the course, the student is offered a commission as second lieutenant in the United States Air Force Reserve. The student when commissioned does not have obligation to serve on active duty in the Air Force, but he may volunteer for either extended active duty or a short tour of active duty.

Students who demonstrate outstanding scholarship, leadership, and character may receive a regular commission in the Air Force upon graduation. Such commission offers a definite career as an officer in the Air Force. A maximum of one-third of each graduating class may become eligible to receive this commission.

At this University the student is given specialized training in the field of administration and logistics, and is qualified to work in that field as a junior officer. Flying training is not given. The Air Force R.O.T.C. graduate has high priority for flying training, and is encouraged to apply for such training to begin soon after graduation. While receiving flying training his status is that of a reserve officer on active duty; and if he successfully completes flying training he must, if required, serve three years on active duty.

The advanced course is offered to regularly enrolled students who have completed the basic course, or who are veterans of World War II. Students must have two years of undergraduate work remaining, must be physically fit, and must not have reached the age of twenty-seven at the time of admission. The advanced-course student receives a commutation of subsistence monetary allowance, approximately \$27 per month; and by accepting this allowance he makes the completion of Air Science a prerequisite to graduation from the University.

Summer camp attendance is required of each student, normally following completion of the first year of the advanced course. Summer camp is six weeks in duration and is conducted at an active Air Force base. The University grants three units credit for attendance at this camp. The student also is paid \$75 a month during this period. The Air Force furnishes uniforms, equipment, subsistence, and the transportation to and from the camp.

**131A-131B. First-Year Advanced Air Science (4-4) Yr.** The Staff  
Leadership; logistics; air operations; administration and logistics; drill and command.

**141A-141B. Second-Year Advanced Air Science (4-4) Yr.** The Staff  
Military teaching methods; military law; air force management; administration and logistics; leadership; drill and command.

## ANTHROPOLOGY AND SOCIOLOGY

RALPH L. BEALS, Ph.D., Professor of Anthropology.

HARRY HOLJER, Ph.D., Professor of Anthropology (Chairman of the Department.)

GEORGE WALTON BRAINERD, Ph.D., Associate Professor of Anthropology.

\*LEONARD BROOM, Ph.D., Associate Professor of Sociology.

WALTER R. GOLDSCHMIDT, Ph.D., Associate Professor of Anthropology and Sociology.

CONSTANTINE PANUNZIO, Ph.D., Associate Professor of Sociology.

WILLIAM S. ROBINSON, Ph.D., Associate Professor of Sociology.

JOSEPH B. BIRDSSELL, Ph.D., Assistant Professor of Anthropology.

EDWIN M. LEMERT, Ph.D., Assistant Professor of Sociology.

WILLIAM A. LESSA, Ph.D., Assistant Professor of Anthropology.

PHILLIP SELZNICK, Ph.D., Assistant Professor of Sociology.

RALPH H. TURNER, Ph.D., Assistant Professor of Sociology.

DONALD R. CRESSEY, Ph.D., Instructor in Sociology.

\_\_\_\_\_, Lecturer in Sociology.



MARK RAYMOND HARRINGTON, A.B., Research Associate in Anthropology.

ESHREV SHEVKY, Ph.D., Lecturer in Sociology.

ROY T. SIMMONS, M.A., Research Associate in Anthropology.

ABRAHAM KAPLAN, Ph.D., Assistant Professor of Philosophy.

*Letters and Science List.*—All undergraduate courses in anthropology and sociology are included in the Letters and Science List of Courses. For regulations concerning this list, see page 62.

### FIELD OF CONCENTRATION IN ANTHROPOLOGY

*Preparation.*—Required: Anthropology 1, 2, Sociology 3, a course in statistics approved by the department, 5 to 6 units chosen from a list of courses available at the departmental office, and fulfillment of the general requirements of the University and the College of Letters and Science.

*The Field of Concentration.*—Thirty upper division units distributed as follows:

1. Eighteen upper division units of anthropology, including courses 101, 103, 125, and 9 additional units selected from anthropology, and Linguistics and General Philology 170 and 171.

2. Six units chosen from Sociology 118A–118B, 122, 124, 126, 128, 143, 144, 168, 169, 170, 186, 189, 190.

3. Six additional upper division units, chosen in accordance with the student's special interests and approved by the adviser, from one of the following groups: sociology, geography, psychology, geology, zoölogy, history, Linguistics and General Philology 170 and 171.

### FIELD OF CONCENTRATION IN SOCIOLOGY

*Preparation.*—Required: Sociology 3 or 101, Anthropology 1, 2, Psychology 1A–1B or 101, a course in statistics approved by the department, and fulfillment of the general requirements of the University and the College of Letters and Science. The student should consult a detailed statement of requirements and recommendations available at the departmental office.

\* Absent on leave, 1950–1951.

*The Field of Concentration.*—Thirty upper division units distributed as follows:

1. Eighteen upper division units in sociology. Students planning any professional career in sociology should include course 118A–118B.

2. Six units chosen from Anthropology 101, 103, 105, 124, 125, 139, 141, 147, 148, 151, 165.

3. Six additional upper division units selected with the approval of the adviser from one of the following groups: anthropology; Psychology 126, 134, 137A–137B, 142, 143, 145A–145B, 147, 168; economics; political science; history; philosophy; geography.

*Candidates for the General Secondary Credential.*—The undergraduate requirements for a teaching major in social science may be fulfilled by completing the preparation, and items 1 and 2 for the field of concentration in anthropology or items 1 and 2 for the field of concentration in sociology and in addition completing a year lower division course in history, and 6 upper division units in history selected from courses 111A–111B, 121A–121B, 142, 143, 144, 145, 153A–153B, 154, 157, 162A–162B, 171, 172, 173, 174.

*Graduate Work.*—Work leading toward the M.A. and Ph.D. degrees is offered with concentration in one discipline if desired. For details of requirements for the degrees consult the departmental adviser.

*Social Welfare.*—Students whose primary interest is in social welfare should normally fulfill the requirements of the Curriculum in Presocial Welfare (see page 75). Students planning on graduate training in social welfare should consult the announcement of the Department of Social Welfare (see page 327).

#### ANTHROPOLOGY AND SOCIOLOGY

##### GRADUATE COURSE

274A–274B. Departmental Seminar. (1–1) Yr.

Mr. Beals in charge

Prerequisite: consent of the instructor.

#### ANTHROPOLOGY

##### LOWER DIVISION COURSES

1. General Anthropology. (3) I, II.

The Staff

(Former number, 1A.)

Human biology and physical anthropology; the relation of man and the animals; the origin and antiquity of man; fossil man; anthropometry; the criteria of race and racial classification; current racial theories; race problems.

2. General Anthropology. (3) I, II.

The Staff

(Former number, 1B.)

Lectures, three hours; quiz, one hour. May be taken without Anthropology 1. The nature of culture; culture growth and history; a survey of the range of cultural phenomena, including material culture, social organization, religion, language, and other topics.

##### UPPER DIVISION COURSES

Courses 1, 2, or upper division standing are prerequisite to all upper division courses, except as otherwise stated.

101. Ethnology. (3) II.

Mr. Lessa

Major theories of culture; survey of principal culture types and their distribution; discussion of ethnological problems.

103. Culture History. (3) II.

Mr. Brainerd

A general survey of the origin and development of early civilizations of the Old World: Europe, Asia, Africa.

105. The American Indian. (3) I.

Mr. Beals

An introductory survey of the Indians of North and South America; origins, languages, civilizations, and history.

- \*106. Archaeology of North America. (3) II.** Mr. Brainerd  
Prehistory of North American Indians; prehistoric culture areas; relations with historic Indians.
- 110. Language and Culture. (3) I.** Mr. Hoijer  
Language as a cultural phenomenon; the relations of linguistic processes to cultural processes; language as a means of communication and as a system of symbols; the interrelations of language and culture. Knowledge of linguistics is not required.
- 124. Comparative Religion. (3) I.** Mr. Lessa  
The origins, elements, forms, and symbolism of religion; the role of religion in society.
- 125. Comparative Society. (3) I, II.** Mr. Goldschmidt  
Prerequisite: upper division standing and Anthropology 2, or Sociology 3 or 101, or consent of the instructor.  
The analytical study of organized social life in societies of varying degrees of complexity; group formation and function; the relation of value systems to organized interpersonal behavior; systems of status; economic institutions and the role of property; the problem of control and authority in society.
- 127. Primitive Art. (3) I.** Mr. Brainerd  
Development and change of conventions in the visual art forms of various nonliterate peoples; effects of craftsmanship, materials, and local culture on primitive art.
- 130. Literature of Preiterate Peoples. (3) II.** Mr. Hoijer  
Analysis and classification of literary forms found among preiterate peoples; the content of primitive literature in relation to other aspects of culture; the role of literature and the storyteller in preiterate societies.
- \*139. Peoples of Africa. (3) I.** \_\_\_\_\_  
A study of the diverse civilizations of Africa in prehistoric and modern times; relations with Europe and Asia; problems arising from European colonization.
- 140. Ancient Civilizations of Mexico and Peru. (3) I.** Mr. Brainerd  
Aztecs, Mayas, Incas, and their predecessors; origins, archaeology, traditions, history; social and political systems; religion; art and architecture; intellectual achievements.
- 141. Indians of Modern Mexico. (3) II.** Mr. Beals  
The contemporary Indian groups in Mexico; the present cultures and their derivations; the problem of the mixed culture; Indian influences on modern Mexican culture.
- \*147. Peoples of the Pacific. (3) II.** Mr. Lessa  
The aboriginal civilizations of Australia, Malaysia, Melanesia, Micronesia, and Polynesia in prehistoric and modern times; changes arising from European contact and colonization.
- \*148. Peoples of Asia. (3) II.** \_\_\_\_\_  
A study of the peoples of Asia, both preiterate and literate; development of the several cultures with reference to their geographic environment and historic interrelations, problems arising from the impact of modern European culture.

\* Not to be given, 1950-1951.

- 150. Physical Anthropology. (3) I.** Mr. Birdsell  
Lectures, three hours; laboratory, two hours.  
Prerequisite: consent of the instructor.  
A general survey of human osteology in terms of racial variations. The methodology of measurements and observations will require laboratory work.
- 151. The Genetics of Race. (4) II.** Mr. Birdsell  
Prerequisite: Anthropology I.  
A general survey of the methods and problems of racial classification with emphasis upon the genetic approach; the living peoples of the world; processes and products of race mixture.
- 162. History of Anthropology. (3) I.** Mr. Beals  
Prerequisite: Anthropology 1 and 2, and senior standing.  
A systematic survey of the development of anthropology as a scientific field, especially designed for majors in anthropology and sociology. Prerequisite to graduate work in the theory and method of anthropology.
- 165. Acculturation and Applied Anthropology. (3) II.** Mr. Goldschmidt  
Prerequisite: upper division standing and Anthropology 2 or Sociology 3 or 101. Recommended: Anthropology 125.  
The impact of Western civilization upon native societies; characteristic social and cultural adjustments to the impact; community disintegration and reintegration; anthropological problems in colonial and native administration.
- 195. Field Course in Archaeological Method. (2) II.** Mr. Brainerd  
Prerequisite: consent of the instructor.  
Week-end excavations. Will require all day Saturday throughout the semester or equivalent time if week-end trips are taken to greater distances than can be reached in a single day.
- \*196. Archaeological Laboratory Methods and Museum Techniques. (2) II.**  
Prerequisite: consent of the instructor. Mr. Brainerd  
Study and preparation of specimens, analysis of archaeological data. Will require all day Saturday throughout the semester.
- 199A-199B. Special Problems in Anthropology. (1-4; 1-4) Yr.**  
Prerequisite: consent of the instructor. Mr. Birdsell in charge

## GRADUATE COURSES

- 250A-250B. Theory and Method of Anthropology. (2-2) Yr.** Mr. Lessa
- 256A-256B. Social Anthropology. (2-2) Yr.** Mr. Goldschmidt
- 257A-257B. Problems in Cultural Anthropology. (2-2) Yr.** Mr. Beals
- \*260A-260B. Characteristics of American Culture. (2-2) Yr.**  
Mr. Goldschmidt
- \*265A-265B. Cultures of Latin America. (2-2) Yr.** Mr. Beals
- 269A-269B. Problems in Archaeology. (2-2) Yr.** Mr. Brainerd
- 271A-271B. Linguistic Analysis. (2-2) Yr.** Mr. Hoijer
- 273A-273B. Human Genetics. (2-2) Yr.** Mr. Birdsell
- 292A-292B. Research in American Indian Languages. (1-6; 1-6) Yr.**  
Prerequisite: Linguistics and Philology 170, 171. Mr. Hoijer
- 299A-299B. Research in Anthropology. (1-6; 1-6) Yr.**  
Mr. Goldschmidt in charge

\* Not to be given, 1950-1951.



RELATED COURSES IN ANOTHER DEPARTMENT (See page 251)

- Linguistics and Philology 170. Introduction to Linguistics. (3) I.  
Mr. Hoijer  
Linguistics and Philology 171. Introduction to Phonetics. (3) II.  
Mr. Hoijer

**SOCIOLOGY**

LOWER DIVISION COURSE

3. Introductory Sociology. (5) I, II. The Staff  
Lectures, four hours; quiz, one hour.

UPPER DIVISION COURSES

Courses 3 or 101, or their equivalent, are prerequisite to all upper division courses in sociology unless otherwise stated.

101. Principles of Sociology. (3) I, II. Mr. Selznick  
For upper division students who have not taken Sociology 3 in this institution. An intensive introduction to sociology. May not be counted as fulfilling the requirements of the field of concentration.
- 118A-118B. Quantitative Methods. (3-3) Yr. Mr. Robinson  
Prerequisite: course 3 or 101, and Statistics 1, Economics 2, or consent of the instructor.  
A systematic course in the logic and practice of statistical methods of use to working sociologists.
120. Social Maladjustment. (3) I, II. \_\_\_\_\_  
Prerequisite: course 3 or 101 and upper division standing.  
A survey of the forms and incidence of social maladjustment, and an inquiry into the social factors which generate maladjustment.
122. Social Change. (3) I. Mr. Robinson  
Prerequisite: courses 3 or 101.  
A study of patterns of social change, resistance to change, and change-producing agencies and processes.
124. Collective Behavior. (3) I. Mr. Turner  
Characteristics of crowds, mobs, publics, social movements, and revolutions, their relation to social unrest and their role in developing and changing social organization.
126. Culture and Personality. (3) II. Mr. Turner  
Prerequisite: Sociology 3 or 101 and upper division standing.  
Theories of the relation of variations in personality to culture and group life, in primitive and modern societies, and the influence of social role on behavior.
128. Formal Organizations. (3) I. Mr. Selznick  
Prerequisite: course 3 or 101 and upper division standing.  
Institutional analysis of administrative structures and voluntary associations: informal organization, ideology, bureaucracy, decision-making, and morale.
142. Marriage and the Family. (3) I. Mr. Turner  
Prerequisite: upper division standing.  
The marriage-family system; development, modern functions, characteristics, and maladjustments.
143. Urban Sociology. (3) II. Mr. Cressey  
Prerequisite: course 3 and upper division standing, or course 101.  
Urban and rural cultures; the characteristics of cities in Western civilization with emphasis on the American metropolis.

**144. Rural Society. (3) I.**

Mr. Goldschmidt

Prerequisite: course 3 and upper division standing, or course 101.

The characteristics of rural social systems in contrast to urban; the nature of folk societies; development of major agricultural traditions in America with emphasis upon the effects of industrialization of rural life; problems in policy and administration of agriculture in modern America.

**145. Community and Ecology. (3) I.**

Mr. Shevky

Prerequisite: course 3 and upper division standing, or course 101.

Comparative studies of community structure and organization. Application of the ecological, sociometric, and similar techniques to community research.

**150. Latin American Societies. (3) II.**

Mr. Beals

Prerequisite: upper division standing.

A descriptive survey of the major Latin American societies, emphasizing their historical backgrounds and their emergent characteristics, with special attention to the relations between rural and urban life.

**160A-160B. Systematic Sociology. (3-3) Yr.**

Mr. Panunzio

(Former number, 104.)

Prerequisite: Sociology 3 or 101 and upper division standing, or consent of the instructor.

An intensive survey of scientific sociology: the basic sociological theories; the bases of the superorganic order; the sociology of the individual; the group system and its processes; the institutional system and its processes; the sociology of societies and cultures.

**161. Social Processes. (3) I, II.**

Mr. Panunzio

(Former number, 121.)

Systematic study of the genesis, formation, structure, functioning of groups; the associational and dissociational processes, their forms, means, functions, and products.

**168. Sociology and Social Thought. (3) II.**

Mr. Selznick

Survey of major attempts in the history of ideas to understand the nature of man and society; the relation of this intellectual background to the development of sociological theory.

**\*169. Ethical Problems of Social Organization. (3) I.**

Mr. Kaplan, Mr. Selznick

Prerequisite: upper division major in social science or philosophy, or consent of the instructor.

Logical and sociological analysis of problems and conflicts in the functioning of social organizations.

**\*170. Contemporary Sociological Theory. (3) II.**

Prerequisite: course 3 or 101 and upper division standing.

An examination of current theoretical formulations; the place of logic, experimentation, key ideas, quantification, and frames of reference, and the relation of symbols to sense data in the development of modern sociological theory.

**181. Sociopathic Behavior. (3) I, II.**

Mr. Lemert

Prerequisite: course 120 and upper division standing.

Various types of sociopathic behavior analyzed from the standpoint of social isolation and social control.

\* Not to be given, 1950-1951.

- 182. Criminology. (3) I.** Mr. Cressey  
 Prerequisite: course 120 and upper division standing.  
 Theories of the genesis of crime; factors in the organization of criminal behavior from the points of view of the person and group; criminal behavior systems.
- 183. Social Control. (3) I.** Mr. Lemert  
 Prerequisite: course 3 or 101 and upper division standing.  
 Consideration of the agencies and means involved in the control of social deviation.
- 184. Control of Crime. (3) II.** Mr. Cressey  
 Prerequisite: course 182.  
 Theories of punishment; methods of dealing with convicts; police, courts, prisons, probation, and parole. Emphasis on California systems.
- 185. The Field of Social Welfare. (3) II.** Mr. Lemert  
 A survey of the field of social welfare and social work functions. This is a preprofessional course open only to senior students in sociology.
- 186. Population. (3) II.** \_\_\_\_\_  
 Prerequisite: course 3 or 101, and senior standing.  
 Fundamental problems and techniques in interpreting population data and trends, and a systematic discussion of the more important generalizations which constitute the science of demography today.
- \*189. Ethnic and Status Groups. (3) I.** Mr. Broom  
 Prerequisite: course 3 or 101, and upper division standing.  
 A study in social stratification; the statuses of the chief minorities in the continental United States with comparisons drawn from Brazil, Hawaii, and other areas; the development, operation, and effects of such policies and doctrines as selective immigration, assimilationism, ethnic pluralism, and racism.
- \*190. American Ethnic Problems. (3) II.** Mr. Broom  
 Prerequisite: course 3 or 101, and senior standing.  
 A topical study, especially of Southern California. The characteristics of the "visible" ethnic groups, e.g., Japanese, Mexican, and Negro; their organization, acculturation, and differentiation. The operation of segregation, discrimination, and programs of counteraction and amelioration.
- 192. Studies in the Family. (3) I.** Mr. Turner  
 Prerequisite: course 142 or consent of instructor.  
 A survey of the range of sociological research and research findings in the family; the intensive analysis of selected pieces of research and practice in the planning of research in this area.
- 199A-199B. Special Problems in Sociology. (1-4; 1-4) Yr.**  
 The Staff (Mr. Robinson in charge)  
 Prerequisite: open to seniors who have had 6 units of upper division courses in sociology with grades of B or above, and consent of the instructor.

GRADUATE COURSES

- 250A-250B. Methodological Problems. (2-2) Yr.** Mr. Shevky
- 251A-251B. Social Maladjustment. (2-2) Yr.** Mr. Lemert
- \*252A-252B. Criminology. (2-2) Yr.** Mr. Lemert
- 253A-253B. Quantitative Methods in Sociology. (2-2) Yr.** Mr. Robinson

\* Not to be given, 1950-1951.

*256A-256B. Demography. (2-2) Yr.	Mr. Robinson
259A-259B. Social Institutions. (2-2) Yr.	Mr. Panunzio
*261A-261B. Ethnic Minorities. (2-2) Yr.	Mr. Broom
268. Historical and Interpretive Sociology. (2) I.	Mr. Selznick
269. Social Action. (2) II.	Mr. Selznick
290A-290B. Research in the Local Area. (1-6; 1-6) Yr.	Mr. Shevky
299A-299B. Research in Sociology. (1-6; 1-6) Yr.	Mr. Lemert in charge

## ART

- KARL E. WITH, Ph.D., Professor of Art.  
 S. MACDONALD WRIGHT, Professor of Art.  
 LAURA F. ANDERSON, M.A., Associate Professor of Art.  
 ROBERT S. HILPERT, M.A., Associate Professor of Art Education.  
 LOUISE PINKNEY SOOY, Associate Professor of Fine Arts.  
 HELEN CLARK CHANDLER, Associate Professor of Fine Arts, Emeritus.  
 ANNITA DELANO, Associate Professor of Fine Arts.  
 CLARA BARTRAM HUMPHREYS, M.A., Associate Professor of Fine Arts, Emeritus.  
 E. CLINTON ADAMS, M.A., Assistant Professor of Art.  
 WILLIAM BOWNE, M.A., Assistant Professor of Art (Acting Chairman of the Department).  
 ARCHINE FETTY, M.A., Assistant Professor of Fine Arts.  
 JOSEPH WILLIAM HULL, M.A., Assistant Professor of Art.  
 GORDON NUNES, M.A., Assistant Professor of Art.  
 MARGARET H. RISWOLD, B.E., Assistant Professor of Fine Arts.  
 CARL D. SHEPPARD, Ph.D., Assistant Professor of Art.  
 JAN STUSSY, M.A., Assistant Professor of Art.  
 DOROTHY BROWN, A.B., Instructor in Art.  
 NATALIE WHITE, M.A., Instructor in Art and Supervisor of Training, Art.  
 MARJORIE HARRIMAN BAKER, B.E., Lecturer in Art.  
 WARREN G. CARTER, A.B., Lecturer in Art.  
 ALICE M. EVERETT, A.B., Lecturer in Art.  
 MARGARET T. LECKY, Lecturer in Art.  
 JOHN WILLIAM LOVE, M.A., Lecturer in Art.  
 ANNIE C. B. MCPHAIL, M.A., Lecturer in Fine Arts.  
 JOSEPHINE P. REPS, M.A., Lecturer in Art.  
 MARYBELLE OLIVE SCHMIDT, A.B., Lecturer in Art.  
 ROBERTA L. THOMAS, A.B., Lecturer in Art.  
 MADELEINE BOYCE SUNKES, B.E., Lecturer in Art.

The student may select a major from among the seven majors offered in the College of Applied Arts or the major in the history of art in the College of Letters and Science; each of these majors leads to the degree of Bachelor of Arts. For information concerning teaching credentials, consult the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

### College of Applied Arts

#### 1. Major in History and Application of Art.

*Preparation for the Major.*—Twenty-four units of lower division courses, including 2A-2B, 33A-33B, and prerequisites as approved by the departmental adviser.

*The Major.*—Thirty-six units of coördinated upper division courses, including eight units chosen from courses 101A, 101B, 111A-111B, 151A-151B,

\* Not to be given, 1950-1951.

171A-171B, 181A-181B, 191A-191B; 4 units chosen from courses 141A-141B, 161A, 161B; 8 units chosen from either (a) 134A, 134B, 135, 144A-144B, 155, 164A, 164B, 165A, 165B, 174, 194, or (b) 117A-117B, 132A-132B, 156A, 156B, 173, 177, 183A-183B; Philosophy 136; and 13 units to be approved by the departmental adviser.

## 2. Major in Painting.

*Preparation for the Major.*—Twenty-four units of lower division courses, including 2A-2B, 11A-11B, 31A-31B, 33A-33B, 34A-34B, 44, and prerequisites as approved by the departmental adviser.

*The Major.*—Thirty-six units of coördinated upper division courses, including 134A, 134B, 144A, 144B, 164A-164B, 174, 194; Philosophy 136; and 17 units to be approved by the departmental adviser.

## 3. Major in Advertising Art.

*Preparation for the Major.*—Twenty-four units of lower division courses, including 1, 2A-2B, 11A-11B, or 31A-31B, 16A-16B, 32B, 33A-33B, and prerequisites as approved by the departmental adviser.

*The Major.*—Thirty-six units of coördinated upper division courses, including 105, 131A, 131B, 134A, 135, 144A, 155, 164A-164B, 165A, 165B, 174, 175A, 175B; and 6 units to be approved by the departmental adviser.

## 4. Major in Industrial Design.

*Preparation for the Major.*—Twenty-four units of lower division courses, including 1, 2A-2B, 11A-11B or 31A-31B, 16A-16B, 32A-32B, 33A-33B, and prerequisites as approved by the departmental adviser.

*The Major.*—Thirty-six units of coördinated upper division courses, including 101A, 117A-117B, 127A-127B, 131A, 131B, 132A-132B, 147A-147B, 150, 156A, 162A-162B, 177; and 6 units to be approved by the departmental adviser.

## 5. Major in Interior and Costume Design.

*Preparation for the Major.*—Twenty-four units of lower division courses, including 1, 2A-2B, 11A-11B, or 31A-31B, 16A-16B, 32A-32B, 33A-33B, and prerequisites as approved by the departmental adviser.

*The Major.*—Thirty-six units of coördinated upper division courses, including 101A-101B, 150, 156A-156B, 162A-162B, 173, 183A-183B; and 16 units to be approved by the departmental adviser.

## 6. Major in Interior Design.

*Preparation for the Major.*—Twenty-four units of lower division courses, including 1, 2A-2B, 11A-11B or 31A-31B, 16A-16B, 32A-32B, 33A-33B, and prerequisites as approved by the departmental adviser.

*The Major.*—Thirty-six units of coördinated upper division courses, including 101A, 117A, 132A-132B, 147A, 150, 155, 156A-156B, 162A-162B, 175A, 186A-186B; and 8 units to be approved by the departmental adviser.

## 7. Major in Teaching of Art.

*Preparation for the Major.*—Twenty-four units of lower division courses, including 1, 2A-2B, 16A, 21A, 24 or 44, 32B, 33A-33B, 34A, and prerequisites as approved by the departmental adviser.

*The Major.*—Thirty-six units of coördinated upper division courses, including 105, 117A, 127A or 147A, 134A, 155 or 165A, 156A, 173, 180, 183A, 370A, 370B, one year of upper division art history; and 12 units to be approved by the departmental adviser.

## College of Letters and Science

*Letters and Science List.*—Courses 1, 10A-10B, 11A, 11B, 12A, 12B, 31A, 31B, 42, 45, 110A-110B, 111A-111B, 120A-120B, 130A, 130B, 131A, 131B, 141A-141B, 151A-151B, 161A-161B, 171A-171B, 180, 181A-181B, and 191A-191B are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Courses 10A-10B, 11A, 11B, 12A, 12B, 31A,

31B; Anthropology 1, 2; History 4A-4B; Philosophy 20A, 20B; and Psychology 1A-1B.

*The Major in the History of Art.*—Course 110A-110B; Philosophy 136; three year courses chosen from courses 111A-111B, 151A-151B, 171A-171B, 181A-181B, 191A-191B; 4 units chosen from courses 141A-141B, 161A-161B; and either course 120A-120B or course 130A-130B.

### Graduate Division

*Requirements for the Master's Degree.*—For the general requirements, see page 120. The Department of Art follows either Plan I, 20 units of graduate work and a thesis, or Plan II, 24 units of graduate work (including 4 units of an advanced project in the laboratory field as approved by the department) and a comprehensive examination. Additional requirements with regard to the several fields of concentration should be obtained from the departmental adviser.

#### LOWER DIVISION COURSES

- 1. The Appreciation of Art.** (2) I, II. Mrs. Baker
- 2A. Art Structure.** (2) I, II. Mrs. Baker  
Fundamental course in creative design and color harmony. Color theory.
- 2B. Art Structure.** (2) I, II. \_\_\_\_\_  
Prerequisite: course 2A.  
Basic study of the elements of art as related to two-dimensional decorative design.
- 10A-10B. Fundamentals in Art.** (2-2) Yr. Mr. Hull  
Principles and terminology in the history of art.  
10A. Painting and sculpture.  
10B. Architecture.
- 11A. History of Art.** (2) I. Mr. Hull  
Not open for credit to students having credit for course 121A.  
Art of prehistoric, early historical, and classical cultures.
- 11B. History of Art.** (2) II. \_\_\_\_\_  
Not open for credit to students having credit for course 121A.  
Art and architecture in Western and Oriental civilization from the time of the migration to the late Gothic period.
- 12A. Workshop in Basic Techniques.** (2) I. Mr. Hilpert  
A study of the practices of drawing, painting, and the graphic arts as a means to comprehension of the artist's viewpoint. Open only to students electing the Letters and Science major in Art History.
- 12B. Workshop in Basic Techniques.** (2) II. Mr. Hilpert  
A study of the practices of design and crafts as a means to comprehension of the artist's viewpoint. Open only to students electing the Letters and Science major in Art History.
- 16A. Perspective Drawing.** (2) I, II. Mr. Love  
(Former number, 4A.)
- 16B. Rendering in Water Color and Related Media.** (2) I, II. Miss Schmidt  
(Former number, 14B.)  
Prerequisite: course 16A.
- 21A. Appreciative Study of Apparel.** (2) I, II. Mrs. Sooy  
Lecture, one hour; laboratory, two hours.  
Social and personal significance of clothing; interaction between temperament, appearance, and apparel.

- 21B. Home Furnishing.** (2) I, II. Mrs. Fetty  
Lecture, one hour; laboratory, two hours. Field trips are taken during the laboratory period.  
Appreciative study of modern house furnishing.
- 22. Design in Three Dimensions.** (2) I, II. ———  
Prerequisite: courses 2A, 2B.  
Principles of design as related to three-dimensional form; experiments in the use of plastic materials in abstract composition.
- 24. Figure Sketching.** (2) I, II. Miss McPhail  
A basic simplified study of the proportions of the human figure with variations as used in the apparel industry.
- 27A-27B. Crafts Workshop.** (2-2) Yr. Beginning either semester. ———  
A course designed to meet the needs of recreational workers, occupational therapists, social workers, and others interested in handcraft.
- 31A. History of Art.** (2) I. Mr. With  
Not open for credit to students having credit for course 121B.  
Art and architecture from the end of the Middle Ages to the beginning of the Neo-Classical movement.
- 31B. History of Art.** (2) II. Mr. With  
Not open for credit to students having credit for course 121B.  
Art and architecture from the Neo-Classical movement to the present day.
- 32A-32B. Advanced Art Structure.** (2-2) Yr. Beginning either semester.  
Prerequisite: course 2B. Mrs. Sunkees  
Further experience in color and design.
- 33A. Beginning Drawing and Painting.** (2) I, II. Mr. Stussy  
(Former number, 4B.)
- 33B. Beginning Drawing and Painting.** (2) I, II. Mr. Adams  
(Former number, 14A.)  
Prerequisite: course 33A.  
A continuation of course 33A.
- 34A-34B. Intermediate Drawing and Painting.** (2-2) Yr. Beginning either semester. Mrs. Brown, Mr. Nunes  
Prerequisite: courses 33A, 33B.  
Continuation of courses 33A and 33B.
- 42. Introduction to Art.** (3) I, II. Mr. Hilpert  
Not open to students whose major is art.  
An exploratory course to develop an understanding and appreciation of art as an aspect of all activities of daily life.
- 44. Life Drawing.** (2) I, II. Mr. Stussy  
Prerequisite: courses 33A, 33B.
- 45. Introduction to Scientific Illustration.** (2) I, II. Mr. Hull  
Limited to students whose major is science.  
Studies in the development of an ability to draw convincingly those forms relevant to the science course involved; and an understanding of various media for reproduction.

## UPPER DIVISION COURSES

- 101A. History of Furniture.** (2) I. Mrs. Sooy  
The history of furniture from ancient to modern times.

- 101B. History of Costume. (2) II.** Mrs. Sooy  
The history of costume from ancient to modern times.
- 105. Advertising Art. (2) I, II.** \_\_\_\_\_  
Prerequisite: courses 2B, 16B, and upper division standing.  
Development of concepts of design in advertising. Reproduction lettering (classical and contemporary). Type faces. Layout.
- 110A-110B. Iconography. (2-2) Yr.** Mr. Wright  
Prerequisite: courses 121A-121B or 10A-10B, 11A-11B, 31A-31B.  
Physical symbols of the myth, hero tale, legend and folk tale—their appearance in painting, sculpture, and architecture of the mature cultures.
- \*111A-111B. Prehistoric and Early Historical Cultures. (2-2) Yr.** \_\_\_\_\_
- 117A-117B. Ceramics. (2-2) Yr.** Beginning either semester. Miss Andreson  
Prerequisite: courses 2A, 2B.  
Practice in the various methods of building pottery; glazing; firing.
- 120A-120B. Art Criticism. (2-2) Yr.** \_\_\_\_\_  
Prerequisite: courses 10A-10B, 11A-11B, 31A-31B.  
The basis for art criticism as applied to painting and sculpture.  
120A. Painting.  
120B. Sculpture.
- 127A-127B. Bookbinding. (2-2) Yr.** Beginning either semester.  
Prerequisite: courses 1, 2A, 2B. Mrs. Lecky  
Practical work in bookbinding, using various types of book construction and binding materials.
- \*130A. Art Analysis, Theory and Criticism. (2) I.** \_\_\_\_\_  
Prerequisite: courses 10A-10B, 11A-11B, 31A-31B.  
An investigation of approaches to problems in art history.
- \*130B. Art Analysis, Theory and Criticism. (2) II.** \_\_\_\_\_  
Prerequisite: courses 10A-10B, 11A-11B, 31A-31B.  
An investigation of critical standards and the function of the critic.
- 131A. Introduction to the History of Architecture and Sculpture. (2) I.** Mr. With  
Not open to students having credit for courses 11A-11B or 31A-31B.  
Twelve outstanding monuments chosen to exemplify the architectural and sculptural characteristics of various epochs. Emphasis is laid upon the relationship between art and religion throughout the ages.
- 131B. Introduction to the History of Painting. (2) II.** Mr. With  
Not open to students having credit for courses 11A-11B or 31A-31B.  
The works of leading personalities in Western painting are discussed with regard to subject matter, manner of representation, and pictorial organization, and are evaluated on the basis of their cultural and human significance in our time.
- 132A-132B. Design for Industry. (2-2) Yr.** Mr. Love  
Prerequisite: courses 16A, 16B.  
Study of materials, tool processes, and functional design of industrial products.
- 134A. Landscape Painting. (2) I.** \_\_\_\_\_  
Prerequisite: course 34B.  
Medium: water color.



- 134B. Landscape Painting. (2) II.** \_\_\_\_\_  
Prerequisite: courses 134A, 144A.  
Medium: oil.
- 135. Illustration. (2) I, II.** Miss McPhail  
Prerequisite: courses 34B, 44.
- \*140A. Elementary Museology. (2) I.** \_\_\_\_\_  
Prerequisite: courses 10A-10B, 11A-11B, 31A-31B.  
The history and function of the museum.
- \*140B. Elementary Museology. (2) II.** \_\_\_\_\_  
Prerequisite: course 140A.  
Identification, handling, and preservation of works of art, and their exhibition in the modern museum.
- 141A-141B. Art of the Americas. (2-2) Yr.** Mr. Hull  
The development of art and architecture in America.  
141A. Pre-Columbian and colonial art.  
141B. From the seventeenth century to contemporary expressions.
- 144A. Still-Life Painting. (2) I.** Mr. Bowne  
Prerequisite: course 34B.  
Medium: oil.
- 144B. Figure Painting. (2) II.** Mr. Stussy  
Prerequisite: courses 44, 144A, 164A.  
Medium: oil.
- 147A-147B. Weaving. (2-2) Yr.** Mrs. Riswold  
Prerequisite: courses 1, 2A, 2B.  
History and development of weaving; experience with techniques and processes.
- 150. Utilitarian and Domestic Art. (2) I.** Mr. With  
Prerequisite: consent of the instructor.
- 151A-151B. Classical Art. (2-2) Yr.** \_\_\_\_\_
- 155. Poster Design. (2) I, II.** \_\_\_\_\_  
Prerequisite: courses 34B, 105.  
Intensive study and practice of all forms of poster design.
- 156A. Interior Design. (2) I, II.** Mrs. Fetty  
Prerequisite: courses 2B, 21B.  
The consideration of the home as a functional unit.
- 156B. Interior Design. (2) II.** Mrs. Fetty  
Prerequisite: courses 32A-32B, 101A, 156A.
- 161A-161B. Oriental Art. (2-2) Yr.** Mr. Wright  
Chinese, Japanese, Persian, and Indian arts to the eighteenth century; their cultural basis, their interrelations, their points of contrast with occidental art.
- 162A-162B. Advanced Studies in Surface Design. (2-2) Yr.** Mrs. Sunkees  
Prerequisite: courses 21B, 32A, 156A; senior standing.  
Theory of design as applied to the enrichment of plane surfaces.
- 164A-164B. Advanced Life Drawing. (2-2) Yr.** Mr. Nunes, Mr. Stussy  
Prerequisite: course 44.

- 165A. **Design for Advertising.** (2) I. \_\_\_\_\_  
Prerequisite: courses 34B, 44, 105.  
Study of rendering techniques and forms of advertising art: newspaper, magazine, brochure.
- 165B. **Design for Advertising.** (2) II. \_\_\_\_\_  
Prerequisite: course 165A.  
Development of professional ideas; creative interpretation and layout for complete advertising campaigns.
- 171A-171B. **Medieval Art.** (2-2) Yr. Mr. Sheppard
173. **Costume of the Theater.** (2) I. Mrs. Baker  
The decorative, historical, and psychological aspects of stage costume.
174. **Painting Methods and Materials.** (2) I. Mr. Bowne  
Prerequisite: course 34B.  
The physical properties of the artist's materials, and the history of their use in painting. Paint chemistry. Comparative study of the various painting media.
- 175A. **Fashion Illustration.** (2) I. Miss Schmidt  
Prerequisite: courses 34B, 44, 105.  
Study of rendering techniques and of media for fashion-advertising purposes.
- 175B. **Fashion Illustration.** (2) II. Miss Schmidt  
Prerequisite: course 175A.  
Application of fashion illustration to specific advertising problems: newspaper, magazine, billboard, brochure.
177. **Metalcraft.** (2) I, II. Mr. Carter  
Open only to art majors with consent of the instructor.  
Designing and making jewelry; sawing, soldering, stonemasonry, etc.
180. **Theory and Philosophy of Art Education.** (2) II. Mr. Hilpert  
Prerequisite: senior standing. Open only to majors in Teaching of Art.  
A comparative study of existing theories and practices in art education.
- \*181A-181B. **Renaissance and Baroque Art.** (2-2) Yr. \_\_\_\_\_
- 183A-183B. **Modern Costume Design.** (2-2) Yr. Beginning either semester.  
Prerequisite: courses 21A, 32A, 32B. Mrs. Sooy
- 183C. **Principles of Fashion Analysis.** (2) II. Mrs. Sooy  
Prerequisite: course 183A.  
Lectures and demonstrations. Field trips. Guest lectures.
- 186A. **Advanced Interior Design.** (2) I. Mrs. Fetty  
Prerequisite: course 156B.
- 186B. **Advanced Interior Design.** (2) II. Mrs. Fetty  
Prerequisite: course 186A.
187. **Design and Structure of Apparel Accessories.** (2) I, II. Mrs. Riswold  
Prerequisite: courses 183A, 183B.  
The design and structure of apparel accessories. A study of the historical development of the accessories of each period with emphasis upon the characteristic forms of modern design and the construction problems of various materials used in this field.
- \*191A-191B. **Modern Art.** (2-2) Yr. \_\_\_\_\_

\* Not to be given, 1950-1951.

- 194. Advanced Painting.** (2) I, II. The Staff  
Prerequisite: senior standing and consent of the instructor.  
This course may be repeated a maximum of four times for credit.
- 199A-199B. Special Studies in Art.** (1-4; 1-4) I, II. The Staff  
Section 1. Art History.  
Section 2. Industrial Design.  
Section 3. Costume.  
Section 4. Painting.  
Section 5. Advertising Art.  
Section 6. Interior Design.  
Section 7. Art Education.  
Prerequisite: senior standing, an average grade of B or higher in the student's specified major.  
Advanced individual work upon specific problems connected with art and art education.

## GRADUATE COURSES

- 231A-231B. Advanced Art History.** (2-2) Yr. Mr. Wright  
Approaches to the creation of art in painting and sculpture, ancient and modern, oriental and occidental; filiation of styles and their formal values.
- 241A-241B. Advanced Art Criticism.** (2-2) Yr. Mr. Wright  
Inclusive and exclusive systems; subjective and objective criteria; application to works of monumental importance.
- \*251A-251B. Seminar in Art Analysis.** (2-2) Yr. Miss Delano
- 252A-252B. Seminar in Advanced Design.** (2-2) Yr. Mrs. Sooy  
Critical discussion and reports on theories of design in which students from related fields may investigate their common problems.
- 260A-260B. Seminar in Contemporary Art.** (2-2) Yr. Mr. With
- 271A-271B. Advanced History of Art. Seminar.** (2-2) Yr. \_\_\_\_\_
- 293. Costume Design.** (4) I, II. Mrs. Sooy  
Prerequisite: permission of the department. Specific requirements may be obtained from the departmental adviser.  
Advanced creative work in costume design, a course designed for candidates for the degree of Master of Arts.
- 294. Advanced Painting.** (4) I, II. Mr. Adams  
Prerequisite: permission of the department. Specific requirements may be obtained from the departmental adviser.  
Advanced work in painting, a course designed for candidates for the degree of Master of Arts.
- 295. Advertising Art.** (4) I, II. \_\_\_\_\_  
Prerequisite: permission of the department. Specific requirements may be obtained from the departmental adviser.  
Advanced creative work in advertising art, a course designed for candidates for the degree of Master of Arts.
- 296. Interior Design.** (4) I, II. Mrs. Fetty  
Prerequisite: permission of the department. Specific requirements may be obtained from the departmental adviser.  
Advanced creative work in interior design, a course designed for candidates for the degree of Master of Arts.
- 299. Special Studies for Graduate Students.** (1-4) I, II. The Staff

\* Not to be given, 1950-1951.

## PROFESSIONAL COURSES IN METHOD

- 330. Industrial Arts for the Elementary Grades.** (3) I, II. Miss White
- 370A. Principles of Art Education.** (2) II. Mr. Hilpert  
Prerequisite: junior standing. Open only to majors in Teaching of Art.  
A study of objectives and general educational principles as related to art education.
- 370B. Principles of Art Education.** (2) I. Mr. Hilpert  
Prerequisite: course 370A. This course should be completed before practice teaching.  
A study of method and the curriculum in art education.

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**ASTRONOMY**

- FREDERICK C. LEONARD, Ph.D., Professor of Astronomy.  
SAMUEL HERRICK, Ph.D., Associate Professor of Astronomy (Chairman of the Department).  
DANIEL M. POPPER, Ph.D., Associate Professor of Astronomy.
- ◊
- JOSEPH KAPLAN, Ph.D., Professor of Physics.  
PAUL E. WYLIE, C.E., Lecturer in Astronomy.  
EVERETT C. YOWELL, Ph.D., Research Associate in 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: Astronomy 7, 4, and 2; Physics 1A-1B-1D-1C or, in exceptional cases, 2A-1D-1C or 2A-2B; Mathematics 1, 3A, 3B, and 4A, or 5A, 5B, and 6A. Recommended: English composition, speech, and a reading knowledge of at least one modern foreign language.

*The Major.*—Twenty-four upper division units of astronomy, physics, and mathematics, of which at least 15 must be of astronomy and all 24 in courses approved by the department.

*Majors in Astronomy-Mathematics and Astronomy-Physics.*—Attention is directed to the curricula in Astronomy-Mathematics and Astronomy-Physics on page 68 of this bulletin.

## LOWER DIVISION COURSES

- 1A. Elementary Astronomy.** (3) I, II. The Staff  
Lectures, three hours; discussion, one hour.  
The general principles and the fundamental facts of astronomy. A course for nontechnical students, not open, except with the permission of the instructor, to students who are majoring, or preparing to major, in a physical science or mathematics and who have the prerequisites for Astronomy 7.
- 1B. Elementary Astronomy.** (3) II. The Staff  
Prerequisite: course 1A.  
A nontechnical course including selected topics supplemental to the material of course 1A.
- 2. Practice in Observing.** (2) I, II. Mr. Leonard, Mr. Wylie  
Prerequisite: credit or registration in course 4 or 7; or consent of the instructor.  
Practical work for beginners, including constellation studies, telescopic observations of celestial objects, laboratory exercises cognate to the material of course 4 or 7, and regularly scheduled excursions to the neighboring observatories and planetarium. Required of students preparing to major in astronomy.

**3. Engineering Astronomy. (2) I.**

Mr. Wylie

An observing period, 7:15-10 P.M., will occasionally be substituted for the regular class period. Prerequisite: plane trigonometry.

The principles of practical astronomy and spherical trigonometry as they relate to the determination of azimuth, latitude, and longitude with the engineer's transit.

**4. Spherical Astronomy. (3) I.**

Mr. Leonard

Prerequisite: plane trigonometry.

The celestial sphere and its coördinate systems; time; spherical trigonometry and its astronomical applications. Required of students preparing to major in astronomy. Course 2 may be elected for observational and laboratory work in connection with this course.

**7. General Astronomy. (3) I, II.**

Mr. Leonard, Mr. Popper

Prerequisite: open only to students majoring or preparing to major in a physical science or mathematics, and to others with similar prerequisites, who have credit for plane trigonometry.

A survey of the whole field of astronomy. Required of students preparing to major in astronomy. Course 2 may be elected for observational and laboratory work in connection with this course. Students who have credit for course 1 will receive only 1½ units of credit for course 7.

**10. Celestial Navigation. (3) II.**

Mr. Herrick, Mr. Wylie

(Former number, 12.)

Lectures, three hours; laboratory, one hour.

The determination of the line of position and the solution of allied problems of celestial navigation, both at sea and in the air; the use of the *Air Almanac*, the *Nautical Almanac*, *H. O. 214*, other modern tables and graphs, and the marine and bubble sextants; and the identification of the naked-eye stars and planets.

## UPPER DIVISION COURSES

Lower division courses in astronomy are not prerequisite to upper division courses unless specified.

**100. The Development of Astronomical Thought. (3) I.**

Mr. Herrick

Prerequisite: upper division standing. Not open to students who have credit for Astronomy 1 or 7.

A survey of astronomy, the historical development of its methods and ideas, and its relation to other fields of thought.

**102. Stellar Astronomy. (3) II.**

Mr. Leonard, Mr. Popper

Prerequisite: course 7 or 117A.

A review of stellar astronomy, with special emphasis on the results of modern researches.

**104. Practical Astronomy. (3) I.**

Mr. Popper

Prerequisite: Astronomy 4, Physics 1D or 2B, and Mathematics 3B.

Fundamental stellar coördinates; time and latitude; star catalogs; telescopes; principles of photometric and spectrographic observations.

**107. The Reduction of Observations. (3) II.**

Mr. Herrick

Prerequisite: Mathematics 3B-4A.

Analytical, numerical, and graphical methods employed in the handling of observational data. The measurement and reduction of photographic positions. The theory of errors and least squares.

**108. Numerical Analysis. (3) I.**

Mr. Herrick

Prerequisite: Mathematics 3B-4A.

The more serviceable formulae of interpolation and their application in the use of tables; development of the formulae of numerical differentiation

and integration and their employment in the construction of tables; practice in making extensive calculations, with special aim at accuracy and speed; coding of problems for automatic digital calculating machines and the differential analyzer.

112. **Rocket Navigation.** (3) I. Mr. Herrick  
Prerequisite: Mathematics 3B-4A.  
The astronomical aspects of the rocket problem; celestial mechanics.
115. **The Determination of Orbits.** (3) II. Mr. Herrick  
Prerequisite: Mathematics 3B-4A.  
The theory and calculation of preliminary orbits and ephemerides of comets and minor planets.
- 117A-117B. **Astrophysics.** (3-3) Yr. Mr. Popper  
Prerequisite: Mathematics through 4A and Physics 1A-1B-1C-1D or their equivalents.  
117A: the Sun.  
117B: the stars.
118. **Meteoritics.** (3) II. Mr. Leonard  
Open to students whose major subject is a physical science or mathematics.  
The science of meteorites and meteors.
127. **The Astrophysics of the Upper Atmosphere.** (3) II. Mr. Kaplan  
Prerequisite: senior standing and a major in a physical science or mathematics; or the consent of the instructor. Not open to students having credit for Meteorology 102.  
Cosmic-terrestrial phenomena of the Earth's upper atmosphere, including the light of the night sky, the auroras, meteors, and other effects of cosmic agents on the composition and behavior of the upper atmosphere.
199. **Special Studies.** (1 to 4) I, II. The Staff  
Prerequisite: consent of the instructor.  
Investigation of special problems or presentation of selected topics chosen in accordance with the preparation and the requirements of the individual student.

#### INSTITUTE FOR NUMERICAL ANALYSIS

Attention is directed to the Institute for Numerical Analysis, the activities of which are described on page 260.

## BACTERIOLOGY

- ANTHONY J. SALLE, Ph.D., Professor of Bacteriology (Chairman of the Department).  
MERIDIAN RUTH BALL, Sc.D., Assistant Professor of Bacteriology.  
GREGORY J. JANN, Ph.D., Assistant Professor of Bacteriology.  
M. J. PICKETT, Ph.D., Assistant Professor of Bacteriology.



- BENJAMIN G. FISHKIN, M.D., Lecturer in Bacteriology.  
GORDON H. BALL, Ph.D., Professor of Zoölogy.  
ORDA A. PLUNKETT, Ph.D., Associate Professor of Botany.

#### COLLEGE OF LETTERS AND SCIENCE

*Letters and Science List.*—All undergraduate courses in bacteriology are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Bacteriology 1; Chemistry 1A–1B, 5A, 8; Zoölogy 1A, 1B; Physics 2A–2B; a modern foreign language. Recommended: Zoölogy 4.

*The Major.*—Bacteriology 103, 105, 106; also 13 units of upper division work in related subjects, these to be selected from the following series: Bacteriology 104, 106C, 107, 108; Public Health 145, 162; Botany 119, 126, 191A, 191B; Zoölogy 100, 101A, 101B, 101C, 106, 107, 107C, 111, 111C, 111H, 118A; Chemistry 107, 108A, 108B, 108C, 108D, 109A, 109B; Home Economics 114; Soil Science 110A. Courses are to be chosen with the approval of the department.

*Curriculum for Medical Technicians.*—Students who plan a career in public health laboratory work must have a bachelor's degree in Bacteriology. In addition to completing the requirements for the major, the student must take the following courses: Bacteriology 107, 108; Botany 126; Zoölogy 4, 111, 111C, 111H. A course in biochemistry is advisable.

For practicing in the clinical laboratory field in California it is desirable to have a bachelor's degree with a major in bacteriology. The same courses required of those entering the public health laboratory field must be taken.

Subsequent to graduation an apprenticeship in an approved laboratory is required for eligibility to take the State examination for a license.

#### LOWER DIVISION COURSES

- 1. Introductory Bacteriology and Microbiology.** (4) I, II. Mr. Salle  
Prerequisite: Chemistry 1A or 2A. Students who have credit for course 6 will receive only three units for course 1.  
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. Pickett  
Not open to students who have had course 1.  
A cultural course for nontechnical students.

#### UPPER DIVISION COURSES

- 103. Advanced Bacteriology.** (5) I. Mr. Pickett  
Prerequisite: course 1.  
The more advanced principles of the life activities, growth, and morphology of bacteria. The etiology of disease.
- 104. Soil Bacteriology.** (2) II. Mr. Jann  
Prerequisite: course 1.  
The microscopic flora of soil: the morphology, function, and metabolism of soil bacteria.
- 105. Serology.** (4) II. Mrs. Ball  
Lecture, one hour; laboratory, nine hours. Prerequisite: course 103.  
Limited to sixteen students per section.  
The theory and practice of serological methods.
- 106. Metabolism of Bacteria.** (2) I. Mr. Salle  
Lectures and discussions. Prerequisite: course 1 and Chemistry 8.  
Chemical studies of fats, carbohydrates, proteins, and nucleic acids of bacteria; nutrition of bacteria; effect of vitamins on their growth; enzymes of bacteria and their reactions; respiration; respiratory enzymes; coenzymes; anaerobiosis; putrefactions; protein-sparing action; fermentations; bacterial photosynthesis; bacterial metabolic methods.

- 106C. **Metabolism of Bacteria Laboratory.** (2) II. Mr. Jann  
Prerequisite: course 106.
107. **Public Health Bacteriology.** (4) I. Mrs. Ball  
Lecture, one hour; laboratory, nine hours. Prerequisite: course 103. De-  
signed for students who plan careers in the fields of public health and clinical  
bacteriology.  
A study of diagnostic procedures.
108. **Hematology.** (2) II. Mr. Fishkin  
Lecture, one hour; laboratory, two hours.  
Prerequisite: senior standing and consent of the instructor.  
Diagnostic procedures used for the study of normal and pathological blood  
cells.
195. **Proseminar.** (2) I, II. The Staff  
Prerequisite: course 103.  
Library problems.
- 199A-199B. **Problems in Bacteriology.** (2-2) Yr. The Staff  
Prerequisite: consent of the instructor.

**MICROBIOLOGY****GRADUATE COURSES**

210. **Advanced Bacterial Physiology.** (3) I. Mr. Salle  
Prerequisite: Bacteriology 106.  
Physiological activities of microorganisms in the light of more advanced  
principles.
- 251A-251B. **Seminar in Microbiology.** (1-1) Yr.  
Mrs. Ball, Mr. Ball, Mr. Plunkett
- 293A-293B. **Research in Microbiology.** (2-5; 2-5) Yr. The Staff

**RELATED COURSE (see page 351)**

- Life Sciences 370. Methods and Materials for Teaching Life Science.**  
(3) II. Mr. Cowles, Mr. Herbst

**BOTANY****A Division of the Department of Agriculture**

- CARL C. EPLING, Ph.D., Professor of Botany and Curator of the Herbarium.  
KARL C. HAMNER, Ph.D., Professor of Botany and Director of the Botanical  
Garden (Chairman of the Division).  
ARTHUR W. HAUPT, Ph.D., Professor of Botany.  
FLORA MURRAY SCOTT, Ph.D., Professor of Botany.  
OLENUS L. SPONSLER, Ph.D., Professor of Botany, Emeritus.  
FREDRICK T. ADDICOTT, Ph.D., Associate Professor of Botany.  
ORDA A. PLUNKETT, Ph.D., Associate Professor of Botany.  
SAMUEL G. WILDMAN, Associate Professor of Botany.  
F. HARLAN LEWIS, Ph.D., Assistant Professor of Botany.  
BERNARD O. PHINNEY, Ph.D., Assistant Professor of Botany.



RUTH STOCKING LYNCH, Ph.D., Research Associate in Botany.

*Preparation for the Major.*—Botany 1, 2, 3, 6; Chemistry 1A-1B or equivalent. In addition to these courses, certain phases of botanical work require Geology 3, 5; Physics 2A-2B; Bacteriology 1; and Zoölogy 1A-1B.



*The Major.*—Twenty-four units of upper division botany including courses 107 and 140. In certain cases 6 units of upper division botany may be replaced by upper division courses in agriculture, bacteriology, chemistry, geology, and zoology, to be chosen with the approval of the division.

## LOWER DIVISION COURSES

1. **General Botany.** (5) I. Mr. Addicott  
Lectures, three hours; laboratory, six hours. No prerequisite.  
An introduction to the plant sciences.
2. **Plant Morphology.** (4) II. Mr. Haupt  
Lectures, two hours; laboratory, six hours.  
Prerequisite: course 1 or equivalent.  
The evolution of the plant kingdom, dealing with the comparative morphology of all the great plant groups.
3. **Field Botany.** (4) II. Mr. Lewis  
Lectures, two hours; laboratory or field, six hours.  
An introduction to the life habits, interrelationships, and classification of native and ornamental plants.
6. **Plant Anatomy.** (4) II. Miss Scott  
Lecture, two hours; laboratory, six hours.  
Prerequisite: course 1 or equivalent.  
The microscopic study of the structure and development of higher plants in relation to the functions of the tissues.

## UPPER DIVISION COURSES

Botany 1 or equivalent is prerequisite to all upper division courses, except 103 and 150.

103. **Botany of Economic Plants.** (2) II. Miss Scott  
Designed for students of economics, geography, agriculture, and botany. Biology 1 is recommended.  
The general morphology, classification, ecology and geographic distribution, origin, and uses of economic plants.
- 105A. **Algae and Bryophytes.** (4) I. Mr. Haupt  
Lectures, two hours; laboratory, six hours.  
Prerequisite: courses 1 and 2, or equivalent.  
A study of the structure, development, and phylogenetic relationships of the principal orders of fresh-water and marine algae, and of liverworts and mosses.
- 105B. **Morphology of Vascular Plants.** (4) II. Mr. Haupt  
Lectures, two hours; laboratory, six hours.  
Prerequisite: Botany 1 and 2, or equivalent.  
Structure, development, and phylogenetic relationships of the principal groups of ferns, fern-allies, and seed plants.
107. **Introduction to Plant Physiology.** (4) I. Mr. Addicott  
Lecture-discussion and laboratory, eight hours.  
Prerequisite: courses 1 and 6 and Chemistry 1A-1B or equivalent.  
A survey of the more important aspects of water relations, mineral nutrition, photosynthesis, assimilation, respiration, and coordination in higher plants.
111. **Plant Cytology.** (3) I. Miss Scott  
Lecture, one hour; laboratory, six hours.  
Prerequisite: courses 1, 2, 6, and 107.  
Structure and physiology of the cell,

- 112. Experimental Plant Anatomy. (3) I.** Mr. Phinney  
Lecture, one hour; laboratory, six hours.  
Prerequisite: courses 1, 6, 107, and 140.  
Quantitative aspects of development and differentiation in higher plants.
- \*113. Physiological Plant Anatomy. (3) I.** Miss Scott  
Lecture, one hour; laboratory, six hours.  
Prerequisite: courses 1, 6, and 107.  
A survey of the tissues of the higher plants in relation to function.
- 119. Mycology. (3) I.** Mr. Plunkett  
Lecture, one hour; laboratory, six hours.  
Prerequisite: Botany 1 and 2, or equivalent.  
Structure, development, and classifications of the important genera and species of fungi. For students in botany, bacteriology, agriculture, and forestry.
- 126. Medical Mycology. (4) II.** Mr. Plunkett  
Lectures, two hours; laboratory, six hours.  
Prerequisite: courses 1, 2, and 119 or Bacteriology 1.  
An introduction to the morphology, physiology, and taxonomy of the pathogenic fungi which cause disease in man and the domestic animals. This course is designed for students in bacteriology, parasitology, and medicine.
- 140. Plant Genetics. (4) II.** Mr. Phinney  
(Formerly Ornamental Horticulture 140.)  
Lectures, three hours; laboratory, three hours.  
Prerequisite: course 1 or equivalent.  
Principles of heredity with special reference to plants. Laboratory work involving breeding experiments with plant and animal materials.
- \*141. Plant Cytogenetics. (4) II.** \_\_\_\_\_
- 151. Taxonomy of Seed Plants. (3) I.** Mr. Lewis  
Lecture, one hour; laboratory, six hours and additional field work.  
Prerequisite: courses 1 and 3, or equivalent.  
The fundamentals of systematic botany. A survey of the orders and families commonly met with in the native and cultivated floras.
- 152. Advanced Systematic Botany. (3) II.** Mr. Lewis  
Lecture, one hour; laboratory or field, six hours.  
Prerequisite: courses 1, 3, and 151, and consent of the instructor.  
Field and laboratory study of natural variation in relation to spatial distribution.
- 153A-153B. Population Genetics. (2-2) Yr.** Mr. Epling  
Lecture and discussion, two consecutive hours.  
Prerequisite: consent of the instructor.  
The processes of evolutionary change in natural populations.
- 160A-160B. Plant Physiology. (4-4) Yr.** Mr. Hamner  
Lectures, two hours; laboratory, six hours.  
Prerequisite: courses 1, 6, and 107, and Chemistry 8, or equivalents. Chemistry 5A is recommended.  
Physiology of the higher plants including water relations, mineral nutrition, pigments, photosynthesis, assimilation, translocation, respiration, growth, dormancy, hormones and periodicity. An advanced course employing quantitative laboratory methods. Designed for students expecting to enter graduate work in the botanical or horticultural sciences.

\* Not to be given, 1950-1951.

**\*165. Plant Biochemistry. (4) II.**

Lectures, two hours; laboratory, six hours.

Prerequisite: course 160A-160B and Chemistry 8, or equivalents.

The chemistry of plants and plant products.

**\*190. Research Methods in Morphology. (4) II.**

Mr. Phinney

Lecture, one hour; laboratory, nine hours.

Prerequisite: consent of the instructor.

The theory and methods of preparing plant tissues and materials for microscopic study.

**191A-191B. Molecular Structure of Biological Materials. (2-2) Yr.**

Mr. Hamner

Prerequisite: senior standing, or consent of the instructor; Physics 2A-2B, Chemistry 8, and Botany 1, 2 or Zoölogy 1, 2, and in addition advanced courses in biological fields.

An adaptation of our knowledge of atomic and molecular structure to biological concepts of protoplasm and cell parts.

**199A-199B. Problems in Botany. (2-4; 2-4) Yr.**

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Prerequisite: senior standing.

**GRADUATE COURSES****252A-252B. Seminar in Principles and Theories of Botany. (2-2) Yr.**

Mr. Phinney

**253A-253B. Seminar in Plant Anatomy. (1-1) Yr.**

Miss Scott

**254A-254B. Seminar in Plant Physiology. (1-1) Yr.**

Mr. Addicott, Mr. Hamner

**255A-255B. Seminar in Systematics. (1-1) Yr.**

Mr. Epling

**256A-256B. Seminar in Plant Morphology. (1-1) Yr.**

Mr. Haupt

**257A-257B. Seminar in Mycology. (1-1) Yr.**

Mr. Plunkett

**278A-278B. Research in Botany. (2-6; 2-6) Yr.**

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**RELATED COURSES IN OTHER DEPARTMENTS OR DIVISIONS****Bacteriology 1. Fundamental Bacteriology.****Biology 1. Fundamentals of Biology.****Geology 120. Paleobotany.****Irrigation and Soils 110A. Soil and Plant Interrelations.****Floriculture and Ornamental Horticulture 131A-131B. Taxonomy and Ecology of Ornamental Plants.****Floriculture and Ornamental Horticulture 136. General Floriculture.****Floriculture and Ornamental Horticulture 146. Plant Breeding.****Life Sciences 370. Methods and Materials for Teaching Life Science.****Plant Pathology 120. Plant Diseases.****Subtropical Horticulture 100. Systematic Pomology.****Subtropical Horticulture 101. Citriculture.****Subtropical Horticulture 102. Subtropical Fruits Other Than Citrus.****Subtropical Horticulture 110. Plant Propagation.****Subtropical Horticulture 111. Respiration and Respiratory Enzymes.****Subtropical Horticulture 113. Fruit Physiology and Storage Problems.****Zoölogy 101A, B, C. General Physiology.****Zoölogy 130, 131. Genetics.**

\* Not to be given, 1950-1951.

**BUSINESS ADMINISTRATION**

- RALPH M. BARNES, Ph.D., Professor of Production Management and Professor of Engineering.
- RALPH CASSADY, JR., Ph.D., Professor of Marketing.
- IRA N. FRISBEE, M.B.A., C.P.A., Professor of Accounting.
- NEIL H. JACOBY, Ph.D., LL.D., Professor of Business and Economic Policy (Chairman of the Department).
- HOWARD SCOTT NOBLE, M.B.A., C.P.A., LL.D., Professor of Accounting.
- JOHN C. CLENDENIN, Ph.D., Associate Professor of Finance.
- \* WILBERT E. KARRENBROCK, Ph.D., Associate Professor of Accounting.
- WAYNE L. MCNAUGHTON, Ph.D., Associate Professor of Personnel Management and Industrial Relations.
- PHILIP NEFF, Ph.D., Associate Professor of Business Economics.
- GEORGE W. ROBBINS, M.B.A., Associate Professor of Marketing.
- J. FREDERICK WESTON, Ph.D., Associate Professor of Finance.
- WILLIAM F. BROWN, Ph.D., Assistant Professor of Marketing.
- A. B. CARSON, Ph.D., C.P.A., Assistant Professor of Accounting.
- \* ALFRED NICOLS, Ph.D., Assistant Professor of Business Economics.
- ROBERT TANNENBAUM, Ph.D., Assistant Professor of Personnel Management and Industrial Relations.
- JOHN R. VAN DE WATER, A.B., J.D., Assistant Professor of Business Law.
- JAMES WARREN DEGAN, Ph.D., Instructor in Personnel Management and Industrial Relations.
- ROBERT WENDELL BUTTREY, A.B., C.P.A., Lecturer in Accounting.
- JOSEPH D. CARRABINO, M.B.A., Lecturer in Production Management.
- C. JOSEPH CLAWSON, M.A., Lecturer in Marketing.
- STEPHEN ENKE, Ph.D., Lecturer in Business Economics.
- ROLAND W. FUNK, B.S., Lecturer in Accounting.
- EDWARD G. HATHCOCK, A.B., Lecturer in Real Estate.
- GEORGE R. HAWKES, M.A., Lecturer in Accounting.
- MALCOLM F. HESLIP, Ph.D., Lecturer in Business Administration.
- JAMES E. McNULTY, JR., Ph.D., Lecturer in Business Economics.
- FRANK E. NORTON, A.B., Lecturer in Business Administration.
- CYRIL J. O'DONNELL, Ph.D., Lecturer in Business Administration.
- RONALD C. ROESCHLAUB, LL.B., M.A., Lecturer in Business Law.
- MELVIN E. SALVESON, M.S., Lecturer in Production Management.
- ROBERT F. SCHENZ, M.B.A., Lecturer in Business Statistics.
- JOHN T. SCHNEIDER, M.B.A., Lecturer in Statistics.
- HARRY SIMONS, M.A., C.P.A., Lecturer in Accounting.
- LEON C. STERES, B.S., C.P.A., Lecturer in Accounting.
- CLAUDE W. STIMSON, Ph.D., LL.B., Lecturer in Business Law.
- ROBERT D. TUCKER, M.B.A., Lecturer in Finance.
- ROBERT M. WILLIAMS, Ph.D., Lecturer in Business Statistics.

**School of Business Administration**

*Admission.*—The School of Business Administration accepts students of junior or higher standing who have completed an organized program of college work fulfilling the requirements for upper division standing in one of the colleges of the University or the equivalent elsewhere. For information concerning acceptance by the School, see page 113 of this bulletin, and consult the ANNOUNCEMENT OF THE SCHOOL OF BUSINESS ADMINISTRATION.

\* Absent on leave, 1950-1951.

\* In residence second semester only, 1950-1951.

*The Upper Division Program.*

1. General requirements: courses 100, 101, 105A-105B, 115, 120, 140, 150, 160, 190, and Economics 135.
2. Special elective: 3 units from upper division business administration or economics courses other than those used to meet requirement (1) or (3).
3. At least four courses aggregating not less than 10 units in one of the following seven majors: accounting, finance, insurance, production management, personnel management and industrial relations, marketing, office management. (For courses offered in the various majors, see pages 157 ff.)

**College of Letters and Science**

*Letters and Science List.*—Courses 1A-1B, 131, 133, 135, 160. For regulations governing this list, see page 62.

**Graduate Division***Requirements for Admission to Graduate Status.*

The general requirements (see paragraph 1 above), or their equivalent, as well as the general University requirements, are prerequisite to admission to regular graduate status in the Department of Business Administration.

*Departmental Requirements for the Degree of Master of Business Administration.*

1. At least 6 units of the 24 required for the degree must be taken outside the Department of Business Administration.
2. Twelve units of graduate courses (200 series) are required, 6 of which must be taken in the field of specialization, and the remaining 6 outside the field of specialization and divided between at least two other fields.
3. The department favors the comprehensive examination plan.

For further information concerning graduate work consult the ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN DIVISION, and the ANNOUNCEMENT OF THE SCHOOL OF BUSINESS ADMINISTRATION.

**LOWER DIVISION COURSES****1A-1B. Elementary Accounting.** (3-3) Beginning either semester.

The Staff

Prerequisite: sophomore standing for nonaccounting majors. Accounting majors should begin the course not later than the second semester of the freshman year. This course consists of two one-hour lectures per week, one two-hour laboratory per week, and four one-hour examinations which are scheduled at 4:00 p.m. on the second Tuesday of each month during the semester. Attendance in all parts is compulsory for all students enrolled in the course.

**2A-2B. Accounting Laboratory.** (1-1) Beginning either semester.

Need not be taken concurrently with course 1A-1B. The Staff  
One three-hour laboratory per week.

**UPPER DIVISION COURSES**

Business Administration 1A-1B and Economics 1A-1B are prerequisite to all upper division courses.

**I. Business Economics****100. Theory of Business.** (3) I, II.

Mr. Williams, Mr. Norton, Mr. Enke, Mr. Neff, Mr. McNulty

Effort of the enterprise to secure profits, nature of demand for its products. Costs and production. Allocation of resources through competition. Forms of market competition. Relation of size to efficiency. Markets for productive factors. Incentives and growth.

Required of all business administration students.

**101. The Enterprise in an Unstable Economy. (3) I, II.**

Mr. Williams, Mr. Norton, Mr. Neff, Mr. McNulty

(Former number, 102.)

Prerequisite: course 100.

How the enterprise reacts to general economic fluctuations and how its decisions, in turn, affect them. Important forces in past fluctuations. Behavior of indices of business activity. Appraisal of forecasting techniques. Entrepreneurial and public policies to mitigate business fluctuations.

Required of all business administration students.

**II. Business Law****105A-105B. Business Law. (3-3) Beginning either semester.**

Mr. Stimson, Mr. Roeschlaub, Mr. Van de Water

(Former number, 115A-115B.)

Law in its relationship to business. Contracts, agency, and property are considered in the first semester; bailments, sales, negotiable instruments, and business organizations in the second semester.

Required of all business administration students.

**106. General Laws Relating to Property. (3) I, II.**

Mr. Stimson

(Former number, 116.)

Prerequisite: course 105A-105B.

Real and personal property; nature and kinds, types of ownership, methods of acquisition and disposal, rights of husband and wife, community and separate, intangibles, automobiles, security devices, rights and remedies of creditors, copyrights and patents, associated nonproperty relationships.

**107. The Law of Wills, Estates, and Trusts. (3) II.**

Mr. Stimson

(Former number, 117.)

Prerequisite: course 105A-105B.

Testate and intestate succession; types, requirements, and revocation of wills; schemes of testamentary disposition; protection against disinheritance; probate and administration; nature, kinds, and formation of trusts; subject matter of trusts; trustee and beneficiary; trust administration.

**III. Business Communication and Office Management**

For courses in Business Communication and Office Management, see under Department of Business Education, page 164.

**IV. Business Statistics****115. Business Statistics. (4) I, II.**

(Former number, 140.)

Mr. Williams, Mr. Schneider, Mr. Schenz

Lectures, three hours; laboratory, four hours. Students who have credit for Economics 140 will receive only one unit of credit for this course.

Sources of statistical data; construction of tables, charts, and graphs; statistical distributions and their measurement; introduction to probability theory, market analysis, consumer sampling, and quality control; index numbers; correlation; time-series analysis: trend, seasonal, business cycles; business forecasting; statistics of national income.

Required of all business administration students.

**\*116. Correlation Analysis in Business. (2) I.**

Mr. Williams

Prerequisite: course 115.

Measuring variability in a statistical series; reliability of statistical results; methods of measuring the relationship between variables; accuracy of estimates and degree of correlation; partial and multiple correlation; correlation of time series; application to various types of business problems.

\* Not to be given, 1950-1951.

- \*117. Probability and Sampling in Business. (2) II.** Mr. Williams  
Prerequisite: course 115.  
Principles of probability theory; statistical induction and the problem of sampling; random and stratified selections; measures of reliability; the analysis of variance; generalizing from small samples; applications to business problems in market research, population, sampling, and quality control in manufacturing.
- 118. Business and Statistical Research. (2) I.** Mr. Williams  
(Former number, 144.)  
Prerequisite: course 115.  
Research philosophy and methodology and the application of specific research techniques to actual business problems. These problems will be made possible by the cooperation of various concerns in Southern California.

### **V. Accounting**

- 120. Intermediate Accounting. (3) I, II.**  
Mr. Simons, Mr. Funk, Mr. Carson, Mr. Hawkes  
(Former number, 160A.)  
Adjustments, working papers, statements from incomplete data, cash and receivables, inventories, investments, fixed assets, intangibles and deferred charges, liabilities, capital stock and surplus, installment accounting, statement analysis, and application of funds.  
Required of all business administration students.
- 121. Advanced Accounting. (3) I, II.** Mr. Simons, Mr. Funk, Mr. Carson  
(Former number, 160B.)  
Prerequisite: course 120.  
Partnerships, joint ventures, agencies and branches, consolidated balance sheets, consolidated profit and loss statements, statements of affairs, receiverships, realization and liquidation statements, estates and trusts, and actuarial accounting problems.
- 122. Cost Accounting. (3) I, II.** Mr. Carson  
(Former number, 161.)  
Prerequisite: course 120.  
Distribution of department store expenses, general factory accounting, process costs, job-lot accounting, foundry accounting, budgets and control of costs, expense distributions, burden analyses, differential costs, by-products and joint-products, and standard costs.
- 123. Auditing. (3) I, II.** Mr. Steres  
(Former number, 162.)  
Prerequisite: course 121.  
Accounting investigations, balance sheet audits, and detailed audits performed by public accountants. Valuation, audit procedure, working papers, and audit reports.
- 125. Municipal and Governmental Accounting. (3) I, II.**  
(Former number, 165.) Mr. Simons, Mr. Carson  
Prerequisite: course 121.  
A study of fund accounting as applied to governmental accounting and nonprofit institutions. Includes problems of budgeting, tax levies, appropriations, and accounting for revenues and expenditures. The following funds are included: general, special revenue, bond sinking, working capital, special assessment, trust and agency, and utility. Special problems on nonprofit institutions.

\* Not to be given, 1950-1951.

**127. Federal Tax Accounting. (3) I, II.**

(Former number, 163.)

Prerequisite: course 121.

A study of the current federal revenue acts as relating to individual, partnership, and corporation income taxation, excess profits taxes, estate taxes, and gift taxes.

Mr. Buttrey

**128. C.P.A. Review. (5) I, II.**

(Former number, 169.)

Prerequisite: courses 121, 122, 123, 125, 127.

Three hours lecture and two practice sessions of two hours each weekly.

Intensive training in working accounting problems of the type encountered in C.P.A. examinations. The practice sessions will be devoted to problem solution under conditions similar to those experienced by the C.P.A. candidate during the examination. Explanation and acceptable solutions to the problems will be provided.

Mr. Simons

**VI. Finance**

Economics 135 is required of all students in the School of Business Administration and is prerequisite to all courses in the finance series.

**131. Corporation Finance. (3) I, II.**

Prerequisite: Economics 135.

A study of the financial structures and financial problems of business corporations. The instruments and methods of financing a corporation will be considered in their social, legal, and economic effects as well as in their effects on the corporation and the shareholders.

Mr. Weston

**132. Applied Business Finance. (3) I, II.**

(Former number, 139.)

Prerequisite: Economics 135.

An intensive study of the financial operations of business; work of the credit department, the comptroller's or treasurer's office; preparation of financial reports for stockholders and for public authorities; credit analysis; credit bureaus and their services; consumer installment contracts and financing; relations with banks. Emphasis on the operating financial problems and practices of all types of business enterprise.

Mr. Weston

**133. Investments. (3) I, II.**

(Former number, 132.)

Prerequisite: Economics 135.

The principles underlying investment analysis and investment policy; the chief characteristics of civil and corporate obligations and stocks. Investment trusts and institutional investors, forms, problems, and policies. Relation of money markets and business cycles to investment practice.

Mr. Clendenin

**134. Investment and Financial Analysis. (3) I, II.**

(Former number, 133.)

Prerequisite: course 131 or 133; Economics 135.

Examination of specific securities and projects from an investment point of view; sources of information on investment matters; the writing of investment analyses and reports. Examples of financial practices involved in mergers, reorganizations, recapitalization plans, etc. Reading assignments and class discussions will be devoted mainly to actual and recent cases.

Mr. Clendenin, Mr. Tucker

**VII. Risk-Bearing and Insurance****135. Principles of Insurance. (3) I, II.**

(Former number, 145.)

Basic principles of risk and insurance and their applications to business management and personal affairs. Analyses of concepts and methods of han-



dling risks; insurance carriers, contracts, and underwriting; loss prevention and settlement; government insurance programs; economic functions of insurance.

**136. Life Insurance. (3) I, II.**

Prerequisite: course 135.

Studies of the nature, and of the business and personal uses of life insurance and annuities; contracts; policy conditions; selection of risks; types of carriers; mathematical bases; group, wholesale, and industrial insurance; organization, management, regulation, taxation, and investment policy of legal reserve companies.

**137. Property Insurance. (3) I.**

Prerequisite: course 135.

A study of fire, ocean marine, inland marine, and closely allied property insurance lines. A thorough analysis is made of insurable interest, policies, forms, endorsements, ratemaking, underwriting, loss prevention, and loss settlement.

**138. Casualty Insurance. (3) II.**

Prerequisite: course 135.

Studies of the principles and personal and business uses of casualty insurance. Workmen's compensation, liability, automobile, aviation, accident and health, theft, boiler and machinery, plate glass, credit and title insurance, and fidelity and surety bonding are analyzed.

**VIII. Production Management**

**140. Elements of Production Management. (3) I, II.**

(Former number, 121A.)

Mr. Barnes, Mr. Salvesson

Lecture, two hours; laboratory, two hours.

An introductory course conveying an understanding of basic problems in managing production operations. Organizing for production; sales forecasting; production planning; production control; materials planning and control; purchasing and procurement; packaging; warehousing; transportation; plant location; new product development.

Required of all business administration students graduating on and after February, 1951.

**141. Techniques of Production Management. (5) I, II.**

(Former number, 121B.)

Mr. Barnes

Prerequisite: course 140.

Lecture, three hours; laboratory, four hours. (An additional two hours' laboratory in drawing will be required of students who do not offer credit for engineering drawing or its equivalent.)

A study of the management techniques for improving and controlling manufacturing operations. Methods analysis and control; production and cost standards; job analysis and evaluation; wage systems and incentives; quality control; materials handling; plant and work place layout; manufacturing budgets; performance analysis and control.

Required of all majors in production management.

**142. Production Planning and Control. (3) I, II.** Mr. Barnes, Mr. Salvesson

Prerequisite: course 141.

A study of the problems and methods of planning the efficient utilization of capital, labor, equipment, and materials. Sales forecasting; production planning; production control-scheduling, routing, dispatching, and expediting; labor layout; materials planning and control; capital budgets.

Required of all majors in production management.

- 143. Motion and Time Study.** (4) I, II. Mr. Barnes, Mr. Carrabino  
(Former number, 124A-124B.)  
Prerequisite: course 141 or consent of the instructor.  
Lecture, two hours; laboratory, four hours.  
An analysis of time and motion study as a management tool. Work simplification and motion economy; analyzing operations; time standards and their calculation; speed rates and allowances; motion picture film analysis; the motion study report; for both management and nonmanagement students.
- \*144. Line-Production Methods.** (3) II. Mr. Barnes, Mr. Salveson  
Prerequisite: course 141.  
A study of the special problems and methods in line production. Equipment selection; material movement; balancing operations with the line; establishing the line; special considerations in production and material control; obtaining flexibility in the line; possible uses and variations in line production.
- \*145. Industrial Purchasing.** (3) Mr. Salveson  
Prerequisite: course 141 or consent of the instructor.  
A study of purchasing and procurement in industry and government. Purchasing policies and organization; coordination with production schedules and materials planning; optimum quantity and price; vendor relations; follow-up and expediting; receiving and inspection; purchasing research.

### IX. Personnel Management and Industrial Relations

- 150. Elements of Personnel Management.** (3) I, II. Mr. McNaughton, Mr. Tannenbaum, Mr. Degan  
(Former number, 153A.)  
A critical examination of the principles, methods, and procedures related to the effective utilization of human resources in organizations. Historical development and objectives of personnel management, individual differences, labor budgeting, job analysis, recruitment, selection, placement, training, transfer and promotion, wage and salary administration, hours of work, accident prevention, employee health, personnel services, motivation and morale, management-union relations.  
Required of all business administration students.
- 152. The Management of Employee-Group Relations.** (3) I, II. Mr. McNaughton, Mr. Tannenbaum  
(Former number, 153B.)  
Prerequisite: course 150.  
Methods and procedures available to managers in their relationships with employee groups and related managerial policies considered with reference to the theory of groups. Leadership and devices for the attainment of high morale. Management-union relationships. An evaluation of conflicting, competing, and complementary group-relations programs.  
Required of all personnel management and industrial relations majors.
- 153. Managerial Adjustments to Labor Law.** (3) I, II. Mr. Van de Water  
(Former number, 155.)  
Prerequisite: course 150.  
History and consequences for business policy of (a) law governing collective relationships between employers, employees, and their representatives and (b) law concerned with employee welfare, including wages, hours, working conditions, and industrial accident compensation. Criteria for evaluating labor

law, with special attention to the role of management in the improvement of legislation.

Required of all personnel management and industrial relations majors.

**154. Labor Markets and Wage Structures. (3) I, II.**

Prerequisite: courses 100 and 150. Mr. McNaughton, Mr. Tannenbaum

The theory and characteristics of labor markets and wage structures considered as a basis for managerial policies and procedures in wage and salary administration.

Required of all personnel management and industrial relations majors.

### **X. Marketing**

**160. Elements of Marketing. (3) I, II.**

Mr. Robbins, Mr. O'Donnell, Mr. Healip, Mr. McNulty, Mr. Clawson  
(Former number, 180A.)

A survey of the major marketing methods, institutions, and practices. The subjects of retailing, wholesaling, distribution channels, marketing legislation, advertising, coöperative marketing, pricing, marketing research, and marketing costs are treated from the standpoint of consumers, middlemen, and manufacturers.

Required of all business administration students.

**162. Retail Store Management. (3) I, II.**

Mr. Cassady, Mr. Brown

(Former number, 186.)

Prerequisite: course 160.

A study of retailing from the standpoint of management. Includes the case-method treatment of such problems as buying, sales promotion, inventory planning and control, pricing, style merchandising, and general management problems.

**163. Advertising Principles. (3) I, II.**

Mr. Brown, Mr. Clawson

(Former number, 185A.)

Prerequisite: course 160.

Lecture, two hours; laboratory, two hours.

A survey of the field of advertising—its use, production, administration, and economic implications. Includes the study of advertising psychology, practice in the preparation of advertisements, consideration of methods of market research and copy testing, and analysis of advertising campaign planning and sales coördination.

**165. Sales Management. (3) I, II.**

Mr. Robbins, Mr. O'Donnell

(Former number, 184.)

Prerequisite: course 160.

A case-method study of sales strategy from the managerial viewpoint. Includes merchandising policies, distribution policies, forecasting and planning, sales method and campaigns, pricing, sales department organization, management of the sales force, and budgetary control of sales.

**168. Advertising Policy. (3) II.**

Mr. Brown

(Former number, 185B.)

Prerequisite: course 163 and consent of the instructor, to be granted on the basis of the applicant's training or experience in such fields as art, composition, psychology, and political science.

Lecture, two hours; laboratory, two hours.

Intended for students planning a career in advertising, this course emphasizes such management problems as the definition of advertising objectives, selection of campaign themes, determination of the budget, and use of research in planning the program and measuring its effectiveness.

**169. Marketing Policies.** (3) I, II.  
(Former number, 180B.)

Mr. Cassady, Mr. Brown

Prerequisite: courses 160, 118, and senior standing.

Lecture, two hours; laboratory, two hours.

A course designed to analyze policies which are important in marketing management. Special attention is given to the use of research in solving marketing problems, the theory of pricing and price policies as related to marketing, and certain types of restrictive legislation as they affect the distribution of goods and services. Readings are assigned for background purposes. The case method is utilized as a basis for class discussion. Laboratory periods provide practice in the application of principles to the distribution of a selected commodity.

**XI. Real Estate and Urban Land Economics****180. Real Estate Principles.** (3) I, II.  
(Former number, 110.)

Mr. Hathcock

A survey of the business methods, economic problems, and legal background of real estate operation. Topics studied include ownership estates, liens, mortgages, leases, taxes, deeds, escrows, title problems, brokerage, subdivisions, appraisals, and zoning and building ordinances.

**XII. Business Organization and Policy****190. Organization and Management Policy.** (3) I, II.

(Former number, 125.)

Mr. Funk, Mr. O'Donnell

Prerequisite: senior standing.

A case-method study of the practical problems involved in the organization and management of business enterprises. Emphasis is placed upon the correlation of functions and activities of operating departments in the organization.

Required of all business administration students.

**199A-199B. Special Studies in Business Administration.** (3-3) Yr.

The Staff

Prerequisite: senior standing, 6 units of upper division courses in business administration, and consent of the instructor.

**GRADUATE COURSES****221A. Seminar in Accounting Problems I.** (2) I.

Mr. Frisbee

(Former number, 261A.)

Consideration of basic problems in presenting balance sheets and income and surplus statements, particularly from the standpoint of the public accountant; studies in the accounting methods and problems of specific industries.

**221B. Seminar in Accounting Problems II.** (2) II.

Mr. Frisbee

(Former number, 261B.)

Advanced study of problems in federal and state income, franchise, gift, and estate taxes; aims to convey an understanding of source materials and research methods for ascertaining current rulings and trends in laws and regulations.

**222. Seminar in Industrial Accounting.** (2) II.

Mr. Karrenbrock

(Former number, 262.)

Prerequisite: course 122.

Aims to acquaint the student with practical aspects of industrial accounting. Current cost-accounting literature is examined; studies of systems in local industries are made; case reports are prepared.

- \*225. Seminar in Governmental and Institutional Accounting. (2) II.**  
 (Former number, 265.) Mr. Karrenbrock  
 Prerequisite: course 125.  
 State laws applicable to governmental and institutional accounting are examined. The actual administration and accounting procedures of municipalities of the Los Angeles area are studied; case reports are prepared.
- 229. Seminar in Accounting Theory. (2) I, II.** Mr. Noble  
 (Former number, 260.)  
 A survey of accounting literature, with emphasis on the development of basic accounting concepts. An attempt is made to explain contemporary practice as it has evolved in accordance with basic theory and expanding demands for accounting information.
- 230. Seminar in Money Rates and Money Markets. (2) I.** Mr. Clendenin  
 (Former number, 235.)  
 A study of American money markets. Sources of funds for bond investment, mortgage loans, stock financing, and small business financing; the demand for such funds; the interest rates and yields from investments which result from supply-demand relationships.
- 231. Seminar in Business Finance. (2) I, II.** Mr. Weston  
 (Former number, 254.)  
 Discussion of current problems in the financing of business; critical review of special studies made by members of the class on topics relating to business finance.
- 233. Seminar in Investments. (2) II.** Mr. Clendenin  
 (Former number, 255.)  
 Discussion of current problems faced by individual and institutional investors; critical review of special studies made by members of the class on topics relating to investment.
- 240A-240B. Seminar in Industrial Plant Management. (2-2) Yr.**  
 (Former number, 251A-251B.) Mr. Barnes, Mr. Salvesson  
 A study of the problems and policy decisions encountered at the coördinative, or plant management level. Basic production policies and organization; determination of production methods; coördinating production activities; industrial risk and forecasting; business indicators; social aspects of production.
- \*241A-241B. Seminar in the Dynamics of Industrial Technology. (2-2) Yr.**  
 Mr. Barnes  
 The managerial problems and policy decisions concerning technological research; budgeting for research; contributions of fundamental, engineering, and market research; management of research and development; research and industrial progress; social aspects of technological change; product diversification and standardization; annual models.
- 249A-249B. Seminar in the Scientific Approach to Management. (2-2) Yr.**  
 Mr. Barnes  
 A study of the historical development of the scientific approach to management. Analysis of the contributions of the pioneers, Taylor, Gilbreth, Gantt, Cooke, Fayol, and others. Evaluation of current trends. Case studies in application to all fields of management.
- 251. Seminar in the Management of Individual-Employee Relations. (2) I.**  
 (Former number, 253A.) Mr. McNaughton, Mr. Tannenbaum  
 Consideration, at an advanced level, of factors underlying the formation and execution of managerial policies relating to the selection, development, adjustment, and motivation of individual employees. Emphasis on independent investigations and presentations by students.

- 252. Seminar in the Management of Employee-Group Relations. (2) II.**  
 (Former number, 253B.) Mr. McNaughton, Mr. Tannenbaum  
 Prerequisite: course 152.  
 Consideration, at an advanced level, of factors underlying the formation and execution of managerial policies relating to employee groups. Leadership and morale. Management-union relationships. Emphasis on independent investigations and presentations by students.
- 261. Seminar in Marketing Institutions. (2) I.** Mr. Cassady  
 (Former number, 270.)  
 Lays a groundwork for sound investigative procedures in solving marketing problems. Intensively studies marketing institutions (chain store, wholesaler, market research agency, etc.), and the legal environment in which they operate (Sherman, Clayton, and Federal Trade Commission Acts, Fair Trade Laws, Unfair Practices Acts, etc.).
- 262. Seminar in Price Policies. (2) II.** Mr. Cassady  
 (Former number, 271.)  
 Relates economic theory and price policy. Rigorous consideration is given to such concepts as demand, theory of competition, market classification, price leadership, geographical pricing schemes, and price discrimination, followed by analysis of the price policies of individual firms in which these concepts are utilized. A firm grasp of economic theory is a prerequisite.
- 298A. Seminar in Business Policies I. (2) I.** Mr. Jacoby  
 (Former number, 250A.)  
 Prerequisite: consent of the instructor.  
 Aims to develop a theory and philosophy of business organization, management, and leadership. Students prepare analytical reviews of leading works on these subjects for presentation in class and critical group discussion.
- 298B. Seminar in Business Policies II. (2) II.** Mr. Jacoby  
 (Former number, 250B.)  
 Prerequisite: consent of the instructor.  
 Aims to develop capacity to solve the problems of organization, personnel, and policy formation encountered at and around the top levels of management. Students prepare reports on a series of complex business cases for analysis and discussion in class.
- 299. Research in Business Administration. (1 to 4) I, II.** The Staff  
 (Former number, 290.)

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## BUSINESS EDUCATION

- SAMUEL J. WANOUS, Ph.D., Professor of Office Management and Business Education (Chairman of the Department).  
 ERWIN M. KEITHLEY, M.S., Lecturer in Office Management and Business Education.  
 WOODROW W. BALDWIN, M.A., Associate in Office Management and Business Education.  
 LAWRENCE W. ERICKSON, M.S., Associate in Office Management and Business Education.  
 RAYMOND R. WHITE, M. Com. Ed., Lecturer in Office Management and Business Education.

The majors in business education are offered in the College of Applied Arts and provide specialization in secretarial training, bookkeeping and accounting, general business, and merchandising for students who wish to qualify for teaching in these fields. (Students interested in positions of administrative re-

sponsibility in business enterprises should consult the offerings of the School of Business Administration.)

*Preparation for the Major.*—Courses 3A–3B, Business Administration 1A–1B, Economics 1A–1B, Psychology 1A and either 1B or 33, English 1A, Speech 1A, Geography 5A–5B, and 3 units of mathematics or science.

Business Administration 2A or 2B is required for the special secondary credential if it includes “Bookkeeping and Accounting.”

Business Education 4A–4B is required for the special secondary credential if it includes “Secretarial Training.”

*The Major.*—Thirty-six units of coördinated upper division courses which may be taken in one of six specified majors:

1. *Major in Office Administration.*

Courses 110, 111, 112, 113, 370A, Business Administration 105A, 160, Economics 135, and 13 units to be approved by the departmental adviser.

2. *Major in Accounting.*

Courses 110, 112, 113, 370B, Business Administration 105A, 120, 160, Economics 135, one additional accounting course, and 10 units to be approved by the departmental adviser.

3. *Major in General Business.*

Courses 110, 112, 113, 370B, Business Administration 105A, 120, 160, Economics 135, and an additional upper division course in economics, and 10 units to be approved by the departmental adviser.

4. *Major in Merchandising.*

Courses 110, 113, 370C, Business Administration 105A, 160, 162, 163, 165, Economics 135, and 10 units to be approved by the departmental adviser.

5. *Major in Office Administration, Accounting, and General Business.*

Courses 110, 111, 112, 113, 370A–370B, Business Administration 105A, 120, 160, Economics 135, one additional accounting course, and 5 units to be approved by the departmental adviser.

6. *Major in Accounting, General Business, and Merchandising.*

Courses 110, 112, 113, 370B–370C, Business Administration 105A, 120, 160, 162, 163, 165, Economics 135, and one additional accounting course.

*Graduate Division.*—Students in business education may earn the following graduate degrees: Master of Business Administration in the School of Business Administration; Master of Education, Master of Arts, or Doctor of Education in the School of Education. For further information see the announcements of the School of Business Administration, the School of Education, and the Graduate Division, Southern Section.

*Requirements for Teaching Credentials.*—Candidates for the special secondary credential in business education or for the general secondary credential with a major or minor in business education should consult the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

#### LOWER DIVISION COURSES

**3A–3B. Secretarial Training. (2–2) Beginning either semester.**

(Formerly Business Administration 3A–3B.)

Mr. Erickson

A study of typewriting in which the groundwork is laid for a thorough understanding of office management and business teaching problems. Principles of operating various kinds of typewriters, special adaptations of each, and bases of speed and accuracy development are included. Business Education 3A is open only to students majoring in business education or office management.

**4A–4B. Secretarial Training. (3–3) Beginning either semester.**

(Formerly Business Administration 4A–4B.)

Mr. White, Mr. Baldwin

A study of shorthand in which the groundwork is laid for a thorough

understanding of office management and business teaching problems. An analysis of various techniques used in mastery of technical vocabularies and speed in writing and reading shorthand from dictation is included. Business Education 4A is open only to students majoring in business education or office management.

#### UPPER DIVISION COURSES

- 110. Business Correspondence.** (3) I, II. Mr. Keithley, Mr. Baldwin  
(Formerly Business Administration 150.)  
Prerequisite: course 3A or its equivalent.  
Designed to give students an understanding of the service of written communications to business. Training in the writing of communication forms in typical business situations. A review of correct English usage in business writing is included.
- 111. Applied Secretarial Practice.** (3) I, II. Mr. Erickson  
(Formerly Business Administration 151.)  
Prerequisite: courses 3A-3B, 4A-4B.  
Study of stenographic office problems, including the development of expert skill and ability in transcription. A consideration of the principles underlying the editing of dictated letters and reports and of the requirements and standards of stenographic positions in civil service as well as in various types of private offices.
- 112. Secretarial Problems.** (3) I, II. Mr. Erickson  
(Formerly Business Administration 152.)  
Prerequisite: course 3A or its equivalent.  
A study of nonstenographic office problems and their solutions, including those encountered in filing, preparing statistical reports, handling incoming and outgoing correspondence, and proofreading. A study of the rules of conduct affecting all office employees, and the development of understanding of various types of office machines.
- 113. Office Organization and Management.** (3) I, II. Mr. Wanous, Mr. Keithley  
(Formerly Business Administration 154.)  
Analysis of functions of various office departments, their organization and management. Methods used in selecting and training office personnel; office planning and layout; selection and care of office supplies and equipment; methods and devices used to improve operating efficiency; types and uses of office appliances; techniques for performing office duties.
- 114. Business Report Writing.** (2) II. Mr. Keithley  
Prerequisite: course 3A, or equivalent, and course 110.  
A study of the processes of investigation and presentation of business problems and their solutions. Training in methods of collecting, organizing, and interpreting data, with emphasis upon writing the elements of a final report.

#### GRADUATE COURSES

- 210. Case Studies in Office Management.** (2) II. Mr. Wanous  
**299. Independent Study in Business Education.** (2 to 4) I, II. The Staff

#### PROFESSIONAL COURSES IN METHOD

- 370A. Methods of Teaching Secretarial Subjects.** (2) I. Mr. Wanous  
(Formerly Business Administration 370A.)  
A survey and evaluation of the methods and material used in teaching typewriting, shorthand, transcription, and office training to secondary school pupils. Also considered are achievement standards, grading plans, measurement devices, and procedures for adapting instruction to various levels of pupil ability.



**370B. Methods of Teaching Bookkeeping and the General Business Subjects.**

(2) II.

Mr. Wanous

(Formerly Business Administration 370B.)

An analytical study of the devices, methods, and materials used in teaching bookkeeping, junior business training, business arithmetic, business law, commercial geography, and related business subjects. A consideration of course objectives, curricular placement, units of instruction, evaluation measures, and remedial procedures.

**\*370C. Methods of Teaching Merchandising. (2) II.**

Mr. Keithley

An application of the principles of best practices in teaching salesmanship, merchandising, marketing, and other subjects related to the merchandising field. Emphasis placed upon study of current practices, objectives, teaching aids, evaluation, and achievement of effective learning situations.

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## CHEMISTRY

FRANCIS E. BLACET, Ph.D., Professor of Chemistry (Chairman of the Department).

MAX S. DUNN, Ph.D., Professor of Chemistry.

†THEODORE A. GHEISSMAN, Ph.D., Professor of Chemistry.

JAMES B. RAMSEY, Ph.D., Professor of Chemistry.

\*G. ROSS ROBERTSON, Ph.D., Professor of Chemistry and Director of the Chemical Laboratories.

\*HOSMER W. STONE, Ph.D., Professor of Chemistry.

SAUL WINSTEIN, Ph.D., Professor of Chemistry.

WILLIAM G. YOUNG, Ph.D., Professor of Chemistry.

WILLIAM R. CROWELL, Ph.D., Professor of Chemistry, Emeritus.

CLIFFORD S. GARNER, Ph.D., Associate Professor of Chemistry.

THOMAS L. JACOBS, Ph.D., Associate Professor of Chemistry.

JAMES D. McCULLOUGH, Ph.D., Associate Professor of Chemistry.

DONALD J. CRAM, Ph.D., Assistant Professor of Chemistry.

RALPH A. JAMES, Ph.D., Assistant Professor of Chemistry.

WILLIAM G. McMILLAN, JR., Ph.D., Assistant Professor of Chemistry.

ROBERT L. PECOK, Ph.D., Assistant Professor of Chemistry.

ROBERT L. SCOTT, Ph.D., Assistant Professor of Chemistry.

KENNETH N. TRUEBLOOD, Ph.D., Assistant Professor of Chemistry.

PAUL S. FARRINGTON, Ph.D., Instructor in Chemistry.

*Admission to Courses in Chemistry.*—Regular and transfer students who have the prerequisites for the various courses are not thereby assured of admission to those courses. The department may deny admission to any course if a grade D was received in a course prerequisite to that course, or if in the opinion of the department the student shows other evidence of inadequate preparation. Evidence of adequate preparation may consist of satisfactory grades in previous work, or in a special examination, or in both. *For each course which involves a limitation of enrollment and which requires a qualifying examination or other special prerequisite, an announcement will be posted before the first day of registration, in each semester, on the Chemistry Department bulletin board.* No regular or transfer student should enroll in any course without first consulting a departmental adviser who will furnish more specific information regarding limitations in enrollment.

\* Not to be given, 1950-1951.

† Absent on leave, 1950-1951.

\* In residence second semester only, 1950-1951.

*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, 5A, Physics 1A, 1C (or 2A, 1C)<sup>o</sup>, trigonometry, Mathematics 1–3A\*, 3B, 4A, English 1A, and a reading knowledge of German<sup>oo</sup>. Recommended: an additional course in chemistry.

Students should note that the lower division curriculum prescribed for the College of Chemistry at Berkeley differs from the curriculum leading to the degree of Associate in Arts in the College of Letters and Science at Los Angeles.

*The Major.*—Upper division credit will be allowed for not more than three courses from the group 5A, 5B, 8, 9, 112A, and 112B, provided such courses were taken by the student while he was in the upper division, and provided further that not more than two of the courses were in organic chemistry. This allowance of upper division credit is permissible in any University curriculum.

The minimum requirement for the major is: Chemistry 5B (3), 110A–110B (6), 111A–111B or 111 (4), 112A–112B (10), and two additional courses in chemistry, of which at least one must include laboratory work, selected from the following group: 103, 107, 108A or 108A and 108C, 108B or 108B and 108D, 115, 121, 126A, 126B, 130A, 130B, 131, 132 and 140. Normally 110A–110B, 111, and 112A–112B will be taken concurrently in the junior year. Students who find their principal interest in organic chemistry should take Chemistry 126A–126B and Chemistry 103 in their senior year. If their principal interest is in physical chemistry, Chemistry 130A–130B should be taken; an additional laboratory course in chemistry is required, and advanced courses in physics and mathematics are recommended. The following courses outside of chemistry are also required and should be finished as early as possible (some of them may be taken in the lower division): English 1B, Mathematics 4B†, Physics 1D. Speech 1A is recommended but may not be substituted for English 1A as formerly, except for students who began the chemistry major before September, 1950 or transfer students who took the speech course before September, 1950.

Students who transfer to the University of California, Los Angeles, as juniors with a grade of C or better in the equivalent of Chemistry 8 and 9 will be accepted in Chemistry 112B. Such transfers who have already taken Chemistry 8, 9, 101, and 102 or 112A–112B or an equivalent course will be permitted to count this toward the major with the consent of a chemistry upper division adviser. Part of the sequence 8, 9, 101, 102 may have been taken at the University of California, Los Angeles.

Completion of the major in chemistry automatically meets the minimum requirements for eligibility to full membership in the American Chemical Society in the minimum time of two years after graduation.

*Limitation of Enrollment.* Warning: Since demand for laboratory space in chemistry, particularly in quantitative analysis and organic chemistry, is likely to exceed supply, it may be necessary to arrange for selection of students to be admitted, before enrollment days, and thus *several days before the first day of instruction*. Applicants for such courses should consult the official Chemistry Department bulletin board on registration days (not enrollment days). Information will be posted describing possible methods of advance application,

\* Mathematics 5A, 5B may be substituted for 1–3A, 3B. Consult the departmental adviser.

† Mathematics 181 may be substituted for 4B in certain cases. Consult the departmental adviser.

<sup>o</sup> Permission of the departmental adviser required. For students who combine a chemistry major and a premedical major, Physics 2A–2B may be substituted with the consent of the departmental adviser.

<sup>oo</sup> The equivalent of German 1, 2, and 3PS. German 3PS may be completed in the upper division.

qualifying examinations, or other procedures for selecting the limited number acceptable in a given class. Students neglecting this matter may expect great difficulties, or possibly complete exclusion from the courses.

#### LOWER DIVISION COURSES

Certain combinations of courses involve limitations of total credit, as follows: 2A and 1A, 9 units; 2A and 1A-1B, 14 units; 2 and 1A, 7 units; 2 and 1A-1B, 12 units; 8, 9, and 112A, 6 units; 8, 112A, and 112B, 10 units.

**1A. General Chemistry.** (5) I, II. Mr. McCullough, Mr. Stone, Mr. Scott  
Lectures, three hours; laboratory and quiz, six hours. Prerequisite: high school chemistry. (High school physics and three years of high school mathematics, or Chemistry 2A will be accepted in place of high school chemistry, but the latter is recommended.) Required in the colleges of Agriculture, Chemistry, and Engineering, and of pre dental, premedical, premining, prepharmacy and preoptometry students; also of majors in applied physics, bacteriology, chemistry, geology, and physics and of medical technicians, and of students in home economics (curriculum 4) in the College of Applied Arts.

A basic course in principles of chemistry with special emphasis on chemical calculations.

**1B. General Chemistry.** (5) I, II. Mr. Blacet, Mr. Garner, Mr. James  
Lectures, three hours; laboratory and quiz, six hours. Prerequisite: course 1A. Required in the same curricula as course 1A.

Continuation of course 1A with special applications to the theory and technique of qualitative analysis; periodic system; structure of matter. A brief introduction to organic chemistry is included.

**2. Introductory General Chemistry.** (3) I, II. Mr. Cram, Mr. Trueblood  
Lectures, three hours. An introductory course emphasizing the principles of chemistry and including a brief introduction to elementary organic chemistry. The course may be taken for credit in physical science by students following curricula not requiring laboratory work in such field of study. Not open for credit to students who have credit for course 2A.

**2A. Introductory General Chemistry.** (5) I, II. Mr. Cram, Mr. Trueblood  
Lectures and quizzes, four hours; laboratory, three hours. This course satisfies the chemistry requirements for nurses as prescribed by the California State Board of Nursing Examiners; it is required of certain home economics majors in the College of Applied Arts.

An introductory course emphasizing the principles of chemistry and including a brief introduction to elementary organic chemistry. Not open for full credit to students who have credit for course 2.

**5A. Quantitative Analysis.** (3) I, II.  
Mr. Stone, Mr. Pecosok, Mr. Trueblood, Mr. Farrington  
Lectures, discussions, and quizzes, two hours; laboratory, six hours. Prerequisite: course 1A-1B. Required of chemistry majors, economic geologists, petroleum engineers, public health, sanitary, and municipal engineers, medical technicians, and of premedical, College of Chemistry, metallurgy, and certain agriculture students.

Principles and technique involved in fundamental gravimetric and volumetric analyses.

**5B. Quantitative Analysis.** (3) I, II. Mr. Pecosok, Mr. Trueblood  
Lectures, discussions, and quizzes, two hours; laboratory, six hours. Prerequisite: course 5A. Required of chemistry majors, economic geologists, and College of Chemistry students.

A continuation of course 5A but with greater emphasis on theory, analytical problems in acidimetry and alkalimetry, oxidimetry, electrolytic deposition, and semiquantitative procedures.

- 8. Elementary Organic Chemistry.** (3) I, II. Mr. Cram, Mr. Robertson  
Prerequisite: course 1A-1B; concurrent enrollment in course 9 is advisable. This course is required of premedical and pre dental students, majors in petroleum engineering, sanitary and municipal engineering, home economics, public health, and some agriculture majors.  
An introductory study of the compounds of carbon, including both aliphatic and aromatic derivatives.
- 9. Methods of Organic Chemistry.** (3) I, II. Mr. Robertson  
Lectures and quizzes on principles of laboratory manipulation, two hours; laboratory, six hours. Prerequisite or concurrent: course 8. Required of premedical and pre dental students, and majors in petroleum engineering.  
Laboratory work devoted principally to synthesis, partly to analysis.
- 10. Organic and Food Chemistry.** (4) I. Mr. Cram, Mr. Robertson  
Prerequisite: courses 1A and 1B, or 2A. Lectures, three hours; laboratory, three hours. Arranged primarily for majors in home economics.  
An introductory study of the compounds of carbon, including both aliphatic and aromatic derivatives.

#### UPPER DIVISION COURSES

Certain combinations of courses carry limitations of total credit, as follows: 109A and 110A, 3 units; 109A-109B and 110A, 4 units; 109A and 110A-110B, 6 units; 109A-109B and 110A-110B, 6 units.

- 103. Qualitative Organic Analysis.** (3) I, II. Mr. Geissman, Mr. Young  
Lecture, one hour; laboratory, six hours. Prerequisite: courses 5A-5B, 8 and 9, or 112A-112B.  
Classification, reactions, and identification of organic compounds.
- 107. Amino Acids and Proteins.** (3) I. Mr. Dunn  
Lectures, three hours. Prerequisite: courses 5A, 8 and 9, or 5A, 112A-112B.  
A detailed treatment of the chemistry and metabolism of amino acids, polypeptides and proteins.
- 108A-108B. Principles of Biochemistry.** (3-3) Yr. Mr. Dunn  
Lectures, three hours. Prerequisite: courses 5A, 8 and 9 or 5A, 112A-112B.  
Discussion of the basic principles of the biochemistry of plants and animals with particular reference to chemical composition and physiological processes.
- 108C-108D. Methods of Biochemistry.** (2-2) Yr. Mr. Dunn  
Quiz, one hour; laboratory, five hours. Prerequisite: courses 5A, 8 and 9 or 5A, 112A-112B. Concurrent or prerequisite: course 108A-108B.  
The preparation, analysis, and quantitative studies of metabolites in plants and animals, including amino acids, carbohydrates, enzymes, lipides, peptides, proteins, purines, pyrimidines, sterols, and vitamins.
- 109A-109B. General Physical Chemistry.** (2-2) Yr.  
Lectures and demonstrations. Prerequisite: course 6A, Physics 2A-2B, Mathematics 1; recommended preparation, course 8, Mathematics 7. May not be offered as part of the major in chemistry.  
Chemical principles of particular importance in the life sciences and geology.
- 110A. Physical Chemistry.** (3) I, II. Mr. Ramsey, Mr. McCullough, Mr. Scott  
Prerequisite: course 5B, Physics 1C, and Mathematics 4A, with a minimum grade of C in each. Nonchemistry majors admitted without course 5B.  
Certain fundamental principles relating to matter and energy, including

the first law of thermodynamics and thermochemistry; molecular and atomic theories regarding constitution of substances; gas laws and molecular kinetic theory; colligative properties of solutions of nonelectrolytes.

**110B. Physical Chemistry.** (3) I, II. Mr. Ramsey, Mr. McMillan  
Prerequisite: course 110A; Mathematics 4B (may be taken concurrently).

The mass-action law of chemical equilibrium and the Phase Rule, thermodynamic derivations; electrical properties of solutions and ionic theory; electromotive force of voltaic cells, relations to free energy and entropy changes and to equilibrium constants; chemical kinetics.

**110G. Physical Chemistry.** (3) I. Mr. Ramsey, Mr. McCullough, Mr. Scott  
Prerequisite: same as for course 110A. Open only by permission of the chairman of the department to graduate students who have not taken course 110A in this institution.

**110H. Physical Chemistry.** (3) I, II. Mr. Ramsey, Mr. McMillan  
Prerequisite: course 110A or 110G. Open only by permission of the chairman of the department to graduate students who have not taken course 110B in this institution.

**111. Physical Chemistry Laboratory.** (4) II. Mr. James  
Lectures, two hours; laboratory, six hours. Prerequisite: course 110A; concurrent: course 110B. Required of chemistry majors except those who began course 110A before September, 1949.

Physicochemical measurements and laboratory experiments illustrating some of the important principles of physical chemistry.

**112A-112B. Organic Chemistry.** (5-5) Yr. (Beginning either semester)  
Mr. Geissman, Mr. Jacobs, Mr. Robertson, Mr. Cram

Lectures, three hours; laboratory and quiz, six hours. Prerequisite: course 1A-1B. Recommended: course 5A. A beginning course designed primarily for chemistry majors. Students who have had Chemistry 8 and 9 or their equivalent may, with the consent of the instructor, take 112B without having had 112A. Open to other students who desire a more comprehensive course than Chemistry 8 and 9.

**\*115. Advanced Organic Synthesis.** (3) I, II. Mr. Robertson  
Prerequisite: courses 112A and 112B, and the ability to read scientific German. Quiz, one hour; laboratory, seven hours.  
Advanced organic preparations; introduction to research methods.

**\*121. Advanced Inorganic Chemistry.** (3) I. Mr. Stone  
Lecture, one hour; laboratory, six hours. Prerequisite: course 5B.  
Equilibrium and reaction rate; periodic classification. Laboratory work principally synthetic and analytic, involving special techniques.

**126A-126B. Advanced Organic Chemistry.** (3-3) Yr.  
Mr. Geissman, Mr. Jacobs, Mr. Winstein  
Lectures, three hours. Prerequisite: Chemistry 112A-112B or its equivalent. Primarily for seniors and first-year graduate students. Course 126B may be taken without 126A with the consent of the instructor.

A comprehensive course based on modern concepts. Substitution, elimination and addition reactions, condensations, rearrangements, stereochemistry, physical properties such as absorption spectra and an introduction to the chemistry of naturally occurring substances.

**130A. Advanced Physical Chemistry.** (3) I. Mr. McMillan, Mr. Garner  
Lectures, three hours. Prerequisite: Chemistry 110B; Mathematics 4B; Physics 1C, 1D. Primarily for seniors and first-year graduate students.  
Selected topics in modern physical chemistry including quantum effects,

\* Not to be given, 1950-1951.

nucleonics, interaction of matter with fields, intermolecular forces, chemical bond, molecular structure and the solid state.

**130B. Advanced Physical Chemistry.** (3) II. Mr. Scott, Mr. McMillan

Lectures, three hours. Prerequisite: Chemistry 110B; Mathematics 4B; Physics 1C, 1D. Chemistry 130A is prerequisite except with the permission of the instructor.

A continuation of Chemistry 130A. Selected topics in modern physical chemistry including probability and statistical methods, reaction kinetics, the imperfect gas and condensations, liquids and solutions, phase transitions, surface phenomena and high polymers.

**\*131. Absorption Spectra and Photochemical Reactions.** (2) II. Mr. Blacet

Prerequisite or concurrent: course 110A.

**132. X-rays and Crystal Structure.** (2) II.

Mr. McCullough

Prerequisite: course 110A.

Symmetry of crystals; use of X-rays in the investigation of crystal structure.

**137. Chemistry of Bacterial Nutrition.** (2) II.

Mr. Dunn

Lectures, two hours. Prerequisite: approved courses in bacteriology and biochemistry.

Detailed studies of bacterial nutrition and metabolic products. Microbiological assays of vitamins and amino acids.

**138. Chemistry of Intermediary Metabolism.** (2) II.

Lectures, two hours. Prerequisite: course 108A.

Detailed consideration of metabolic transformations in plants and animals.

**\*\*199. Problems in Chemistry.** (3) I, II. The Staff (Mr. Garner in charge)

Prerequisite: junior standing, a good scholastic record, and such special preparation as the problem may demand.

#### GRADUATE COURSES

**203. Chemical Thermodynamics.** (3) II.

Mr. Ramsey

Derivation and application of thermodynamic relations of particular importance in chemistry; partial molar quantities and thermodynamic properties of solutions; the concepts, fugacity, activity, activity coefficient and osmotic coefficient, and their uses.

**221. Physical Aspects of Organic Chemistry.** (3) II.

Mr. Winstein

A course stressing mechanism. Electronic interpretations, kinetics, and stereochemistry of organic reactions are treated. The emphasis in this course is, in some years, on ionic situations and, other years, on free radical reactions.

**222A-B\*-C\*-D\*. Naturally Occurring Organic Compounds.** (2) I.

Mr. Geissman, Mr. Jacobs, Mr. Cram

The chemistry of the following types of naturally occurring organic compounds will be discussed.

222A. Non-nitrogenous plant products.

222B. Nitrogenous plant products.

222C. Mold metabolites.

222D. Steroids.

**\*230. Special Topics in Inorganic Chemistry.** (3) I. Mr. Garner, Mr. James

Selected inorganic compounds and reactions considered from a modern physicochemical viewpoint (including electronic configurations, molecular structure, thermodynamic properties, and kinetic aspects). Topics covered in different years may include: coordination compounds and inorganic stereochemistry, chemistry of selected nonmetallic elements, and chemistry of the rare-earth and transradium elements.

\* Not to be given, 1950-1951.

\*\* To be given only if laboratory space is available.

**231. Nuclear Chemistry. (3) I.**

Mr. Garner

Introduction to natural and artificial radioactivity; interaction of radiations with matter; detection and measurement of nuclear radiations; methods for the preparation, concentration, isolation, and identification of radioisotopes, and their application to chemical problems.

**233. Statistical Mechanics. (3) I.**

Mr. McMillan

Prerequisite: courses 110A, 110B; Mathematics 4B. Recommended: course 203; Physics 105; Mathematics 119A, 122A-122B.

Derivation of the laws of molecular assemblies from the properties of the individual molecules, including: elementary kinetic theory of gases; thermodynamic functions for monatomic, diatomic, and polyatomic gases; chemical equilibrium; the crystalline state; theory of the general imperfect gas; condensation, and related topics.

**234. Quantum Chemistry. (3) II.**

Mr. McMillan

Prerequisite: course 110B; Physics 121; Mathematics 119B or 110B; or consent of the instructor. Recommended: course 131, Physics 105.

Elementary quantum mechanics with particular emphasis on chemical applications. Includes: classical mechanics; early quantum theory; wave-particle dualism; statistical interpretation; Schrodinger formulation; particle in a potential well, harmonic oscillator, and rigid rotator; hydrogen atom; periodic system; approximation methods; molecules; chemical bond types; and more advanced topics as time permits.

**260. Seminar in Chemistry. (1) I, II.** The Staff (Mr. Winstein in charge)

Oral reports by graduate students on important topics from the current literature in their field of chemistry. Each student taking this course must consult the instructor in charge before enrolling, and is expected to present a report.

**261. Seminar in Biochemistry. (1) I, II.**

Mr. Dunn

**280A-B-C-D. Research in Chemistry. (3 to 6) I, II.**

The Staff (Mr. McCullough in charge)

**281A-B-C-D. Advanced Research in Chemistry. (3 to 6) I, II.**

The Staff (Mr. McCullough in charge)

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## CLASSICS

FREDERICK MASON CAREY, Ph.D., Professor of Classics (Chairman of the Department).

PAUL FRIEDLANDER, Ph.D., Professor of Classics, Emeritus.

ARTHUR PATCH MCKINLAY, Ph.D., Professor of Latin, Emeritus.

HERBERT BENNO HOFFLEIT, Ph.D., Associate Professor of Classics.

PAUL AUGUSTUS CLEMENT, Ph.D., Assistant Professor of Classics and Classical Archaeology.

<sup>2</sup> ALBERT HARTMAN TRAVIS, Ph.D., Assistant Professor of Classics.

<sup>1</sup> JANE MCKEE INFELD, M.A., Lecturer in Latin.

HELEN FLORENCE CALDWELL, M.A., Associate in Classics.

*Letters and Science List.*—All undergraduate courses in classics 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 classics either in Latin or Greek.

<sup>1</sup> In residence first semester only, 1950-1951.

<sup>2</sup> In residence second semester only, 1950-1951.

<sup>00</sup> Not to be given in 1950-1951. Given in alternate years with course 233.

*Preparation for the Major.*

A. *Latin*.—Required: four years of high school Latin, or two years of high school Latin and courses 2 and 3; courses 5A-5B, 9A, 9B. Recommended: English, French, German, Greek, Italian, Spanish.

B. *Greek*.—Required: either course 1-2 or two years of high school Greek; and 4A or 4B or any 2 units of 100A-B-C-D (which may be taken concurrently with courses 101 and 102). Recommended: English, French, German, Italian, Latin, Spanish.

*The Major.*

A. *Latin*.—Courses 102, 115, 146, 154, 157, 191, plus 6 units of upper division courses in Latin, English, French, German, Greek, Italian, Spanish, philosophy, ancient or medieval history, to be chosen with the approval of the department. (Latin 165A-B-C-D is required of students preparing for a teaching credential.)

B. *Greek*.—Courses 100A-B-C-D, 101, 102, 103, 104, 105, 114, plus 6 units of upper division courses in Latin, English, French, German, Italian, Spanish, philosophy, ancient or medieval history, to be chosen with the approval of the department.

*Requirements for Admission to Graduate Courses.*

A candidate for admission to graduate courses in Latin or in Greek must meet, in addition to the general University requirements, the minimum requirements for an undergraduate major in Latin or Greek. If the candidate is deficient in this prerequisite he must fulfill it by undergraduate work which is not counted toward his graduate residence.

*Requirements for Admission to Candidacy for the Master's Degree in Latin.*

1. A reading knowledge of French or German.
2. Completion of Greek 101.
3. Completion of Classics 200.
4. A comprehensive examination in Latin literature, Roman history, and Latin composition. The composition requirements may be met by passing Latin 165A-B-C-D with an average grade of B or better.

*Requirements for Admission to Candidacy for the Master's Degree in Greek.*

1. A reading knowledge of French or German.
2. Completion of Latin 5A or Latin 5B.
3. Completion of Classics 200.
4. A comprehensive examination in Greek literature, Greek history, and Greek composition. The composition requirements may be met by passing Greek 100A-B-C-D with an average grade of B or better.

*Requirements for Master's Degree.*

For the general requirements, see page 120. The department favors the Comprehensive Examination Plan.

The following courses in the department do not require a knowledge of Greek or Latin:

Classics 170A-170B, 171A-171B.

Latin 40, 180A-180B.

Greek 40, 180A-180B.

**CLASSICS****GRADUATE COURSES**

\*170A-170B. **Greek Archaeology.** (2-2) Yr.

Mr. Clement

A knowledge of Greek is not required.

A general archaeological survey of the Minoan-Mycenaean and the Greek societies from about 3000 B.C. to the end of the fourth century before Christ: the history of selected excavations, the topography of selected sites, and a

\* Classics 170A-170B is ordinarily given in alternation with Classics 171A-171B.



survey of the work of the societies, particularly in architecture, sculpture, and painting, based on the extant monuments and the related ancient literature (in English translation).

†171A-171B. **Roman Archaeology.** (2-2) Yr. Mr. Clement

A knowledge of Latin is not required.

A general archaeological survey of the Hellenistic Greek and the Roman societies from the beginning of the third century before Christ to the end of the fifth century after Christ: the history of selected excavations, the topography of selected sites, and a survey of the work of the societies, particularly in architecture, sculpture, and painting, based on the extant monuments and the related ancient literature (in English translation).

200. **History of Classical Scholarship, Bibliography, and Methodology.**  
(3) I. Mr. Hoffleit  
Required of all candidates for the master's degree in Latin or Greek.

#### LATIN

##### LOWER DIVISION COURSES

1. **Beginning Latin.** (4) I, II. ———, Miss Caldwell  
Sections meet five hours weekly.
2. **Latin Readings.** (4) I, II. Miss Caldwell  
Prerequisite: course 1, or two years of high school Latin.  
Sections meet five hours weekly.
- GA. **Latin Prose Composition.** (1) II. Mrs. Infield  
Intended primarily for students entering with two years of high school Latin taken at least two years before matriculation in the University.
- GB. **Latin Prose Composition.** (1) I, II. Miss Caldwell  
Prerequisite: course 2 or GA, or two or three years of high school Latin.
3. **Vergil.** (4) I, II. Mrs. Infield  
Prerequisite: course 2, or two or three years of high school Latin. Designed for students who have not studied Vergil in the high school.
- 5A. **A Survey of Latin Literature.** (3) I. Miss Caldwell  
Prerequisite: course 3, or four years of high school Latin.
- 5B. **A Survey of Latin Literature.** (3) II. Mr. Carey  
Prerequisite: course 5A.
- 9A-9B. **Latin Prose Composition.** (2-2) Yr. Mr. Hoffleit, Miss Caldwell  
Prerequisite: course 3, or three years of high school Latin.
40. **The Latin Element in English.** (2) I, II. Mr. Hoffleit  
A course in vocabulary building based on the study of the many groups of English words which are derived from the Latin. A knowledge of Latin is not required.

##### UPPER DIVISION COURSES

102. **Silver Latin.** (3) I. Miss Caldwell  
Prerequisite: courses 5A, 5B.
115. **Ovid: Carmina Amatoria and Metamorphoses.** (3) I. Mr. Carey  
Prerequisite: course 102.
- †146. **Lucretius: Selections; Vergil: Eclogues and Georgics.** (3) II.  
Prerequisite: course 102. Mr. Carey

† Not to be given, 1950-1951; to be given, 1951-1952. Classics 171A-171B is ordinarily given in alternation with Classics 170A-170B.

‡ Not to be given, 1950-1951; to be given, 1951-1952.

154. **Tacitus: Annals.** (3) II. Miss Caldwell  
Prerequisite: course 102.
157. **Roman Satire.** (3) II. Mr. Travis  
Prerequisite: course 102.
- ‡165A-165B. **Latin Composition.** (1-1) Yr. Mr. Carey  
Prerequisite: course 9A-9B.  
Ciceronian prose.
- 165C-165D. **Latin Composition.** (1-1) Yr. Mr. Carey  
Prerequisite: course 9A-9B.  
Ciceronian prose.
- \*\*180A-180B. **A Survey of Latin Literature in English.** (2-2) Yr.  
This course does not count on the major in Latin. Mr. Travis  
A study of the literature of Rome from Ennius to Apuleius with reading  
in English. A knowledge of Latin is not required.
- ‡191. **Cicero: Selections.** (3) I. Mr. Hoffleit  
Prerequisite: courses 102, 154.
- 199A-199B. **Special Studies in Latin.** (1-4; 1-4) Yr. Mr. Carey and the Staff  
Prerequisite: senior standing and at least 12 units of upper division Latin.  
Problems in classical philology.

## GRADUATE COURSES

- \*202. **Cicero's Philosophical Works.** (3) I. \_\_\_\_\_
- \*203. **Roman Historians.** (3) II. \_\_\_\_\_
- \*204. **Roman Prose Writers.** (3) I. \_\_\_\_\_  
Cicero's moral and political essays.
- \*206. **The Roman Epic.** (3) II. Mr. Hoffleit  
The Roman epic from Ennius to Silius Italicus.
208. **Livy.** (3) II. Mr. Hoffleit
210. **Vergil's Aeneid.** (3) I. Mr. Clement
211. **Cicero's Rhetorical Works.** (3) II. Mr. Travis
- \*253. **Seminar in Latin Studies.** (3) II. Mr. Carey  
Textual criticism.
- \*254A-254B. **Seminar in Latin Studies.** (3-3) Yr. Mr. Carey  
Latin comedy.
- \*255. **Seminar in Latin Studies.** (3) II. Mr. Carey  
Roman elegy.
256. **Seminar: Ovid.** (3) II. Mr. Carey
290. **Research in Latin.** (1-4) I, II. The Staff

## PROFESSIONAL COURSE IN METHOD

- \*370. **The Teaching of Latin.** (3) II. \_\_\_\_\_  
Prerequisite: a foreign language minor.

\* Not to be given, 1950-1951.

‡ Not to be given, 1950-1951; to be given, 1951-1952.

\*\* Not to be given, 1950-1951. Latin 180A-180B is ordinarily given in alternation with Greek 180A-180B.

## GREEK

## LOWER DIVISION COURSES

- 1-2. **Greek for Beginners, Attic Prose.** (4-4) Yr. Mr. Clement  
Sections meet five hours weekly.
- 4A-4B. **Readings in Greek.** (2-2) Yr. Mr. Clement
40. **The Greek Element in English.** (2) I, II. Miss Caldwell  
A course in vocabulary building based on the study of the many groups of English words which are derived from the Greek. A knowledge of Greek is not required.

## UPPER DIVISION COURSES

- \*100A-100B. **Prose Composition.** (1-1) Yr. Mr. Carey  
Prerequisite: course 1-2.
- 100C-100D. **Prose Composition.** (1-1) Yr. Mr. Carey  
Prerequisite: course 1-2.
101. **Homer: Odyssey; Herodotus: Selections.** (3) I. Mr. Clement  
Prerequisite: course 1-2.
102. **Plato: Apology and Crito; Lyric Poets.** (3) II. Mr. Hoffleit  
Prerequisite: course 101.
- \*103. **Greek Drama: Euripides and Aristophanes.** (3) II. Mr. Hoffleit  
Prerequisite: courses 101, 102.
104. **Historical Prose: Herodotus and Thucydides.** (3) I. Mr. Hoffleit  
Prerequisite: courses 101, 102.
105. **Greek Drama: Aeschylus and Sophocles.** (3) II. Mr. Travis  
Prerequisite: courses 101, 102.
- \*114. **Plato: Republic.** (3) I. Mr. Carey  
Prerequisite: courses 101, 102.
- 117A-117B. **Greek New Testament.** (2-2) Yr. Mr. Hoffleit
- \*\*180A-180B. **A Survey of Greek Literature in English.** (2-2) Yr. Mr. Carey  
This course does not count on the major in Greek.  
A study of the literature of Greece from Homer to Lucian with reading in English. A knowledge of Greek is not required.
- 199A-199B. **Special Studies in Greek.** (1-4; 1-4) Yr. Mr. Carey and the Staff  
Prerequisite: senior standing and at least 12 units of upper division Greek.  
Problems in classical philology.

## GRADUATE COURSES

- 201A. **Homer: The Iliad.** (3) II. Mr. Clement
- \*201B. **Homer: The Odyssey.** (3) II. Mr. Carey
- \*202. **Sophocles.** (3) I. Mr. Hoffleit
203. **Thucydides.** (3) II. Mr. Clement
204. **Aristophanes.** (3) I. Mr. Carey
290. **Research in Greek.** (1-4) I, II. The Staff

\* Not to be given, 1950-1951.

\*\* Greek 180A-180B is ordinarily given in alternation with Latin 180A-180B.

\* Not to be given, 1950-1951. Courses 103 and 114 are ordinarily given in alternation with courses 104 and 105, respectively.

## RELATED COURSES IN OTHER DEPARTMENTS

- History 111A. Greek History to the Roman Conquest. (3) I.** Mr. Brown  
**History 111B. Roman History to the Accession of Augustus. (3) II.**  
 Mr. Brown  
**History 111C. The Roman Empire from Augustus to Constantine. (3) I.**  
 Mr. Brown

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**ECONOMICS**

- ROY G. BLAKEY, Ph.D., Visiting Professor of Economics.  
 PAUL A. DODD, Ph.D., LL.D., Professor of Economics.  
 PAUL T. HOMAN, Ph.D., Professor of Economics.  
 EARL J. MILLER, Ph.D., LL.D., Professor of Economics (Chairman of the Department).  
 DUDLEY F. PEGEUM, Ph.D., Professor of Economics.  
 MARVEL M. STOCKWELL, Ph.D., Professor of Economics.  
 GEORGE H. HILDEBRAND, Ph.D., Associate Professor of Economics.  
 WARREN C. SCOVILLE, Ph.D., Associate Professor of Economics.  
 ARMEN A. ALOHIAN, Ph.D., Assistant Professor of Economics.  
 WYTZE GORTER, Ph.D., Assistant Professor of Economics.  
 DONALD C. MILLER, Ph.D., Assistant Professor of Economics.  
 KENNETH D. ROOSE, Ph.D., Assistant Professor of Economics.  
 WILLIAM J. J. SMITH, Ph.D., Assistant Professor of Economics.



- BENJAMIN AARON, A.B., LL.B., Lecturer in Economics.  
 JOHN S. MCGEE, M.A., Lecturer in Economics.  
 EDGAR L. WARREN, A.B., Lecturer in Economics.  
 J. RICHARD POWELL, M.A., Lecturer in Economics.

*Letters and Science List.*—All undergraduate courses in economics are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Required: Economics 12°, 13°, 1A, 1B, and Business Administration 1A.

*The Major.*°—Twenty-seven upper division units including Economics 100A, 100B, 140. Economics majors are expected to complete course 100A in the first semester of the junior year. In addition to the foregoing course requirements each major must take one course in three other fields of concentration (see below). Each major must also take two additional semester courses in one of his five fields of concentration. The five fields will be economic theory, statistics, and three elective fields.

## Fields of Concentration:

- Economic Theory (Courses 100A, 100B, 103, 105).
- Economic Institutions (Courses 106, 107, 108).
- Public Finance (Courses 131A, 131B, 133).
- Money and Banking (Courses 135, 136, 137).
- Statistics (Courses 140, 141A, 141B, 142).
- Labor Economics (Courses 150, 152, 155, 156A, 156B, 158).
- Government and Industry (Courses 170, 171, 173, 174).
- International Economics (Courses 195, 196, 197).

° Economics majors planning to graduate in or before June, 1952, should consult departmental advisers regarding the fulfillment of these requirements.

## LOWER DIVISION COURSES

**1A-1B. Principles of Economics.** (3-3) Yr. Beginning either semester.

Mr. E. J. Miller, Mr. Stockwell, Mr. D. C. Miller, Mr. Gorter, Mr. Roose  
Lectures, two hours; discussion, one hour.

An introduction to the basic characteristics of the American economy and the fundamental tools of economic analysis. Theories of price and income distribution.

**12. Evolution of Economic Institutions in Europe.** (3) I. Mr. Scoville  
(Former number, 10.)

Comparative evaluation of the rise of large-scale capitalistic industry in different countries, analysis of economic and institutional changes.

**13. Evolution of Economic Institutions in America.** (3) II. Mr. Scoville  
(Former number, 11.)

Rise of large-scale capitalistic methods of production, influence of technology, prices, politics, ideologies and wars.

## UPPER DIVISION COURSES

Courses 1A-1B or 101 are prerequisite to all upper division courses in economics.

**100A. General Economic Theory.** (3) I, II. Mr. Smith

The laws of demand, supply, returns, and costs; price and output determination in different market situations. The implications of the pricing process for the optimum allocation of resources.

**100B. General Economic Theory.** (3) II. Mr. Smith

Theory of employment and income; theory of factor pricing and income distribution; present state and prospects of capitalism in relation to welfare and economic progress.

**101. Economic Principles and Problems.** (3) I, II. Mr. E. J. Miller

Not open to majors in economics or to those who have taken course 1A-1B. Economics 101 serves as a prerequisite for all upper division courses in economics for all students except economics majors.

A study of the principles of economics and their application to current economic problems.

**103. History of Economic Thought.** (3) I. Mr. Hildebrand

An historical survey of the major systems of economic thought.

**105. Business Cycles.** (3) I, II. Mr. Roose, Mr. Smith  
(Former number, 138.)

The measurement, causes, and control of economic fluctuations.

**106. Programs of Economic Reform.** (3) II. Mr. Hildebrand

An examination of the economic assumptions and implications of the literature of socialism, communism, and anarchism, from classical antiquity to the present, with special attention to conceptions of economic reform and organization, and to the place of the state in the economic scheme.

**107. Comparative Economic Systems.** (3) I, II. Mr. Scoville, Mr. Smith

An analysis of the rival economic doctrines of capitalism, socialism, communism, and fascism, with emphasis upon the problems and implications of systems of economic planning.

**108. Development of Economic Institutions.** (3) I. Mr. Scoville

Development of institutions characteristic of a capitalistic economy; evolution of concepts of private property, individual enterprise, and competition. Critical survey of theories of economic progress.

- 131A-131B. Public Finance.** (2-2) Yr. Mr. Stockwell  
Public expenditures; causes and significance of their increase; sources of public revenue; governmental budgets; financial administration; the public debt; fiscal policy.
- 133. Federal Finance.** (3) II. Mr. D. C. Miller  
Prerequisite: course 135.  
An analysis of the federal tax structure, federal expenditures, and the federal debt structure, and their relationship to the level of employment and income, resource allocation, and the distribution of income.
- 135. Money and Banking.** (3) I, II.  
Mr. Blakey, Mr. Clendenin, Mr. D. C. Miller, Mr. Roose  
The principles and history of money and banking, with principal reference to the experience and problems of the United States.
- 136. Techniques of Monetary Control.** (3) I. Mr. Roose  
(Former number, 136A.)  
Prerequisite: course 135.  
The nature of monetary controls; monetary developments as related to prices, production, and national income; monetary policies in the interwar and postwar periods; monetary policy and domestic economic stabilization.
- 137. Comparative Banking Systems.** (3) II.  
(Former number, 136B.)  
Prerequisite: course 135.  
Comparative study of the banking systems in the principal financial centers of the world.
- 140. Introduction to Statistical Methods.** (4) I, II. Mr. Alchian  
(Former number, 2.)  
Lectures, three hours; laboratory, one two-hour period.  
Principles and methods of utilizing statistical data; presentation and statistics of a given set of data; probability; methods of statistical inference with economic applications; bivariate correlation, time series and index numbers.
- 141A-141B. Statistical Methods.** (3-3) Yr. Mr. Alchian  
(Former number, 140A-140B.)  
Prerequisite: course 140, or the equivalent.  
Emphasis on ability to perform statistical studies with reference to the specific economic applicability of the results. Probability, analysis of variance, multisamples, time, correlation, and sampling procedures with reference to statistical inference.
- \*142. Quantitative Economic Analysis.** (3) II. Mr. Alchian  
(Former number, 141.)  
Prerequisite: course 141A, or the equivalent.  
Examination of American economic structure. A study of quantitative aspects of the main economic magnitudes and their relationships. Attention is given to implications of extent of quantitative knowledge on current economic theory and policy.
- 150. Labor Economics.** (3) I, II. Mr. Hildebrand  
Economic analysis of trade union philosophies and practices; theoretical exploration of basic influences affecting real wages and employment, with examination of the relevant statistical record; internal wage policies of the firm; union-management relations and the public economy.
- 152. Social Insurance.** (3) I.  
Basis of the social security program; unemployment insurance, workmen's compensation, old age pensions, insurance against sickness.

\* Not to be given, 1950-1951.

**155. History and Problems of the Labor Movement. (2) I.**

The origin and development of trade-unionism in the United States; theory of collective bargaining, methods and practices of contemporary unionism; the legal status of unionism.

**156A-156B. Labor Law and Legislation. (3-3) Yr.**

Mr. Aaron

Prerequisite: course 150; 156A is prerequisite to 156B except by consent of the instructor.

The law regulating industrial relationships; the legal status of unions and concerted activities under federal and state laws; wage-hours, antistrike, and other labor legislation; administrative agencies.

**158. Collective Bargaining. (2) I.**

Mr. Warren

Prerequisite: course 150.

Theory and practice of collective bargaining; mediation and arbitration of industrial disputes; grievance procedures and administration of labor-management agreements; government intervention in collective bargaining.

**170. Economics of Industrial Control. (3) I, II.**

Mr. Pegrum

The institutional patterns of regulation; the economics of industrial production and pricing; the control of competitive enterprise, combinations and monopolies and their control; governmental regulation and economic planning.

**171. Public Utilities. (3) II.**

Mr. Pegrum

The economics of public service corporations; the economic problems of regulation; state and national problems arising from the development of public utilities; public ownership.

**173. Economics of Transportation. (3) I.**

Mr. Pegrum

The economic characteristics of transport; the functions of the different transportation agencies; rate structures; problems of state and federal regulation; coördination of facilities. The current transportation problem.

**174. Ocean Transportation. (3) II.**

Historical development of ships and shipping; trade routes; principles of ocean transportation; rates and documentation; ports and terminals; subsidies; American Merchant Marine; coördination of transportation.

**195. Principles of International Trade. (3) I, II.**

Mr. Gorter

An introduction to the principles and mechanisms of international trade; foreign exchange, the balance of payments, comparative costs, the exchange of goods and services and the gain from trade. Effects of trade restrictions. Analysis of selected current international economic problems and policies in the light of the principles presented.

**196. International Trade Policies. (3) I.**

Mr. Gorter

Prerequisite: course 195.

Governmental regulation of international transactions. Bilateral and multilateral trade agreements. Import quotas. Dumping and international cartels. International commodity agreements. The international trade of planned economies. The development of United States foreign trade policy and its impact upon the world economy. The International Trade Organization.

**\*197. International Finance. (3) II.**

Mr. Gorter

Prerequisite: course 135 or 195.

The mechanics of international capital movements. International investment and national welfare. The problem of loan repayment. The International Monetary Fund, the Export-Import Bank, and the International Bank for Reconstruction and Development.

\* This course may be substituted for course 137 to complete the course requirement in the field of money and banking.

199. **Special Problems in Economics.** (2-3) I, II. The Staff  
Admission by special arrangement with the appropriate instructor and the chairman of the department.

## GRADUATE COURSES

- 250A-250B. **History of Economic Doctrine.** Seminar. (3-3) Yr. Mr. Homan
- 251A-251B. **Survey of Contemporary Economic Theories.** Seminar. (3-3) Yr. \_\_\_\_\_
252. **Economic Theory.** Seminar. (3) I. Mr. Homan
253. **Analytic Methods and Concepts of Economic Theory.** Seminar. (3) I. Mr. Alchian
254. **Economic Fluctuations.** Seminar. (3) II. Mr. Alchian
255. **National Income and Employment.** Seminar. (3) II. Mr. Roose
258. **Monetary Theory.** Seminar. (3) II. \_\_\_\_\_
- 260A-260B. **Industrial Organization, Price Policies and Regulation.** Seminar. (3-3) Yr. Mr. Pegrum
261. **Public Finance.** Seminar. (2) I. Mr. Stockwell
262. **Evolution of Economic Institutions in the United States.** Seminar. (3) I. Mr. Scoville
263. **Evolution of Economic Institutions in Western Europe.** Seminar. (3) II. Mr. Scoville
- \*264. **Theories and Problems of Economic Planning.** Seminar. (3) II. Mr. Smith
266. **International Economics.** Seminar. (3) II. Mr. Gorter
- \*270A-270B. **History and Problems of Organized Labor.** Seminar. (2-2) Yr. \_\_\_\_\_
- 271A-271B. **Wage Theory and Wage Policies.** Seminar. (3-3) Yr. Mr. Hildebrand
272. **Industrial Relations.** Seminar. (3) II. Mr. Dodd
273. **Social Insurance.** Seminar. (2) I. Mr. Dodd
290. **Special Problems.** (1-6) I, II. The Staff

**EDUCATION**

FRANCIS L. BACON, M.A., L.H.D., LL.D., Visiting Professor of Education.  
JOHN A. HOCKETT, Ph.D., Professor of Education and Associate Director of Training.

DAVID F. JACKEY, Ph.D., Professor of Vocational Education.

<sup>1</sup> EDWIN A. LEE, Ph.D., Professor of Education (Chairman of the Department).

MALCOLM S. MACLEAN, Ph.D., Professor of Education.

<sup>1</sup> LLOYD N. MORRISSETT, Ph.D., Professor of Education.

DAVID G. RYANS, Ph.D., Professor of Education.

MAY V. SEAGOE, Ph.D., Professor of Education.

PAUL H. SHEATS, Ph.D., Professor of Education.

SAMUEL J. WANOUS, Ph.D., Professor of Business Education and Office Management.

† J. HAROLD WILLIAMS, Ph.D., Professor of Education.

\* Not to be given, 1950-1951.

† Absent on leave, 1950-1951.

<sup>1</sup> In residence fall semester only, 1950-1951.



- FREDRIC P. WOELLNER, Ph.D., Professor of Education.  
 FLAUD C. WOOTON, Ph.D., Professor of Education.  
 KATHERINE L. McLAUGHLIN, Ph.D., Professor of Education, Emeritus.  
 JUNIUS L. MERIAM, Ph.D., Professor of Education, Emeritus.  
 ERNEST CARROLL MOORE, Ph.D., LL.D., Professor of Education and Philosophy, Emeritus.  
 WILLIAM A. SMITH, Ph.D., Professor of Education, Emeritus.  
 CHARLES WILKEN WADDELL, Ph.D., Professor of Education, Emeritus.  
 JESSE A. BOND, Ed.D., Associate Professor of Education and Director of Training.  
 CLARENCE FIELSTRA, Ph.D., Associate Professor of Education.  
 F. DEAN McCLUSKY, Ph.D., Associate Professor of Education.  
 ETHEL I. SALISBURY, M.A., Associate Professor of Elementary Education and Supervisor of Training.  
 CORINNE A. SEEDS, M.A., Associate Professor of Elementary Education and Principal of the University Elementary School.  
 LORRAINE M. SHERER, Ed.D. Associate Professor of Education.  
 HARVEY L. EBY, Ph.D., Associate Professor of Education, Emeritus.  
 CLARENCE HALL ROBISON, Ph.D., Associate Professor of Education, Emeritus.  
 AUBREY L. BERRY, Ed.D., Assistant Professor of Education and Educational Counselor.  
 WILBUR H. DUTTON, Ed.D., Assistant Professor of Education and Associate Director of Training.  
 EVAN R. KEISLAR, Ph.D., Assistant Professor of Education.



- MELVIN L. BARLOW, Ed.D., Lecturer in Education.  
 WILLIAM S. BRISCOE, M.A., Lecturer in Education.  
 HOWARD A. CAMPION, Ed.D., Lecturer in Education.  
 HELEN CHRISTIANSON, Ph.D., Lecturer in Education and Supervisor of Early Childhood Education.  
 PERCY R. DAVIS, Ed.D., Lecturer in School Administration.  
 ROBERT B. HAAS, Ed.D., Lecturer in Education.  
 B. LAMAR JOHNSON, Ph.D., Lecturer in Education.

### Training

- JESSE A. BOND, Ed.D., Director of Training.  
 JOHN A. HOCKETT, Ph.D., Associate Director of Elementary Training.  
 WILBUR H. DUTTON, Ed.D., Associate Director of Secondary Training.

### Supervisors

- ELIZABETH K. COOPER, Ed.D., Elementary.  
 RUTH H. DREWES, A.B., Elementary.  
 MARY DEMPSEY, M.A., Elementary.  
 ETHEL I. SALISBURY, M.A., Elementary.  
 ALMA H. STEVENSON, M.A., Elementary.
- ◇
- FREEMAN AMBROSE, M.A., Secondary, Social Studies.  
 ATTILIO BISSI, Ed.D., Secondary, Mathematics and Science.  
 LUZERNE W. CRANDALL, M.A., Secondary, English.  
 HELEN CHUTE DILL, M.A., Secondary, Music.  
 DONALD T. HANDY, Secondary, Physical Education for Men.  
 RUTH ABERNATHY, Ph.D., Secondary, Physical Education for Women.  
 CECILIA IRVINE, M.A., Secondary, Social Studies.  
 ETHEL M. MARTIN, Ed.B., Secondary, Home Economics.  
 RALPH A. MASTELLER, M.A., Secondary, Business Education.  
 DOROTHY C. MERIGOLD, Ph.D., Secondary, Foreign Language.  
 GLADYS G. WILSON, M.A., Secondary, Art.

**UNIVERSITY ELEMENTARY SCHOOL**

CORINNE A. SEEDS, M.A., Principal of the University Elementary School.  
 HELEN SUE READ, B.S., Assistant Principal and Supervisor Primary Grades.  
 HELEN CHRISTIANSON, Ph.D., Supervisor of Early Childhood Education.  
 RUTH A. MARTINSON, Ed.D., Counselor.  
 DIANA W. ANDERSON, M.A., Supervisor of Training, Physical Education.  
 MARJORIE F. KLUTH, A.B., Supervisor of Training, Music.  
 NATALIE WHITE, M.A., Supervisor of Training, Art.  
 HELEN F. BOUTON, M.A., Supervisor, Fifth Grade.  
 RUTH M. HADACEK BOWERS, B.S., Demonstration Teacher, Nursery School.  
 CYNTHIANA BROWN, A.B., Demonstration Teacher, First Grade.  
 DORIS BROWN, M.A., Demonstration Teacher, First Grade.  
 CHARLOTTE A. CRABTREE, A.B., Demonstration Teacher, Third Grade.  
 JANET R. ECKI, A.B., Demonstration Teacher, Second Grade.  
 PHOEBE JAMES, Assistant in the Elementary School.  
 LOLA C. JENSEN, B.S., Demonstration Teacher, Third Grade.  
 BLANCHE LUDLUM, M.A., Supervisor, Nursery School.  
 GERTRUDE C. MALONEY, M.A., Supervisor, Sixth Grade.  
 ROBERT W. REYNOLDS, A.B., Demonstration Teacher, Fourth Grade.  
 BARBARA STECKER, A.B., Demonstration Teacher, Kindergarten.  
 JANE BERNHARDT STRYKER, M.A., Supervisor, Kindergarten.  
 DOROTHY TAIT, A.B., Demonstration Teacher, Fourth Grade.  
 MARGARET F. TOUGAW, B.Ed., Demonstration Teacher, Second Grade.

**City Training Schools****ELEMENTARY**

IDA F. COLEMAN, A.B., Principal, Fairburn Avenue Demonstration School.  
 Demonstration teachers in the Fairburn Avenue Elementary School are specially selected teachers from the Los Angeles school system.

GEORGE F. GRIMES, M.S., Principal, Nora Sterry Elementary School.

The staff of the Nora Sterry School consists of twenty to twenty-five training teachers selected for the Los Angeles city school system. The personnel varies from year to year.

ALICE B. ARMSTRONG, A.B., Principal, Brockton Avenue Elementary School.

The staff of the Brockton Avenue Elementary School consists of some fifteen training teachers selected from the Los Angeles city school system.

**JUNIOR AND SENIOR HIGH SCHOOLS**

EDWIN F. WHEDON, M.A., LL.B., Principal, University High School.

HELEN M. DARSIE, M.A., Vice-Principal, University High School.

CARROLL O. LOCKRIDGE, M.A., Vice-Principal, University High School.

PAUL E. GUSTAFSON, M.A., Principal, Emerson Junior High School.

JANE DAVIDSON, M.A., Vice-Principal, Emerson Junior High School.

LOWELL M. MCGINNIS, M.A., Vice-Principal, Emerson Junior High School.

FRANCES C. BROOKS, A.B., Counselor, University High School.

MARGARET A. RUENITZ, M.A., Counselor, Emerson Junior High School.

The rest of the secondary school staff consists of about one hundred public school teachers carefully chosen for their ability as teachers and as supervisors by the University supervisory staff and approved for such service by the public school authorities. Each ordinarily assumes responsibility for the training of not more than three student teachers at any one time. The personnel varies from semester to semester as the needs of the University require.

*Letters and Science List.*—Courses 101, 102, 106, 110, 111, 170, and 197 are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*The Major.*—An undergraduate major is not offered in the Department of Education at Los Angeles. Students desiring to qualify for certificates of com-

pletion leading to teaching and administration credentials should consult the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

#### UPPER DIVISION COURSES

Junior standing is prerequisite to all courses in education except course 106, which is open to high sophomores.

#### *History and Theory of Education*

101. **History of Education.** (3) I. Mr. Wooton  
The development of educational thought and practice viewed as a phase of the history of Western civilization.
102. **History of Education in the United States.** (3) II. Mr. Wooton  
The development of significant educational movements in the United States as a basis for the analysis of present-day problems.
106. **The Principles of Education.** (3) I, II. Mr. MacLean  
A critical analysis of the assumptions underlying education in a democratic social order.

#### *Educational Psychology*

Psychology 1A, and either 1B or 33, or the equivalent, are prerequisite to all courses in educational psychology.

110. **The Conditions of Learning.** (3) I, II. Mr. Keislar, Miss Seagoe  
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.
111. **Growth and Development of the Child.** (3) I, II. Mrs. Sherer  
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.
112. **Adolescence.** (3) I, II. Mr. Keislar  
The physical, mental, moral, and social traits of adolescence with special reference to their bearing upon problems of instruction in junior and senior high schools.
114. **Educational Statistics.** (2) I, II. Mr. Ryans  
Statistical procedures applicable to educational problems and educational research.  
Students who are taking or who have taken any other course in statistics will receive only one unit of credit for this course.
- 117A-117B. **Principles of Guidance.** (2-2) Yr. Miss Seagoe  
The philosophy, techniques, and present practices of guidance as applied to the problems of pupil personnel and counseling in the public schools.  
The emphasis will be upon educational guidance in 117A; upon vocational guidance in 117B.
119. **Educational Measurement.** (3) I, II. Mr. Ryans  
Use of standardized tests in problems of group and individual diagnosis and evaluation.
- #### *Early Childhood Education*
123. **Social Backgrounds of Child Development.** (3) I. Miss Christianson  
Prerequisite: Psychology 1A and either 1B or 33.  
A study of the factors conditioning growth, development, and learning in early childhood.

- 124. Arts in Childhood Education. (3) II.** Miss Christianson  
Prerequisite: course 111.  
The functional values of music, speech, rhythm, and dramatic play in early child development.
- 125A. Kindergarten-Primary Education. (3) I.** Mrs. Sherer  
Prerequisite: courses 110, 111. Required for the kindergarten-primary teaching credential.  
Reading and literature in the lower school, including aims, standards of attainment, materials, and technique of teaching.
- 125B. Kindergarten-Primary Education. (3) II.** Mrs. Sherer  
Prerequisite: courses 110, 111 (125A is not prerequisite). Required for the kindergarten-primary teaching credential.  
Organization, curricula, and procedures in the nursery school, kindergarten, and primary grades.
- 139. The Elementary Curriculum. (3) I, II.** Mr. Dutton, Miss Salisbury  
Prerequisite: senior standing.  
Current conceptions of the content and organization of the elementary school curriculum with emphasis upon the place of the skills in the total school program.

*Educational Administration and Supervision*

- 140. The Teacher and Administration. (2) I, II.** Mr. Davis  
The teacher considered as a part of the educational system, and his responsibilities to the organization.
- 141. Administration of City School Systems. (2) I, II.** Mr. Davis  
The principles of efficient school administration as exemplified in the practices of progressive cities.
- 142. State and County School Administration. (2) II.** Mr. Berry  
Prerequisite: consent of the instructor.  
The organization and administration of state school systems with special reference to the interrelation of federal, state, and county support and organization.
- 145. Problems in Public School Finance and Business Administration. (2) I, II.** Mr. Davis  
Prerequisite: consent of the instructor.  
Methods and problems of financing public education, including a study of the principles of public school business administration, preferred practice, and procedure.
- 147. Audio-Visual Education. (2) I, II.** Mr. McClusky  
A course designed to acquaint teachers with the theories and methods of visual instruction and to furnish experience in the utilization of audio-visual aids. Required of all candidates for teaching credentials.
- 148. Legal Bases of Public Education in California. (2) I.** Mr. Berry  
Prerequisite: consent of the instructor.  
Organization and administration of the California school system, as given in the school law of the State and as interpreted by the rulings of the State Superintendent of Public Instruction and the Attorney General.
- 149. Field Work in Administration and Supervision. (2) I, II.** Mr. Morrisett, Mr. Davis  
To be taken concurrently with or subsequent to elementary or secondary school administration.

*Vocational Education*

- 160. Vocational Education. (2) I, II.** Mr. Jackey  
An attempt to develop an understanding and appreciation of the economic and social significance of vocational education in a democracy.

165. **Business Education.** (3) I. Mr. Wanous  
The organization, administration, and teaching of business education in secondary schools.

*Secondary Education*

170. **Secondary Education.** (3) I, II. Mr. Bacon  
Prerequisite: senior standing and Psychology 1A and either 1B or 33.  
A study of secondary education in the United States, with special reference to the needs of junior and senior high school teachers.

*Social and Adult Education*

180. **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.

181. **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 and methods of citizenship, Americanization, and vocational and liberal education will be considered.

194. **Child Guidance.** (2) I. Miss Martinson  
Prerequisite: courses 111 and 119, or the equivalent.  
The purposes, principles, and procedures of child guidance in the elementary school.

197. **Comparative Education.** (2) I. Mr. Wooton  
A study of educational ideas and practices in the major countries of the world with special emphasis on such trends as indicate postwar developments in national systems of education.

*Special Studies in Education*

Open to senior and graduate students with the consent of the instructor.

- 199A. **Studies in Business Education.** (2 to 4), I, II Mr. Wanous

- 199B. **Studies in Curriculum.** (2 to 4) I, II.  
Mr. Bacon, Mr. Fielstra, Mr. Hockett

- 199C. **Studies in Educational Psychology.** (2 to 4) I, II.  
Miss Seagoe, Mr. Keislar, Mr. Ryans

- \*199E. **Studies in Administration.** (2 to 4) I, II. Mr. Morrisett

- 199F. **Studies in Guidance.** (2 to 4) I, II. Mr. Lee, Mr. MacLean

- 199G. **Studies in Elementary School Supervision.** (2-4) I, II. Mr. Hockett

- 199H. **Studies in Audio-Visual Education.** (2-4) I, II. Mr. McClusky

- 199I. **Studies in Adult Education.** (2-4) I, II. Mr. Sheats

- 199J. **Studies of Nursery-Kindergarten Education.** (2-4) I, II.  
Miss Christianson

GRADUATE COURSES†

- 200A-200B. **Fundamentals of Educational Research.** (2-2) Yr. Mr. Ryans  
Prerequisite: course 114 or Psychology 105A, or equivalent. Required of all candidates for the M.A. and Ed.D. degrees.

200A considers research reporting, including bibliographical techniques, presentation of data, etc.

200B deals with the scientific method as applied to education.

\* Not to be given, 1950-1951.

† A thesis is required of all candidates for the degree of Master of Arts with major in education.

**201. History of Education. (2) I.**

Mr. Wooton

A survey of educational ideas and practices in the history of Western civilization. In general, not open to students with credit for Education 101.

**202. History of Education in the United States. (2) II.**

Mr. Wooton

A survey of educational ideas and practices in the history of the United States. In general, not open to students with credit for Education 102.

**208A-208B. Social and Civic Foundations of Education. (2-2) Yr.**

Prerequisite: courses 106 and 180.

Mr. Sheats

Analysis of educational policies and procedures as they are affected by political and economic trends in American life.

**210A-210B. Advanced Educational Psychology. (2-2) Yr.**

Mr. Keislar

Prerequisite: course 110 or Psychology 110, or the equivalent.

Exploration and critical study of current literature and research in educational psychology.

**217A-217B. Principles of Guidance, Advanced. (2-2) Yr.**

Mr. MacLean

Prerequisite: courses 110, 117, 119.

Admission on consultation with the instructor.

The philosophy, organization, and operation of student personnel work. Designed as a part of special preparation for students intending to make counseling their profession.

**226A-226B. Business Education. (2-2) Yr.**

Mr. Wanous

For teachers and students of graduate standing interested in problems related to the organization and supervision of business training on high school and junior college levels. Admission on consultation with the instructor.

**240A-240B. Organization and Administration of Education. (2-2) Yr.**

Mr. Morrisett, Mr. Briscoe

An advanced course in the organization and administration of public education in the United States. Required of all candidates for the doctorate in education. Open to teachers of experience who wish to qualify for the administration credentials.

**\*241A-241B. School Surveys. (2-2) Yr.**

Mr. Morrisett

A critical study of the techniques and findings of school surveys combined with practice in making studies of school systems. Admission on consultation with the instructor.

**243A-243B. Administration of Secondary Education. (2-2) Yr.**

Mr. Morrisett, \_\_\_\_\_

For teachers of experience who desire to qualify for the secondary school supervision or secondary school administration credential. Admission on consultation with the instructor.

**246. Administration of Elementary Education. (2) I, II.**

Mr. Hockett

For teachers of experience who desire to qualify for the elementary school supervision or elementary school administration credential. Problems in organization and administration of the modern elementary school. Admission on consultation with the instructor.

**247A-247B. Audio-Visual Education. Advanced Course. (2-2) Yr.**

Mr. McClusky

For supervisors and administrators dealing with the problems involved in developing programs of visual education on the various levels in public school education. Admission on consultation with the instructor.

\* Not to be given, 1950-1951.

- 250A-250B. History of Education. Seminar. (2-2) Yr.** Mr. Wooton  
Prerequisite: courses 101 and 102, or 201 and 202, or their equivalent.  
Limited to candidates for advanced degrees.  
Specialized studies in the history of education.
- 251A-251B. Supervision of Instruction and Curriculum. Seminar. (2-2) Yr.** Mr. Fielstra  
For graduate students whose major interest is in elementary or secondary supervision.
- 253A-253B. Early Childhood Education. Seminar. (2-2) Yr.** Mrs. Sherer  
For graduate students whose major interest is in the nursery school, kindergarten, or primary education.
- \*254A-254B. Experimental Education. Seminar. (2-2) Yr.** Mr. Ryans  
Prerequisite: courses 110, 114, 119. (210A-210B is desirable.)  
A course designed to consider the planning of experimental and differential research. Students will participate in group experiments and carry out individual research projects.
- 254C-254D. Experimental Education. Seminar. (2-2) Yr.** Mr. Ryans  
Prerequisite: courses 110, 114, 119. (210A-210B is desirable.)  
A course dealing with the construction of aptitude tests, achievement tests, questionnaires, rating devices, and attitude scales.
- 255A-255B. School Administration. Seminar. (2-2) Yr.** Mr. Morrisett, Mr. Briscoe  
Prerequisite: a teaching credential and course 141 or its equivalent.  
Limited to candidates for the master's or doctor's degree whose major interest is school administration.
- 256A-256B. Principles of Education. Seminar. (2-2) Yr.** Mr. Lee, Mr. Wooton  
Prerequisite: course 106 or its equivalent.  
A critical study and appraisal of educational theory, historical and current, the objective of which is to formulate a philosophy of education suited to modern demands.
- 257A-257B. Audio-Visual Education. Seminar. (2-2) Yr.** Mr. McClusky  
Prerequisite: course 147 or its equivalent.  
Limited to candidates for advanced degrees whose major interest is audio-visual education and to students desiring to carry on research in this area.
- 260A-260B. Educational Psychology. Seminar. (2-2) Yr.** Miss Seagoe  
Prerequisite: course 210A-210B or the equivalent.  
Limited to candidates for the master's or doctor's degree whose major interest is educational psychology and to students desiring to carry on research in this area.
- 262A-262B. The Elementary School Curriculum. Seminar. (2-2) Yr.** Mr. Hockett  
Admission on consultation with the instructor.
- 266A-266B. Vocational Education and Guidance. Seminar. (2-2) Yr.** Mr. Champion  
For graduate students whose major interest is in vocational education, vocational guidance, or closely related problems. Admission on consultation with the instructor.
- 267. Research Problems in Education. Seminar. (2) II.** Mr. Ryans  
Prerequisite: courses 254A-B-C-D, or equivalent. Limited to graduate students whose major interest is in educational research.  
In 1951 the seminar will deal with the problems investigated and the methodologies employed in public school research; in 1952 the problems

\* Not to be given, 1950-1951.

studied and procedures employed in collegiate bureaus of educational research will be considered. Admission for one or both years on consultation with the instructor.

**270A-270B. Secondary Education. Seminar. (2-2) Yr.** Mr. Bacon

Prerequisite: course 170. Limited to candidates for the master's or doctor's degree whose major interest is in secondary education, and to students desiring to pursue research in this area.

**275A-275B. The Secondary School Curriculum. Seminar. (2-2) Yr.**

Mr. Fielstra

For graduate students who are interested in studies and research in the curricula of secondary schools.

**276A-276B. Research in Curriculum. (1-4; 1-4) Yr.** Mr. Fielstra

For graduate students who desire to pursue independent research in the curriculum.

**279A-279B. Higher Education. Seminar. (2-2) Yr.**

Mr. Johnson, Mr. MacLean

For graduate students whose major interest is higher education. In 1949-1950 the emphasis will be upon college and university problems; in 1950-1951 the emphasis will be upon the junior college, the technical institute, and closely related areas of study; and alternately thereafter. Admission for one or both years on consultation with instructor.

**281A-281B. Adult Education. Seminar. (2-2) Yr.** Mr. Sheats

Prerequisite: course 181 or its equivalent. For teachers, supervisors, and administrators interested in adult education, university extension, evening schools, or related problems.

**\*292A-292B. Research in Educational Administration. (1-4; 1-4) Yr.**

Mr. Morrisett

Prerequisite: teaching experience in elementary or secondary schools.

**298A-298B. Research in Education. (2-6; 2-6) Yr.**

The Staff

#### COURSES PREPARATORY TO SUPERVISED TEACHING

**330. Introduction to Elementary Teaching. (4) I, II.** Miss Seeds

Prerequisite: Education 110, 111, and a C average or better for all work taken in the University of California.

An intensive study of the principles of teaching made effective by assigned reading, observation, participation, analysis of teaching problems, and preparation of units of work.

This course precedes by one semester all teaching in kindergarten-primary and general elementary grades.

**370. Introduction to Secondary Teaching. (3) I, II.**

Mr. Bond

Prerequisite: regular graduate status: Education 170 and either 101, 102, 106, 112, 140, 180, or Psychology 110.

An intensive study of teaching and learning in the secondary school. This course is prerequisite to G377, G378, and G379, and is so conducted as to prepare for and lead to definite placement in supervised teaching.

Other courses in teaching methods in special subjects will be found listed in the 300 series, Professional Courses in Method, in the offerings of the various departments, and in the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

\* Not to be given, 1950-1951.



## SUPERVISED TEACHING

Supervised teaching is provided in (1) the University Elementary School, comprising a nursery school, kindergarten, and the elementary grades; (2) Nora Sterry and Broekton Avenue Elementary Schools of Los Angeles City; (3) University High School and Emerson Junior High School of Los Angeles City; (4) other high schools of Los Angeles and Santa Monica, as requirements demand. The Fairburn Avenue Elementary School serves as a demonstration school.

The work in supervised teaching is organized and administered by the directors of training and a corps of supervisors and training teachers, chosen by the University authorities.

All candidates for supervised teaching must obtain the approval of a university physician prior to assignment. Formal application for assignment must be filed in the Office of the Director of Training. Except by special arrangement, these applications are received at a meeting held either in January or May of the semester preceding that in which teaching is to be done. The exact date of this meeting is announced through official University channels.

Undergraduate candidates for kindergarten-primary, elementary, or special secondary teaching must have maintained at least a C average in all courses in education, in all courses comprising the major, and in all work completed at the University of California.

*Preparation for Nursery School Teaching*

Students wishing to prepare for nursery school teaching may enroll in the courses listed below for kindergarten-primary credential candidates, and teach under supervision in the University Nursery School. In addition, Education 123 and 124 are recommended.

*For Kindergarten-Primary, General Elementary, and General Junior High School Credentials*

**K335A-S35B. Supervised Teaching: Kindergarten-Primary. (4-4) I, II.**

Prerequisite: senior standing and courses 125A, 125B, and 330.

Required of all candidates for the kindergarten-primary credential.

**K336. Supervised Teaching: Kindergarten-Primary. (1 to 4), I, II.**

Supplementary teaching which may be elected by the student or, in certain cases, required by the department.

**E335A-E335B. Supervised Teaching: General Elementary. (4-4) I, II.**

Prerequisite: senior standing and courses 139 and 330.

Required of all candidates for the general elementary credential.

**E336. Supervised Teaching: General Elementary. (1 to 4) I, II.**

Supplementary teaching which may be elected by the student or, in certain cases, required by the department.

**J374. Supervised Teaching: General Junior High School. (2 to 6) I, II.**

Prerequisite: course E335A-E335B, or a minimum of 6 units of teaching in a special field.

*For Special Secondary Credentials*

**A375 (3 or 4) and A376 (1 to 4). Supervised Teaching: Art. I, II.**

Prerequisite: senior standing, course 170, Art 370A-370B. A total of 6 units required of all candidates for the special secondary credential in art.

**B375 (3 or 4) and B376 (1 to 4). Supervised Teaching: Business Education. I, II.**

Prerequisite: senior standing, course 170, Business Education 370A-370B. A total of 6 units required of all candidates for the special secondary credential in business education.

**H375 (3 or 4) and H376 (1 to 4). Supervised Teaching: Home Economics.**  
I, II.

Prerequisite: senior standing, course 170, Home Economics 370. A total of 6 units required of all candidates for the special secondary credential in homemaking.

**MS375 (3 or 4) and MS376 (1 to 4). Supervised Teaching: Music.** I, II.

Prerequisite: senior standing, course 170, Music 370A-370B. A total of 6 units required of all candidates for the special secondary credential in music.

**P375 (3 or 4) and P376 (1 to 4). Supervised Teaching: Physical Education.**  
I, II.

Prerequisite: senior standing, course 170, Physical Education for Men 354 and 355A-355B, or Physical Education for Women 326A-326B and 327A-327B. A total of 6 units required of all candidates for the special secondary credential in physical education.

*For General Secondary and Junior College Credentials*

**G377. Supervised Teaching: General Secondary.** (4) I, II.

General prerequisite: regular graduate status, courses 170, 370. Special prerequisites in the following fields, as indicated: Art 370A, 370B; Business Education 370A, 370B; English 370; French 370; German 370; Home Economics 370; Music 370B; Physical Education—Men, 354; Physical Education—Women 326, 327; Spanish 370; Speech 370. Required of all candidates for the general secondary credential.

This course consists of participation in the instructional activities of one high school class for one term, and is accompanied by a required conference each week; hours for teaching are by individual arrangement.

**G378. Supervised Teaching: General Secondary.** (1 to 6) I, II.

General prerequisite: regular graduate status, courses 170 and 370, or the equivalents, or public school experience and the consent of the Director of Training. Special prerequisites as indicated for course G377.

A supplementary course in secondary teaching designed for (1) those experienced in public school teaching who need to improve their teaching techniques; (2) those seeking general secondary or junior college credentials after having completed the supervised teaching required for some other type of credential; (3) those who wish to elect types of teaching experience not provided in their previous training.

**G379. Supervised Teaching: Junior College.** (4) I, II.

Prerequisite: regular graduate status, courses 279, 370, or the equivalents, and the consent of the Director of Training. Restricted to candidates for the junior college credential alone who are teaching classes in the University or in a junior college.

**383. Supervised Teaching.** (1 to 6). I, II.

General prerequisite: courses 170, 370. Special prerequisites as indicated for course G377.

Supplementary teaching in any secondary field.

*For More Than One Credential*

- ‡1. **Kindergarten-Primary and General Elementary Credentials:**  
Education K335A-K335B, and E335A; or E335A-E335B, and K335A.
2. **General Elementary and General Junior High School Credentials:**  
E335A-E335B, and J374 (in a minor field).
- ‡3. **General Elementary and Special Secondary Credentials:**  
A minimum of 6 units of teaching in the special field, and E335A.

‡ The combinations marked with the double dagger (‡) are in greatest demand.

4. **General Elementary and General Secondary Credentials:**  
E335A-E335B, and G377 or G 378; or G377, and E335A.
- †5. **Special Secondary and General Junior High School Credentials:**  
A minimum of 6 units of teaching in the special field, and J374 (in a minor field).
6. **Special Secondary and General Secondary Credentials:**  
A minimum of 6 units of teaching in the special field, and G377 or G378; or G377, and a minimum of 6 units of teaching in the special field.
7. **Junior College and General Secondary Credentials:**  
G379, and G377 or G378.

## ENGINEERING

- MORRIS ASIMOW, Ph.D., Professor of Engineering.  
 JOHN LANDES BARNES, Ph.D., Professor of Engineering.  
 RALPH M. BARNES, Ph.D., Professor of Engineering and Professor of Production Management.  
 L. M. K. BOELTER, M.S. Professor of Engineering (Chairman of the Department).  
 WILLIAM BOLLAY, Ph.D., Visiting Professor of Engineering.  
 GEORGE BROWN, Ph.D., Visiting Professor of Engineering.  
 WILLIAM D. HERSEBERGER, Ph.D., Professor of Engineering.  
 W. JULIAN KING, M.E., Professor of Engineering.  
 WENDELL E. MASON, M.S., M.E., Professor of Engineering.  
 THOMAS A. ROGERS, Ph.D., Professor of Engineering.  
 DANIEL ROSENTHAL, Ph.D., Professor of Engineering.  
 WILLIAM F. SEYER, Ph.D., Professor of Engineering.  
 FRANCIS R. SHANLEY, B.S., Professor of Engineering.  
 BALDWIN M. WOODS, Ph.D., Professor of Engineering.  
 SAMUEL TERRELL YUSTER, Ph.D., Professor of Engineering.  
 JOSEPH S. BEGGS, M.S., Associate Professor of Engineering.  
 CHARLES T. BOEHNLEIN, Ph.D., Associate Professor of Engineering.  
 HARRY W. CASE, Ph.D., Associate Professor of Engineering and Associate Professor of Psychology.  
 W. KENNETH DAVIS, M.S., Associate Professor of Engineering.  
 C. MARTIN DUKE, JR., M.S., Associate Professor of Engineering.  
 ALAN E. FLANIGAN, Ph.D., Associate Professor of Engineering.  
 THEODORE FORBES, Ph.D., Visiting Associate Professor of Engineering.  
 H. KURT FORSTER, Ph.D., Associate Professor of Engineering.  
 LOUIS L. GRANDI, M.S., Associate Professor of Engineering.  
 JOHN H. MATHEWSON, M.S., Associate Professor of Engineering.  
 JOHN W. MILES, Ph.D., Associate Professor of Engineering.  
 JOHN R. MOORE, B.S., Visiting Associate Professor of Engineering.  
 WESLEY L. ORR, B.S., Associate Professor of Engineering.  
 LOUIS A. PIPES, Ph.D., Associate Professor of Engineering.  
 CRAIG L. TAYLOR, Ph.D., Associate Professor of Engineering.  
 EDWARD H. TAYLOR, M.S., Associate Professor of Engineering.  
 HAROLD W. MANSFIELD, Associate Professor of Engineering, Emeritus.  
 ALBERT F. BUSH, M.S., Assistant Professor of Engineering.  
 WALTER C. HURTY, M.S., Assistant Professor of Engineering.  
 WILLIAM J. KNAPP, D.Sc., Assistant Professor of Engineering.  
 JOSEPH F. MANILDI, Ph.D., Assistant Professor of Engineering.  
 GEORGE E. MOUNT, Ph.D., Assistant Professor of Engineering and Assistant Professor of Psychology.

† The combinations marked with the double dagger (†) are in greatest demand.

- \*HEINZ F. POPPENDIEK, Ph.D., Assistant Professor of Engineering.  
 HAROLD P. RODES, Ph.D., Assistant Professor of Engineering.  
 FREDERICK W. SCHOTT, Ph.D., Assistant Professor of Engineering.  
 ALBERT L. STANLY, Ph.D., Assistant Professor of Engineering.  
 DEFOREST L. TRAUTMAN, Ph.D., Assistant Professor of Engineering.  
 \*MYRON TRIBUS, Ph.D., Assistant Professor of Engineering.  
 WILLIAM D. VAN VORST, M.S., Assistant Professor of Engineering.  
 SHIRLI C. ALLEN, M.S., Lecturer in Engineering.  
 FRED H. BLANCHARD, Lecturer in Engineering.  
 ALFRED C. BLASOHEK, M.S., Lecturer in Engineering.  
 LESLIE CROMWELL, B.S., Lecturer in Engineering.  
 JOHN C. DILLON, A.B., Lecturer in Engineering.  
 JOHN R. DINNING, B.S., Lecturer in Engineering.  
 JOHN M. ENGLISH, M.S., Lecturer in Engineering.  
 JACOB P. FRANKEL, M.S., Lecturer in Engineering.  
 HENRY C. FROULA, M.A., M.S., Lecturer in Engineering.  
 WARREN A. HALL, B.S., Lecturer in Engineering.  
 GERALD L. HASSLER, Ph.D., Lecturer in Engineering.  
 ADRIAN DEBOE KELLER, M.A., Lecturer in Engineering.  
 ELLIS F. KING, M.S., Lecturer in Engineering.  
 JOSEPH W. MCCUTCHEAN, B.S., Lecturer in Engineering.  
 STEWART F. MULFORD, B.S., Lecturer in Engineering.  
 RUSSELL E. O'NEILL, M.S., Lecturer in Engineering.  
 LLOYD M. POLENTZ, B.S., Lecturer in Engineering.  
 ALLEN B. ROSENSTEIN, B.S., Lecturer in Engineering.  
 VICTOR D. SANDERS, M.S., Lecturer in Engineering.  
 SAADIA M. SCHORE, B.S., Lecturer in Engineering.  
 MICHAEL V. SMIRNOFF, M.S., Lecturer in Engineering.  
 GEORGE J. TAUXE, M.S., Lecturer in Engineering.  
 ROBERT E. TUCKER, B.A., Lecturer in Engineering.  
 WALTER P. WALLACE, B.S., Lecturer in Engineering.  
 ROBERT T. WILKERSON, B.S., Lecturer in Engineering.  
 ROBERT BRENNER, M.S., Associate in Engineering.  
 ADIN E. MATHEWS, M.S., Associate in Engineering.  
 HARRY C. SHOWMAN, B.S., Associate in Engineering.  
 LOUIS G. WALTERS, M.S., Associate in Engineering.



- MARTIN R. HUBERTY, Engr., Professor of Irrigation.  
 ARTHUR F. PILLSBURY, Engr., Associate Professor of Irrigation.

*Letters and Science List.*—Courses 11A-11B, 1FA, 2, 15A-15B, 15AB, 102B, 102C.

#### LOWER DIVISION COURSES

**11A-11B. Surveying Lectures.** (2-2) Yr. Beginning either semester.

Mr. Smirnoff in charge

11A, prerequisite: trigonometry and geometric drawing.  
 Principles of measurement of distances, directions, and elevations. Construction and use of common surveying instruments, such as tape, compass, level, transit, and alidade. Problems in elementary surveying.

11B, prerequisite: courses 11A, 1FA.

Plane and geodetic surveys; triangulation; precise leveling; engineering astronomy; use of plane table and alidade; hydrographic surveys.

\* Absent on leave, 1950-1951.

**1FA-1FB. Surveying Field Practice. (1-1) Yr. Beginning either semester.**

Field work, three hours per week.

Mr. Smirnov in charge

1FA, prerequisite: course 1LA (may be taken concurrently).

Practice in measurement of distances, directions and elevations, using common surveying instruments such as tape, compass, level, and transit.

1FB, prerequisite: course 1LB (may be taken concurrently).

Field practice in surveying including construction surveys and use of plane table and alidade.

**2. Descriptive Geometry. (3) I, II.**

Mr. Hurty in charge

Lecture, one hour; laboratory, five hours.

Prerequisite: engineering drawing or one year of high school mechanical drawing, plane geometry. Recommended: solid geometry.

The fundamental principles of descriptive geometry and their application to the solution of engineering problems.

**6. Engineering Drawing. (3) I, II.**

Mr. Hurty in charge

Lecture, one hour; laboratory, five hours.

Prerequisite: course 2.

An advanced course, based on A.S.A. standards of drawing and drafting room practice, correlating technical sketching and drafting with engineering design and production.

**8. Properties of Materials. (2) I, II.**

Mr. Rosenthal

Prerequisite: Chemistry 1A.

The properties of materials; applications to engineering systems; dependency of properties on internal structure; structures and properties of metals and alloys and their response to thermal and mechanical treatments; structures and properties of nonmetallic materials.

**10B. Processing of Engineering Materials. (2) I, II. Mr. Wallace in charge**

Lecture, one hour; laboratory, three hours.

Prerequisite: course 8, Chemistry 1B.

Study of modern manufacturing processes; casting, cutting, plastic working, fastening (welding, riveting), finishing, gaging, introductory quality-control; emphasis in laboratory on mechanical and physical properties involved in various processes. Arranged field trips.

**12. Survey and Problems in Agricultural Engineering. (2) I.**

Prerequisite: sophomore standing.

Historical and modern applications of engineering to farm life with reference to general and local conditions. Study of erosion, drainage, irrigation, water supply, sewage disposal; domestic and production structures and their equipment; utilities and rates; equipment for tillage, pest control, harvesting, transportation, farm processing.

**15A-15B. Elementary Mechanics. (3-3) Yr. Beginning either semester.**

Lecture, two hours; laboratory, three hours.

Mr. Orr in charge

This is a unified course covering elementary topics of analytical mechanics and strength of materials.

15A, prerequisite: course 8 (may be taken concurrently), Physics 1A, Mathematics 4A or 6A (may be taken concurrently).

Composition and resolution of coplanar force systems, equilibrium of coplanar force systems, states of stress, simple stress calculations, frames, continuously distributed loads, moments of areas, torsion, beam stresses. Algebraic and graphic methods will be employed.

15B, prerequisite: course 15A, Mathematics 4B or 6B (may be taken concurrently).

Composition and resolution of noncoplanar force systems, equilibrium of noncoplanar force systems, friction, deflection of beams, statically indeterminate beams, combined axial and bending loads, eccentric loads, columns, cables.

**15AB. Elementary Mechanics.** (6) I, II.

Mr. Orr in charge

Prerequisite: course 8 (may be taken concurrently), Physics 1A, Mathematics 4B or 6B (may be taken concurrently).

Combination of courses 15A and 15B.

Lecture, three hours; laboratory, six hours.

**30. The Biotechnology of Human Work.** (3) I.

Mr. C. L. Taylor

Prerequisite: Chemistry 1A, Physics 1A.

The human body with special reference to structure and materials, processes for transformation of energy and performance of physical work; rational and emotional components in the performance of mental work.

**48. The Anatomy of Engineering.** (1) I, II.

Mr. Case

Designed for students entering the College of Engineering.

The philosophical basis of engineering and the present scope of the profession. Biographies of eminent engineers and the organization of engineering in industry. Reading and problem assignments.

UPPER DIVISION COURSES

Satisfactory completion of the Junior Status Examination is prerequisite to all upper division courses.

**100A. Circuit Analysis.** (3) I, II.

Mr. Rogers in charge

Prerequisite: Mathematics 4B or 6B, Physics 1C.

Elements of electrical circuit analysis with emphasis on solutions of single-phase circuit problems; applications of steady state and transient analysis to linear electrical, mechanical, and thermal systems will be included.

**100B. Electrical Machines.** (3) I, II.

Mr. Rogers in charge

Prerequisite: course 100A.

Principles and applications of industrially important electrical machines and equipment.

**100C. Electrical Power Operation and Distribution.** (3) I.

Mr. Grandi

Prerequisite: courses 100A-100B, 104A-104B.

Electrical power generation and distribution systems are considered from the viewpoint of equipment, operations, transmission and distribution, and system economics. Occasional field trips will be scheduled.

**101. Irrigation Institutions and Economics.** (2) II.

Mr. Huberty

Water rights, irrigation institutions, and organizations.

**102B. Engineering Dynamics.** (3) I, II.

Mr. Orr in charge

Prerequisite: course 15B; Mathematics 110AB or 110C (may be taken concurrently).

Kinematics and kinetics of a particle and of rigid bodies with emphasis on engineering applications.

**102C. Advanced Engineering Dynamics.** (3) II.

Mr. Miles

Prerequisite: course 102B.

Continuation of Engineering 102B, with special reference to the dynamics of rigid bodies such as the gyroscope, vibrations of systems having several degrees of freedom, use of Lagrange's equations, vibration of elastic systems.

**\*102D. Nonlinear Mechanics. (3) I or II.**

Mr. Pipes

Prerequisite: course 181B.

Topological methods, with special emphasis on phase trajectories of linear systems; phase trajectories of nonlinear conservative systems; questions of stability, limit cycles of Poincaré. Other topological methods and analytical methods will be discussed as time permits.

**103A. Elementary Fluid Mechanics. (3) I, II.**

Mr. E. H. Taylor

Prerequisite: course 102B; course 105B (may be taken concurrently).

An introductory course dealing with the application of the principles of mechanics to the flow of compressible and incompressible fluids. Includes hydraulic problems of flow in closed and open conduits.

**103B. Intermediate Fluid Mechanics. (3) I.**

Mr. E. H. Taylor

Prerequisite: course 103A.

The dynamics of nonviscous and viscous fluids; potential motion, vortex motion, Navier-Stokes equation, boundary layers, turbulence, compressibility. Emphasis is placed on the applications of theory to various practical systems which involve fluid motion.

**104A. Engineering Circuits Laboratory. (2) I, II. Mr. E. F. King in charge**

Laboratory, six hours per week.

Prerequisite: course 100A (may be taken concurrently).

Electrical measurements and instrumentations of mechanical and electrical systems; introductory experiments illustrating the applications of electrical-circuit theory to electrical, mechanical, thermal, acoustical, and fluid systems.

**104B. Engineering Applications of Electrical Machines. (2) I, II.**

Laboratory, six hours per week.

Mr. Mathews in charge

Prerequisite: course 100B (may be taken concurrently), course 104A.

Introductory experiments illustrating the principles of operation and the application of electrical machinery and equipment.

**104C-104D. Senior Engineering Laboratory. (4-4) Yr. Beginning either semester.**

Mr. Grandi in charge

Lecture and demonstration, 2 hours; laboratory, 4 hours.

Additional 6 hours required in preparation of reports.

Prerequisite: completion of all required junior courses.

A year laboratory course containing a group of integrated experiments common to all engineering fields and a group of elective experiments particularly applicable to the several fields of engineering. Occasional field trips will be scheduled.

**105A-105B. Heat Transfer and Thermodynamics. (3-3) Yr. Beginning either semester.**

Mr. Boelter in charge

Prerequisite: Mathematics 110AB or 110C (may be taken concurrently).

The principles of thermodynamics and heat transfer as applied to engines, chemical systems, and various methods for the production or absorption of power, psychrometry, vapors, gases, gas dynamics, theoretical cycles, nonisothermal electrical equipment, and practical problems concerning economic factors.

\* To be given when there is sufficient demand.

**105C. Thermodynamics. (3) I, II.**

Mr. Boelter in charge

Prerequisite: course 105B.

Thermodynamic principles applied to process engineering. General conditions of equilibrium, reaction equilibria and the theory of solutions. The phase rule and phase equilibria of binary and multicomponent systems with application to mass transfer between phases. Thermodynamics of surface phenomena.

**106A. Machine Design. (4) I.**

Mr. Mason in charge

Two lectures and two three-hour laboratory periods per week.

Prerequisite: courses 6 and 102B.

Application of the principles of mechanics, physical properties of materials, and shop processes to the design of machine parts; empirical and rational methods are employed; lectures and problems.

**106B. Product Design. (3) II.**

Mr. Mason

Lecture, one hour; laboratory, six hours.

Prerequisite: course 106A.

Engineering and economic calculations involved in the design and manufacture of industrial products; design for function, safety, and appearance.

**106C. Structural Design. (3) II.**

Mr. Duke

Lecture, 2 hours; laboratory, 3 hours.

Prerequisite: course 108B.

Structural elements of reinforced concrete; design of simple reinforced concrete structures; elements of the design of structural steel and timber members and connections.

**107A. Structural Analysis. (3) I, II.**

Mr. Orr

Prerequisite: course 108B.

Statically determinate and indeterminate theory with applications to machines and structures.

**107G. Analysis of Airplane Structures. (3) I.**

Mr. Shanley

Prerequisite: courses 102B and 108B.

External loads, internal loads, allowable loads, load factors, load distribution. Shell analysis for shear, bending, torsion. Buckling of columns, plates, and shells. Properties of aircraft materials. Analysis of space frameworks and joints.

**107H. Elasticity and Plasticity. (3) II.**

Mr. Rosenthal

Prerequisite: course 108B, Mathematics 110AB or 110C (may be taken concurrently).

Advanced strength of materials. Experimental and analytical solutions of plane state of stress (strain gage technique, photoelasticity, X-ray stress analysis, etc.). Elements of plasticity. Criteria of flow and fracture.

**108A. Strength of Materials. (3) I, II.**

Mr. Orr in charge

Prerequisite: Physics 1A, 1C, 1D; Mathematics 4B or 6B (may be taken concurrently).

Stress, strain, and elasticity; thin shells, welded and riveted joints; shafts and helical springs; beams, shear, moment, flexural stress, shearing stress, deflection, unsymmetrical loading; column-theory; combined stresses. Not open for credit to students who have had courses 15A or 15B.

**108B. Strength of Materials. (2) I, II.**

Mr. Shanley in charge

Prerequisite: course 15B; Mathematics 110AB or 110C (may be taken concurrently).

Elastic energy methods; composite and curved beams and special beam problems; structural stability; stress concentration; fatigue; other stress problems.



- 108C. Properties of Ceramic Materials. (3) I.** Mr. Knapp  
Prerequisite: senior standing in engineering.  
Structure of some ceramic materials in the crystalline and glassy states, and relation to certain physical and chemical properties. Equilibria of ceramic mixtures and certain thermodynamic applications.
- 108F. Engineering Materials Laboratory. (1) I, II.** Mr. Wallace in charge  
Laboratory, three hours per week.  
Prerequisite: course 15B. Course 108B should be taken concurrently.  
Determination of mechanical and physical properties of engineering materials.
- 108J. Principles of Soil Mechanics. (3) I.** Mr. Duke  
Prerequisite: courses 103A, 108B, and Geology 5.  
Formation and distribution of engineering soils. Basic physical characteristics. Properties of real soils classifications; tests. Mechanics of ideal granular materials; active and passive pressures; consolidation and subsidence; bearing capacity. Stresses in earth masses. Field techniques in exploration, testing, and research.
- 109. Irrigation Engineering. (3) II.** Mr. E. H. Taylor, Mr. Pillsbury  
Prerequisite: course 103A (may be taken concurrently).  
Use of irrigation water, hydrology of irrigation water supplies; design, operation, and maintenance of irrigation and drainage systems.
- 110. Route Surveying. (3) II.** Mr. Smirnoff  
Lecture, two hours; field work, three hours.  
Prerequisite: courses 11B and 1FB.  
Simple, compound, and transition curves; reconnaissance, preliminary, and location surveys; calculations of earthwork and other quantities, field work.
- 112A. Basic Electronics. (3) I, II.** Mr. E. F. King  
Prerequisite: courses 100A and 104A. Not open for credit to those who have had Physics 116A.  
Atomic structure of solids, work function, thermionic and photoelectric emission, secondary emission. Motion of charges in electric and magnetic fields. Physical structure of electron tubes. Characteristic curves. Equivalent circuits, methods of analysis of circuits employing electron tubes. Theory of operation of rectifiers, amplifiers, and oscillators. Application of electron tubes to engineering devices and systems.
- 112B. The Communication of Information. (3) II.** Mr. Hershberger  
Prerequisite: courses 100A, 112A.  
Delineation of the fundamental problem of communication between human beings with emphasis on factors common to all systems. The course includes a study of information theory, signals and their spectra, and the factors that determine system performance as distortion, element variation, and band width; noise, and the characteristics of the human voice and sense organs. Illustrative material is drawn from telephony, radar, television, computers, and automatic control systems.
- 112C. Applied Electromagnetic Theory. (3) I.** Mr. Hershberger  
Prerequisite: senior standing in engineering.  
Application of electromagnetic theory to engineering problems, including the treatment of transmission lines, wave guides, and antennas.

**\*113A-113B. The Engineer and His Professional Duties. (2-2) Yr.**

Enrollment limited to twenty students per section.

Mr. Boelter

Prerequisite: senior standing in engineering.

Oral and written reports on various subdivisions of knowledge with emphasis on the sociohumanistic periphery of engineering. Class meetings will be devoted to the subjects of the history of technology, business organization, personal efficiency, professional codes and ethics, industrial procedures, and engineering-report writing. The course serves as training in the professional duties of the engineer.

**120. Principles of Engineering Investment and Economy. (3) I, II.**

Mr. Manildi

Prerequisite: senior standing in an engineering program of study.

Derivation of formulas used in investment theory; analysis of financial statements and cost accounting methods; analysis of original and alternative investments; equipment replacement problems; influence of personnel factors; quality control; studies in the economy of governmental projects.

**121. Engineering Aerodynamics. (3) I.**

Mr. Miles

Prerequisite: courses 103A and 105A-105B.

Airfoil section and wing characteristics, compressibility, propellers, performance determination, stability and control of airplanes.

**125. Building Services. (2) I.**

Mr. Orr

Prerequisite: senior standing in engineering.

Principles and applications of lighting, heating and air conditioning, acoustics, water supply, sewage disposal, traffic, safety, and similar services pertaining to buildings.

**130. The Biotechnology of the Human Environment. (3) I, II.**

Mr. C. L. Taylor in charge

Physical, physiological, and psychological components of the interaction between man and the environment created by machines, processes, structures, circuits.

**131A. Industrial Sanitary Engineering. (3) I.**

Mr. Bush

Prerequisite: course 130 and senior standing in engineering.

Consideration of industrial environment, evaluation of atmospheric contaminants, sampling methods and analysis, control measures, ventilation systems (hoods, local exhaust principles, exhausters and collectors), airflow measurements, industrial atmospheric pollution regulations and fundamental problems of evaluation, consideration of disposal of liquid and solid waste. Occasional field trips will be scheduled.

**143A. Oil Field Development. (3) I.**

Mr. Yuster

Prerequisite: course 103A; course 105B (may be taken concurrently).

Origin, accumulation, and properties of petroleum; petroleum reservoirs, exploration methods, drilling methods, mud technology, well completion, logging methods, and core analysis. Field trips will be made.

**143B. Oil and Gas Production. (3) II.**

Mr. Yuster

Prerequisite: course 143A.

Oil and gas production mechanisms; internal gas drive, water drive, gravity drainage, recycling; flowing of production, gas lift, pumping; storage and transportation; well treatment, secondary recovery; oil mining and oil shale. Occasional field trips will be scheduled.

\* 113A to be given fall and spring semesters; 113B to be given when there is sufficient demand.

- 145. Tool Engineering. (3) I.** Mr. Wilkerson  
Lecture, two hours; laboratory, two hours.  
Prerequisite: senior standing in an engineering program of study and course 106A (may be taken concurrently).  
The selection of tooling for production; design of tools, jigs, fixtures, dies, and production-type gages; design and tooling of automatic machines. Field trips will be scheduled.
- 148A. Elements of Construction. (3) I, II.** Mr. Duke  
Lecture, 2 hours; laboratory and field trips, 3 hours.  
Prerequisite: senior standing in engineering.  
Anatomy of the industry, contracts, costs and economics, equipment and materials, flow and operations, field engineering techniques, analysis of current construction projects in the vicinity on an individual basis, unsolved problems of the industry.
- 150. Industrial Chemistry. (2) I.** Mr. Van Vorst, Mr. W. K. Davis  
Prerequisite: Chemistry 110A.  
Problems and discussions.  
Industrial stoichiometry and heat balances. Behavior of gases and liquids; vaporization and condensation. Study of selected industrial chemical processes with emphasis on the reaction, thermochemistry, energy and weight balances, process equipment, and economic aspects. Field trips to chemical plants will be scheduled. Designed for majors in chemistry. This course replaces Chemistry 140.
- 151A. Industrial Heat Transfer. (3) I.** Mr. Tribus  
Prerequisite: course 105B; Mathematics 110AB or equivalent.  
The study of the basic principles of heat transfer and their application to the design of industrial equipment. Steady-state and transient problems of conduction by analytical and graphical methods. Free and forced convection. Transfer of radiant energy.
- 152A. Industrial Mass Transfer. (3) I.** Mr. W. K. Davis  
Prerequisite: courses 105A-105B.  
Physical and thermal properties of fluids; basic principles of unit operations; molecular and eddy diffusion; mass, heat, and momentum transfer; application to evaporation and psychrometric unit operation, cooling towers, etc.
- 152B. Industrial Mass Transfer. (3) I, II.** Mr. W. K. Davis  
Prerequisite: course 152A or the consent of the instructor.  
Application of mass transfer to unit operations involving also heat and momentum transfer; distillation, absorption, drying, extraction, diffusion separation processes, etc.; mechanical separation and size reduction; crystallization; materials handling.
- 153. Thermal and Luminous Radiation. (3) II.** Mr. Bromberg  
Prerequisite: course 105B.  
The spectral characteristics of sources of thermal radiation and the spectral behavior of transmitters, reflectors, and absorbers. Emphasis will be placed upon illumination, fired heat exchangers, and radiant heating devices.
- 155A. Engineering Aspects of Nuclear Processes. (3) I** Mr. W. K. Davis  
Prerequisite: senior standing in engineering, physics, or chemistry.  
Introduction to the basic engineering principles involved in the design and operation of nuclear reactors, in the separation of isotopes, and in other phases of nuclear energy work. Will include a review of the basic physics required for engineering applications, radiochemistry, diffusion separation processes, the diffusion of neutrons and basic pile mechanics, heat transfer problems in nuclear reactors for power production, health and safety aspects of radiation, disposal of radioactive wastes, etc.

**170. Sales Engineering. (3) I.**

Mr. Case

Lecture, three hours. Field trips may be arranged.

Prerequisite: senior standing in engineering.

The principles of engineering sales will be illustrated by the case method. The selection and assembly of prefabricated components in the solution of a production and construction problem. Presentation of the service function as it is related to sales engineering.

**171. Engineering Organization and Administration. (3) II.**

Mr. Case

Prerequisite: senior standing in engineering.

The principles of organization and administration as applied to engineering in industry will be considered. Special problems pertaining to the use of organizational charts, the assignment of administrative responsibility, the engineering use of job descriptions, job evaluation, job analysis, and efficiency surveys as well as problems pertaining to the selection, training, and supervision of technical employees will be discussed.

**172. Principles of Industrial Safety. (3) II.**

Mr. Mathewson

Prerequisite: junior standing in engineering.

Delineation of the industrial accident-prevention problem. Analysis and synthesis of all major elements in safety engineering, e.g., plant layout, machine and process control devices and safeguards, applicable laws and codes, occupational health-hazards, medical controls, explosion- and fire-prevention and protection, industrial traffic, organizational and functional responsibility.

**173. Fire Protection and Control. (3) I.**

Mr. Mathewson

Prerequisite: senior standing in engineering.

Relationship between fire losses and national economy, conservation of national resources, and sociological progress. Generation of fires, rates of propagation and properties of elements involved, application of anticomcombustibles, elimination or deactivation of sources, precautionary measures, fire-extinguishing systems, building and fire codes, and ordinances.

**174. Fundamentals of Traffic Engineering. (3) I.**

Mr. Mathewson

Lecture, 2 hours; laboratory, 3 hours.

Prerequisite: junior standing in engineering.

Study of methods of street and highway traffic control and control devices, road and intersection capacities, relationship between the movement of traffic and geometric design of streets and highways, data-gathering techniques and instruments, applications of statistical techniques to traffic problems. Occasional field trips will be scheduled.

**180. Advanced Kinematics of Mechanisms. (3) II.**

Mr. Beggs

Prerequisite: courses 2 and 102B.

Analysis and synthesis of fundamental types of mechanisms, including electric, magnetic, pneumatic, and hydraulic links. Applications will be considered to such devices as instruments, servomechanisms, calculating machines, conveyors, and printing presses.

**181A. Linear System Solutions by Transform Methods. (3) I, II.**

Mr. Rogers in charge

Prerequisite: course 100A; Mathematics 110AB or 110C.

Formulation and solution of equations of behavior of lumped linear invariant electrical, rigid and fluid-mechanical, and thermal systems by the Laplace-transformation method. Not open for credit to students who have had course 182.

**181B. Mechanical, Electrical, and Electromechanical System Dynamics.**

(3) II.

Mr. Rogers in charge

Prerequisite: courses 181A, 102B.

Small oscillations of conservative and nonconservative systems; four-terminal structures; free and forced oscillations of electrodynamic systems;

oscillations of beams; approximate methods for computing frequencies and modes of oscillation; simple nonlinear systems. Not open for credit to students who have had course 181.

**181C. Analysis of Servomechanisms.** (3) I, II. Mr. Rogers in charge

Prerequisite: course 181A.

The fundamentals of servomechanisms including: the theory of dynamic stability, analysis of servomechanisms on the transient-time-response and frequency-response bases, with applications to airplane dynamics, autopilots and computers; nonlinear elements. Not open for credit to students who have had course 165.

**183A-183B. Engineering Statistics.** (3-3) Yr. Beginning fall semester.

Prerequisite: junior standing in engineering. Mr. Brown

Fundamental concepts and laws of probability. Statistical methods of decision and their operating characteristics. Illustrations and examples of engineering interest. Applications to production control, design, experimentation.

**198. Directed Group Studies for Upper Division Students.** (1-5) I, II.

Prerequisite: senior standing in engineering. Mr. Boelter in charge

Group study of selected topics. Study groups may be organized in advanced engineering subjects upon approval of instructor in charge.

**199. Special Studies or Research for Advanced Undergraduates.** (1-5) I, II.

Prerequisite: senior standing in engineering. Mr. Boelter in charge

Individual study and/or research on a problem normally chosen from a restricted departmental list. Enrollment is subject to the scholarship requirements imposed by the instructor concerned.

#### GRADUATE COURSES

Courses will be offered only if there is sufficient demand.

**208. Soil Mechanics: Structural Applications.** (3) I, II. Mr. Duke

Prerequisite: courses 103A, 107A, 108J.

Foundations of structures: theory and practice of design; stability, settlements; failures. Stability of cuts and embankments; seepage and pore pressures. Retaining walls and cofferdams. Pressure on tunnels and conduits. Highway and runway subgrade. Soil stabilization. Analysis of field studies of foundations and earth structures.

**228. Advanced Engineering Applications of Electromagnetic Theory.** (2) I.

Prerequisite: Mathematics 224AB, Mathematics 246 or Physics 231, or equivalent courses.

Maxwell's equations and their solution for homogenous media. Wave guides. Resonators. Horns. Antennas. Wave propagation over a perfect earth and in stratified atmosphere.

**229A-229B. Advanced Theory of Servomechanisms.** (3-3) Yr. Beginning fall semester. Mr. Rogers

229A, prerequisite: course 181C or equivalent. I.

Review of linear differential equations and of servocomponents. Methods of describing servo performance; analysis of block diagrams; stability criteria; polar plots; series and parallel equalizer design; internal feedback loops; effect of disturbances; autopilot design.

229B, prerequisite: course 229A. II.

Advanced methods of analysis; conformal mapping; method of root determination; root-locus methods of servo synthesis; synthesis with predetermined damping; random noise in linear systems; nonlinear systems; multiple-coupled systems; computers; variable-parameter systems; combination open-cycle and closed-cycle systems.

**277. Compressible Fluids. (3) II.**

Mr. Bolley

Fundamentals of subsonic and supersonic flow, shock waves, different theoretical methods, laboratory equipment, and procedures for supersonic investigations.

**298. Seminar in Engineering. (1-5) I, II.**

Mr. Boelter in charge

Seminars may be organized in advanced technical fields. Course may be repeated provided no duplication exists.

**299. Research in Engineering. (1-5) I, II.**

Mr. Boelter in charge

Investigation of advanced technical problems.

**INSTITUTE FOR NUMERICAL ANALYSIS**

Attention is directed to the Institute for Numerical Analysis, the activities of which are described on page 260.

**ENGLISH**

EARL LESLIE GRIGGS, Ph.D., Professor of English.

\* EDWARD NILES HOOKER, Ph.D., Professor of English.

LEON HOWARD, Ph.D., Professor of English.

ALFRED EDWIN LONGUEIL, Ph.D., Professor of English.

\* WILLIAM MATTHEWS, Ph.D., Professor of English.

FRANKLIN PRESCOTT ROLFE, Ph.D., Professor of English.

LILY BESS CAMPBELL, Ph.D., Professor of English, Emeritus.

SIGURD BERNHARD HUSTVEDT, Ph.D., Professor of English, Emeritus.

BEADFORD ALLEN BOOTH, Ph.D., Associate Professor of English.

LLEWELLYN MORGAN BUELL, Ph.D., Associate Professor of English.

HUGH GILCHRIST DICK, Ph.D., Associate Professor of English.

\* CARL SAWYER DOWNES, Ph.D., Associate Professor of English.

JOHN JENKINS ESPEY, B.Litt., M.A. (Oxon.) Associate Professor of English.

<sup>1</sup> MAJL EWING, Ph.D., Associate Professor of English (Chairman of the Department).

CLAUDE JONES, Ph.D., Associate Professor of English.

HARRISON MANLY KARR, Ph.D., Associate Professor of Speech.

WESLEY LEWIS, Ph.D., Associate Professor of Speech.

JAMES EMERSON PHILLIPS, JR., Ph.D., Associate Professor of English.

JOHN FREDERIC ROSS, Ph.D., Associate Professor of English.

JOHN HARRINGTON SMITH, Ph.D., Associate Professor of English.

HUGH THOMAS SWEDENBERG, JR., Ph.D., Associate Professor of English.

MARGARET SPRAGUE CARHART, Ph.D., Associate Professor of English, Emeritus.

HARRIET MARGARET MACKENZIE, Ph.D., Associate Professor of English, Emeritus.

MARTIN PERRY ANDERSEN, Ph.D., Assistant Professor of Speech.

ROBERT PAUL FALK, Ph.D., Assistant Professor of English.

ELISE STEARNS HAHN, Ph.D., Assistant Professor of Speech.

DONALD ERWIN HARGIS, Ph.D., Assistant Professor of Speech.

PAUL ALFRED JORGENSEN, Ph.D., Assistant Professor of English.

ROBERT STARR KINSMAN, Ph.D., Assistant Professor of English.

JOHN CLYDE LOFTIS, JR., Ph.D., Assistant Professor of English.

CHARLES WYATT LOMAS, Ph.D., Assistant Professor of Speech.

BLAKE REYNOLDS NEVIUS, Ph.D., Assistant Professor of English.

ADA BLANCOE NISBET, Ph.D., Assistant Professor of English.

CLIFFORD HOLMES PRATOR, Ph.D., Assistant Professor of English.

\* Absent on leave, 1950-1951.

<sup>1</sup> In residence first semester only, 1950-1951.

<sup>2</sup> In residence second semester only, 1950-1951.

ARNOLD JOHN STAFFORD, Ph.D., Assistant Professor of English.  
 WILLIAM WARTHIN TAYLOR, Ph.D., Assistant Professor of English.  
 DANIEL VANDRAEGEN, Ph.D., Assistant Professor of Speech.  
 ———, Assistant Professor of English.  
 DONALD ARTHUR BIRD, Ph.D., Instructor in English.  
 VINTON ADAMS DEARING, Ph.D., Instructor in English.  
 RUSSELL ALFRED FRASER, M.A., Instructor in English.  
 WALDO WOODSON PHELPS, Ph.D., Instructor in Speech.  
 RALPH RICHARDSON, Ph.D., Instructor in Speech.  
 EDWIN RAY COULSON, M.A., Lecturer in English.  
 MITCHELL MARCUS, M.A., Lecturer in English.  
 GERALD DENNIS MEYER, M.A., Lecturer in English.  
 JOHN PAUL MONCUR, M.A., Lecturer in Speech.  
 JAMES MURRAY, Ed.D., Lecturer in Speech.  
 LESLIE MARSHALL VAN DEUSEN, JR., M.A., Lecturer in English.  
 FRANK WHITTEMORE WADSWORTH, JR., M.A., Lecturer in English.  
 BERNARD MALCOLM GOLDMAN, M.A., Associate in English.

◇  
 KENNETH MACGOWAN, B.S., Professor of Theater Arts.  
 ROBERT M. STEVENSON, Ph.D., Assistant Professor of Music.

Students must have passed Subject A (either examination or course) before taking any course in English. Regulations concerning Subject A will be found on page 35.

*Letters and Science List.*—All undergraduate courses in English and all undergraduate courses in speech except 142A and 142B 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 46A-46B or the equivalent, with an average grade of C or higher; History 5A-5B or the equivalent.

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

*The Major.*—Plan I. For the general undergraduate: the program must include (1) English 117J; (2) one of the Type courses (6 units); (3) four of the Age courses, including English 156 (not more than two courses in adjacent ages); (4) at least 3 units of American Literature; (5) English 197, to be taken in the second semester of the senior year.

Plan II. For the undergraduate expecting to proceed to the M.A. or Ph.D. degree in English: the student must present, in the first half of the junior year, a program to be examined and approved by the departmental adviser to upper division students. (1) The program must comprise, at a minimum, 24 units of upper division courses in English, including (a) English 117J, to be taken in the junior year; (b) one of the Type courses (6 units); (c) two of the Age courses (not in adjacent ages); (d) at least 3 units of American Literature; (e) English 151L, to be taken in the senior year. (2) At the end of the senior year the student must complete the Comprehensive Final Examination. If he fails this examination he may still receive the bachelor's degree, but in order to be approved for graduate study in English, he must pass it with a grade of A or B.

#### A. Requirements for the General Secondary Credential.

1. For the field major in English and speech.

- (a) The completion of the following: (1) English 1A-1B, 46A-46B; (2) Speech 1A, 1B or 3A, 3B; (3) History 5A-5B; (4) English 106 or 31 (preferably 106L); 117J; 130A-130B or 190A, 190B; 115 or 153; (5) 6 units from English 114A-114B, 122A-122B, 125C-125D,

125G-125H; (6) 6 units from English 156, 157, 158, 167, 177, 187; (7) 6 units from Speech 106, 107, 110A, 111A, 111B, 122, 140, Theater Arts 103; (8) English 370, to be taken in the first semester of graduate residence; (9) 6 units from English 221, 222, 223A, 223B, 224, 225, 226, or their equivalent.

(b) The passing of the Senior Comprehensive Final Examination with a grade of C or better.

2. For the field minor in English and speech, the completion of the following courses: (1) English 1A-1B, 46A-46B; (2) 3 units from Speech 1A, 3A; (3) English 106 or 31; (4) 6 units from English 114A-114B, 115, 117J, 125C-125D, 130A-130B, 153, 190A, 190B.

#### B. Requirements for Admission to Graduate Courses.

The requirement is ordinarily the undergraduate major in English or its equivalent. No graduate student may take a graduate course in English who has 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.

#### C. Requirements for the Master's Degree.

1. For the general requirements, see page 120. The department follows Plan II, as described on page 122. The Master's Comprehensive Examination consists of four written examinations, each one and one-half hours long. These examinations are given toward the end of the semester.

2. Departmental requirements: (a) Students are required to take the reading test in French or German at the beginning of the first semester of residence. (b) They must complete at least 24 units including the following courses in English: course 200; one course chosen from 110, 111, 211, 212, 213; four courses chosen from 221, 222, 223A, 223B, 224, 225, 226; one graduate seminar (250-270).

#### D. Requirements for the Doctor's Degree.

1. For the general requirements, see page 123.

2. Departmental requirements: (a) On entering the department the candidate will present to the chairman a written statement of his preparation in French, German, and Latin. He must take the reading test in one of the two required modern foreign languages (French and German) at the beginning of the first semester of residence, the test in the other not later than the beginning of the third semester of residence. For work in some fields a reading knowledge of Latin is necessary. (b) In the first year (normally two semesters) of graduate study, the candidate will complete the requirements for the master's degree. At the end of that year, however, he will take, not the Master's Comprehensive Examination, but Part I of the Qualifying Examinations for the doctor's degree, passing which will entitle him to the master's degree. Part I of the Qualifying Examinations will consist of four written examinations, each one and one-half hours long, and a two-hour oral examination. If the candidate does well in these examinations, he will be encouraged to proceed further with graduate study. (c) Normally the candidate will devote a second year to the completion of the language requirement (211, 212, 213) and the taking of graduate seminars in English or suitable courses in other departments, after which he will take Part II of the Qualifying Examinations and be advanced to candidacy. Of course this period may be curtailed or extended according to circumstances. Part II of the Qualifying Examinations will consist of three three-hour written examinations and a two-hour oral examination in the candidate's special field and in two other fields to be chosen in consultation with his adviser. No special examination in linguistics is required, but questions on the language will appear at appropriate points in the examinations on literature. (d) A final year (which under the University rules may not be



curtailed) will normally be devoted by the candidate chiefly to the preparation of his dissertation, after which he will take his final oral examination. During this year the candidate may satisfy the residence requirement either by taking additional seminars or by registering in English 290.

If a student has allowed seven years or more to elapse since taking a course or examination to meet the requirements for a graduate degree, it will be necessary to have such a course or examination validated by the department before he can proceed toward completion of the requirements.

#### LOWER DIVISION COURSES

##### *Freshman Courses*

- 1A-1B. First-Year Reading and Composition.** (3-3) Beginning either semester. Mr. Jones in charge  
Open to all students who have received a passing grade in Subject A.
- \*4A. World Literature: Dramatic Comedy.** (1) I. \_\_\_\_\_
- \*4B. World Literature: Dramatic Tragedy.** (1) II. \_\_\_\_\_
- 4C. World Literature: the Novel.** (1) I. Mr. Kinsman in charge
- 4D. World Literature: the Novel.** (1) II. Mr. Kinsman in charge
- \*4E. World Literature: Lyric Poetry.** (1) I. \_\_\_\_\_
- \*4F. World Literature: Narrative Poetry.** (1) II. \_\_\_\_\_
- 33A. English for Foreign Students.** (4) I, II. Mr. Goldman  
For foreign students only. Speaking, reading, and writing of English; intensified work in grammar; composition, conversation, vocabulary building, speech laboratory. Required for those who fail to pass the examination in English and who are not qualified to take course 33B.
- 33B. English for Foreign Students.** (4) I, II. Mr. Prator  
Continuation of course 33A. Required of those who complete course 33A.

##### *Sophomore Courses*

Course 1A-1B is prerequisite to all sophomore courses in English.

- 31. Intermediate Composition.** (2) I, II. Mr. Buell in charge
- 46A-46B. Survey of English Literature, 1500 to 1900.** (3-3) Yr. Beginning either semester. Mr. Espey in charge

#### UPPER DIVISION COURSES

Courses 1A-1B and 46A-46B are prerequisite to all upper division courses in English, except 110, 111, 115, 116, 117J, 125C-125D, 130A-130B, 133, 135, 136, 190A, 190B, for which only 1A is prerequisite, and 150, for which 1A and 1B are prerequisite. Theater Arts students may substitute Humanities 1A-1B for course 46A-46B as a prerequisite for 113A, 113B, 114A-114B, 114C. Students who have not passed English 31 will be admitted to 106C and 106F only upon a test given by the instructor. Upper division standing is required for all upper division courses in English.

A. *The Junior Course:* Course 117J. Required of juniors whose major or minor subject is English.

B. *The Type Courses:* Courses 114A-114B, 122A-122B, 125C-125D, and 125G-125H. It is understood that major students in English will take one of these year courses.

C. *The Age Courses:* Courses 156, 157, 158, 167, 177, and 187. It is understood that major students in English will take two to four of these courses.

\* Not to be given, 1950-1951.

D. *Courses in American Literature*: Courses 130A-130B, 131, 133, 135, and 136. It is understood that major students in English will take at least 3 units of these courses.

E. *The Senior Courses*: Course 151L. Required of seniors whose major subject is English under Plan II. Course 197. Required of seniors whose major subject is English under Plan I.

- 106A. **The Short Story.** (2) I, II. Mr. Espey, ———  
Prerequisite: consent of the instructor.
- 106B. **Verse Writing.** (3) II. Mr. Jones  
Prerequisite: course 153 or consent of the instructor.
- 106C. **Critical Writing.** (2) I, II. Mr. Rolfe
- 106D-106E. **Fundamentals of Dramatic Writing.** (3-3) Yr. Mr. Macgowan  
For admission to this course, candidates should submit to the instructor an original one-act play or one act of a full-length play by August 1, 1950.
- 106F. **Exposition.** (2) I, II. Mr. Espey, Mr. Taylor
- \*106G. **Special Projects in Writing.** (3) II. ———  
Prerequisite: an A grade in another 106 course, submission of evidence of a satisfactory project, and consent of the instructor.
- 106L. **Advanced Composition for Teachers.** (2) I, II. Mr. Taylor  
Designed primarily for candidates for the general secondary teaching credential.
110. **Introduction to the English Language.** (3) I. Mr. Bird, Mr. Matthews
111. **The English Language in America.** (3) II. Mr. Bird, Mr. Matthews
- 113A. **Ancient Drama.** (3) I. Mr. Smith  
The major Greek and Latin dramas in translation, with a history of the theater and dramatic conventions.
- 113B. **Chief European Dramatists before 1850.** (2) II. Mr. Smith
- 114A-114B. **English Drama from the Beginning to the Present.** (3-3) Yr. Mr. Dick, Mr. Smith
- 114C. **Contemporary Drama.** (2) II. Mr. Smith
115. **Primitive Literature.** (3) II. Mr. Jones  
The study of primitive types, such as the fable, folk tale, myth, legend, ballad, and hero tales, as to characteristics and theories of origin and diffusion. The comparative study of typical stories, and the work of collectors and adapters.
116. **The English Bible as Literature.** (2) II. Mr. Stevenson
- 117J. **Shakespeare.** (3) I, II. The Staff  
A survey of from twelve to fifteen plays, with special emphasis on one chronicle, one comedy, and one tragedy.
- 122A-122B. **English Poetry from the Beginning to the Present.** (3-3) Yr. Mr. Longueil
- 125C-125D. **The English Novel from the Beginning to the Present.** (3-3) Yr. Mr. Jones, Mr. Booth
- 125G-125H. **English Prose from the Beginning to the Present.** (3-3) Yr. Mr. Ewing

\* Not to be given, 1950-1951.

**130A-130B. American Literature. (2-2) Yr. Beginning either semester.**

Mr. Downes, Mr. Falk, Mr. Stafford

A survey of American literature from the beginning to 1860, and from 1860 to the present day; a study of the chief American writers, with special reference to the development of literary movements and types.

**131. American Literature: the Flourishing of New England. (3) I.**

Prerequisite: course 130A or consent of the instructor. Mr. Booth

The study of such figures as Emerson, Hawthorne, Thoreau, Prescott, Longfellow, Lowell, and Holmes, with particular emphasis on the interaction between American and European literature and thought in the period.

**133. American Life in American Letters. (3) I. Mr. Falk, Mr. Stafford**

The main currents of thought in American life as reflected in literature.

**135. American Fiction. (3) II.**

Mr. Booth, Mr. Nevius

The history of the American novel and short story from the beginning to the present day.

**136. American Humor and Satire. (3) II.**

Mr. Ross

**150. Medieval Great Books. (3) II.**

Mr. Matthews, Mr. Taylor

The study of some fifteen representative books of the period in translation, chosen for their historical importance and aesthetic value.

**151L. Chaucer. (3) I, II.**

Mr. Longueil, Mr. Matthews, Mr. Taylor

**153. Introduction to the Study of Poetry. (3) I, II. Mr. Jones, Miss Nisbet****155. Literary Criticism. (3) II.**

Mr. Griggs

**156. The Age of Elizabeth. (3) I, II.**

Mr. Dick, Mr. Phillips

**157. The Age of Milton. (3) II.**

Mr. Swedenberg

**158. The Age of Dryden. (3) I.**

Mr. Hooker, Mr. Swedenberg

**167. The Age of Pope and Johnson. (3) I, II. Mr. Hooker, Mr. Swedenberg****177. The Romantic Age: 1784-1832. (3) I, II. Mr. Longueil, Mr. Griggs****187. The Victorian Age: 1832-1892. (3) I, II. Mr. Rolfe, Mr. Griggs****190A. Literature in English from 1900. (2) I. Mr. Ewing, Mr. Nevius**  
Criticism; the novel.**190B. Literature in English from 1900. (2) II. Mr. Ewing, Mr. Espey**  
Poetry.**197. Senior Survey. (3) I, II.**

Mr. Phillips, Mr. Dick

An integrated survey of English literature designed for the general student who is majoring in English but who has no professional interest in the subject and is not therefore required to take the comprehensive examination. No student may receive unit credit for both this course and the comprehensive examination.

**\*199. Special Studies in English. (3) I, II.**

Limited to seniors; may be taken only once for credit.

**COMPREHENSIVE FINAL EXAMINATION**

The Comprehensive Final Examination is taken at the end of the senior year by majors working under Plan II and by English and speech majors. It will consist of one two-hour paper and one three-hour paper. The examination will cover English literature from the beginning to the present. The papers will be set by the examining committee of the department. The student's preparation for this examination will presumably extend throughout the entire college

\* Not to be given, 1950-1951.

course. A portion of the examination will be based on the required section of the departmental reading list.

This examination is not counted as part of the 24-unit major but is counted on the 42-unit upper division requirement and on the 120 units required for graduation. It does not affect study-list limits, and should at no time be entered by the student upon his study list. However, the student is advised to limit his program to 13 units during his last semester. Upon his passing the examination the grade assigned by the department will be recorded. Given each semester; credit, 3 units.

Mr. Longueil in charge

GRADUATE COURSES

200. *Bibliography.* (3) I, II. Mr. Dick, Mr. Phillips
211. *Old English.* (3) I. Mr. Bird, Mr. Matthews
212. *Middle English.* (3) II. Mr. Matthews, Mr. Taylor
- \*213. *The Development of Modern English.* (3) I. Mr. Matthews
221. *Medievalism.* (3) II. Mr. Matthews
222. *The Renaissance.* (3) I, II. Mr. Dick
- 223A. *Jacobean and Caroline Literature.* (3) II. Mr. Hooker
- 223B. *Neo-Classicism.* (3) I. Mr. Swedenberg
224. *Romanticism.* (3) I. Mr. Griggs
225. *Victorianism.* (3) II. Mr. Griggs, Mr. Rolfe
226. *American Literature.* (3) I, II. Mr. Falk, Mr. Howard, Mr. Ross
- \*251A-251B. *The Ballad Seminar.* (3-3) Yr. \_\_\_\_\_
- 252A-252B. *History of Literary Criticism Seminar.* (3-3) Yr. Mr. Griggs
- 260A, B, C. *Studies in Old and Middle English Seminar.*
- 260A. *Old English Poetry.* (3) II. Mr. Matthews
- \*260B. *Early English Metrical Romances.* (3) I. \_\_\_\_\_
- \*260C. *Chaucer.* (3) II. Mr. Matthews
- \*261. *Studies in Fifteenth-Century and Early Tudor Literature Seminar.*  
(3) \_\_\_\_\_
- 262A, B, C, D. *Studies in Elizabethan Literature Seminar.*
- \*262A. *Shakespeare.* (3) I. Mr. Phillips
- \*262B. *Shakespeare.* (3) II. Mr. Phillips, Mr. Smith
- 262C. *Spenser.* (3) II. Mr. Phillips, Mr. Smith
- \*262D. *Studies in Elizabethan Drama.* (3) I. Mr. Smith
- 263A, B, C, D, E, F. *Studies in Seventeenth-Century Literature Seminar.*
- \*263A. *Trends in Seventeenth-Century Prose.* (3) I. Mr. Hooker
- \*263B. *Trends in Seventeenth-Century Poetry.* (3) II. Mr. Hooker
- 263C. *Studies in Drama, 1660-1790.* (3) I. Mr. Smith
- \*263D. *The Theory of Fiction, 1600-1700.* (3) I. Mr. Rolfe
- 263E. *Milton.* (3) I. Mr. Swedenberg
- \*263F. *Dryden and His Contemporaries.* (3) I. Mr. Hooker
- 264A, B. *Studies in Eighteenth-Century Literature Seminar.*
- \*264A. *Pope and His Contemporaries.* (3) II. Mr. Hooker
- 264B. *Studies in the English Novel.* (3) I. Mr. Jones
- 265A, B, C, D. *Studies in Nineteenth-Century Literature Seminar.*
- \*265A. *Coleridge and His Contemporaries.* (3) II. Mr. Griggs
- 265B. *Studies in Victorian Prose.* (3) I. Mr. Griggs
- 265C. *Studies in Victorian Poetry.* (3) II. Mr. Griggs
- 265D. *Studies in the English Novel.* (3) II. Mr. Booth

**270A, B, C, D, E, F, G. Studies in American Literature. Seminar.**

- \*270A. Colonial America: Letters and Ideas. (3) I. Mr. Howard  
 \*270B. Literature of the Atlantic Seaboard. (3) II. Mr. Howard  
 \*270C. Literature of the Westward Expansion. (3) II. Mr. Howard  
 \*270D. Literature of Conflict, 1850-1890. (3) I. Mr. Howard  
 \*270E. Modern American Literature (since 1900). (3) I. Mr. Howard  
 270F. Backgrounds of American Literature Through the Civil War.  
 (3) I. Mr. Falk, Mr. Howard  
 270G. Backgrounds of American Literature Since the Civil War. (3) II.  
 Mr. Falk, Mr. Howard  
 The Staff

**290. Special Problems. (1-6) I, II.****PROFESSIONAL COURSE IN METHOD****370. The Teaching of English. (3) I, II.**

Mr. Coulson

May be counted as part of the 18 units in education required for the secondary credential. Required of candidates for the general secondary credential with the field major in English and speech.

**SPEECH**

Students must have passed Subject A (either examination or course) before taking any course in speech. Regulations concerning Subject A will be found on page 35.

*Preparation for the Major.*—Speech 1A, 1B, 3A, 3B with an average grade of C or higher; English 1A-1B, 46A-46B; History 7A-7B or 8A-8B; Psychology 1A, 1B.

*The Major.*—For the general undergraduate: the program must include (a) Speech 106, 107, 110A, 111A; 135 or 137; (b) 9 units of electives in upper division courses in speech; (c) 6 units of electives in upper division courses in each of two of the departments of Anthropology-Sociology, Economics, English, Linguistics and General Philology (170 and 171), History, Philosophy, Political Science, and Psychology, the courses to be approved by the departmental adviser.

**Requirements for the General Secondary Credential.****1. For the field major in speech and English:**

- a. The completion of the following: (1) Speech 1A-1B, 3A, 3B; (2) English 1A-1B, 46A-46B, History 7A-7B or 8A-8B, English 31 or 106L; English 117J; (3) 4 units from English 130A-130B, 190A, 190B; (4) Speech 140; (5) 9 units selected, in consultation with the departmental adviser, from Speech 106, 107, 110A, 111A, 122, 135 (or 137), 142, Linguistics and General Philology 171; (6) Theater Arts 103; (7) 6 units from Speech 211, 260, 270.

**b. Speech 370.**

- c. The attainment of a satisfactory level of skill in oral reading and public speaking.

**2. For the field minor in speech and English, the completion of the following courses: (1) Speech 1A-1B, 3A, 3B; (2) English 1A-1B; (3) 6 units in speech from one of the following sequences: (a) 106, 107, 110A, (b) 111A, 111B, 122, (c) 140, 141, 142.****3. For the field major and the field minor in English and speech, see pages 205, 206.****LOWER DIVISION COURSES****1A. Elements of Public Speaking. (3) I, II.**

The Staff

The principles and practice of effective speech composition and delivery.

**1B. Elements of Public Speaking. (3) I, II.**

The Staff

Prerequisite: course 1A.

Application of the principles of effective speech composition and delivery to group discussion and public address.

\* Not to be given, 1950-1951.

- 3A. Basic Voice Training.** (3) I, II. The Staff  
Voice physiology, phonetics, and voice drills.
- 3B. Elementary Interpretation.** (3) I, II. The Staff  
Prerequisite: course 3A.  
Development of the student's ability to communicate prose and poetry orally with understanding and appreciation.

## UPPER DIVISION COURSES

- 103. Phonetics.** (3) II. Mr. Hargis  
Prerequisite: Speech 3A or English 33B.  
A study of the physical production and acoustic characteristics of the sounds of American English; modifications of the sounds in connected speech; extensive practice in phonetic recording of general American speech and its deviate forms.
- 106. Principles and Types of Public Discussion.** (3) I. Mr. Andersen  
Prerequisite: course 1B or consent of the instructor.  
Analysis of the purposes, principles, and types of public discussion. Practice in organizing group discussion.
- 107. Principles of Argumentation.** (3) II. Mr. Lewis  
Prerequisite: course 1B or consent of the instructor.  
Analysis of propositions, tests of evidence, briefing. Study of hindrances to clear thinking, of ambiguity of terms, or prejudice.
- 110A. Problems of Audience Analysis.** (3) I. Mr. Lewis, Mr. Lomas  
Prerequisite: course 1B or the equivalent.  
Theory of audience analysis and adaptation. Preparation and delivery of the occasional speech.
- 110B. Analysis of Style in Speech Composition.** (3) II. Mr. Lewis, Mr. Lomas  
Prerequisite: course 1B or the equivalent (course 110A is not prerequisite).  
Preparation and delivery of special forms of public address.
- 111A. Theories and Techniques of Interpretation.** (3) I. Mr. Hargis  
Prerequisite: courses 3A-3B or the equivalent.  
A study of the schools, principles, and techniques of oral interpretation.
- 111B. Oral Interpretation of Literature.** (3) II. Mr. Vandraegen  
Prerequisite: course 3B or the equivalent, and consent of the instructor.  
The understanding and appreciation of literature through training in the oral communication of various literary forms.
- 122. Diction and Voice.** (3) I, II. Mr. Karr  
Prerequisite: courses 1A and 3A, or the equivalent.  
Advanced studies in breath control, tone production, voice projection, articulation, and pronunciation.
- 135. History of British Public Address.** (3) I. Mr. Lomas  
Critical study of speeches by leading British orators from the eighteenth century to the present time. Relationship of speakers to issues and social movements of their day.
- 137. History of American Public Address.** (3) II. Mr. Lomas  
Critical study of speeches by leading American orators from the colonial period to the present time. Relationship of speakers to issues and social movements of their day.
- 140. Principles of Speech Correction.** (3) I, II. Mrs. Hahn  
Problems and methods of correcting speech defects.

- 141. Speech Correction for the Deaf.** (2) II. Mr. Lewis  
Experiments with techniques calculated to promote in the deaf intelligible and natural vocal control.
- 142A. Clinical Methods of Speech Correction.** (2) I, II. Mrs. Hahn  
Prerequisite: course 140.  
Observation and practice of clinical methods of speech correction.
- 142B. Clinical Methods of Speech Correction.** (2) I, II. Mrs. Hahn  
Prerequisite: course 140 (course 142A is not prerequisite).  
Observation and practice of clinical methods of speech correction.
- 170. Introduction to Oratory.** (3) I. Mr. Lewis
- 190A-190B. Forensics.** (1-1) Yr. Mr. Lewis, Mr. Murray  
Prerequisite: consent of the instructor.

## GRADUATE COURSES

- 211. Backgrounds and Theories of Oral Interpretation.** (3) I.  
Mr. Hargis, Mr. Vandraegen  
Analysis of traditional theories of oral interpretation from Quintilian to the present time; their relation to contemporary theories; special problems in interpretation.
- 260. Problems in Analysis and Criticism of Speeches. Seminar.** (3) II. Mr. Lomas
- 270. Problems in Speech Correction. Seminar.** (3) II. Mrs. Hahn

## PROFESSIONAL COURSE IN METHOD

- 370. The Teaching of Speech.** (3) I, II. Mr. Phelps  
May be counted as part of the 18 units in education required for the secondary credential. Required of candidates for the general secondary credential with the field major in speech and English.

## ENTOMOLOGY

A Division of the Department of Agriculture

WALTER EBELING, Ph.D., Associate Professor of Entomology.  
ROLAND N. JEFFERSON, Ph.D., Assistant Professor of Entomology.  
JOHN N. BELKIN, Ph.D., Assistant Professor of Entomology.  
LELAND R. BROWN, Ph.D., Instructor in Entomology.

*The Major.*—The major is offered only on the Berkeley campus. See the PROSPECTUS OF THE COLLEGE OF AGRICULTURE and consult the appropriate adviser for students in agriculture.

## UPPER DIVISION COURSES

- 100. General Entomology.** (4) II. Mr. Belkin  
Lectures, two hours; laboratory, six hours.  
The classification, life history, structure, and physiology of insects.
- 126. Medical Entomology.** (4) II. Mr. Belkin  
Lectures, two hours; laboratory, six hours.  
The role of insects and other arthropods in the transmission and causation of diseases of humans and other warm-blooded vertebrates; their structure, classification, and life history. Principles of vector control.

**134. Insects Affecting Subtropical Fruit Plants. (4) II.** Mr. Ebeling  
Lectures, two hours; laboratory, six hours. Weekly field trips during the last half of the course.

Biology, economic importance, and control of insects affecting citrus and other subtropical fruit plants. Insecticides; spraying, dusting, and fumigating methods and equipment.

**144. Insects Affecting Ornamental Plants and Flower Crops. (4) II.**

Mr. Jefferson, Mr. Brown

Lectures, three hours; laboratory, three hours. Offered in alternate years.

Biology, economic importance, and control of insects affecting field flower crops, greenhouse and nursery plants, and ornamental trees and shrubs. Insecticides; spraying, dusting, and fumigating methods and equipment.

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

The Staff

Prerequisite: senior standing and consent of the instructor.

## FLORICULTURE AND ORNAMENTAL HORTICULTURE

A Division of the Department of Agriculture

VERNON T. STOUTEMYER, Ph.D., Professor of Ornamental Horticulture and Assistant Director of the Botanical Garden (Chairman of the Division).

B. LENNART JOHNSON, Ph.D., Associate Professor of Ornamental Horticulture.

\_\_\_\_\_, Instructor in Ornamental Horticulture.

DUANE O. CRUMMETT, Ph.D., Lecturer in Ornamental Horticulture.

*Preparation for the Major.*—Subtropical Horticulture 110 or the equivalent, and the requirements in the plant science curriculum (see pages 90-92 or the PROSPECTUS OF THE COLLEGE OF AGRICULTURE).

*The Major.*—Twelve units of upper division courses, including Floriculture and Ornamental Horticulture 131A-131B and 136.

### UPPER DIVISION COURSES

**131A-131B. Taxonomic Classification and Ecology of Ornamental Plants. (3-3) Yr.** Mr. Stoutemyer

Lectures, two hours; laboratory, three hours; several field trips. Prerequisite: Botany 1 or equivalent.

The botanical classification, relationships, and identification of the more important ornamental plants in southern California with special emphasis on their environmental requirements and adaptations.

**136. General Floriculture. (4) II.** Mr. Crummett

Lectures, two hours; laboratory, six hours; several field trips. Prerequisite: Subtropical Horticulture 110, or the equivalent.

Principles and practices of general floriculture, with special reference to the more important flower crops grown in California.

**146. Plant Breeding. (3) II.** Mr. Johnson

Lectures, two hours; laboratory, three hours. Prerequisite: Botany 140 or the equivalent.

Applications of genetics and cytogenetics to the breeding of horticultural plants.

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

Prerequisite: senior standing and consent of the instructor. The Staff

### GRADUATE COURSES

**260A-260B. Seminar in Floriculture. (2-2) Yr.** The Staff

**266A-266B. Research in Ornamental Horticulture. (2-6; 2-6) Yr.** The Staff



## FOLKLORE

WAYLAND D. HAND, Ph.D., Associate Professor of German.

*Letters and Science List.*—Course 145 is included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

## UPPER DIVISION COURSE

145. Introduction to Folklore. (3) I. Mr. Hand  
Prerequisite: 6 units of upper division work in anthropology, English, French, German, Italian, or Spanish. A reading knowledge of a foreign language is desirable, but not prerequisite to the course.  
The various fields of folklore, their literature, and problems.

## GRADUATE COURSE

245. The Folk Tale. (2) II. Mr. Hand  
Prerequisite: course 145 or its equivalent.

## RELATED COURSES IN OTHER DEPARTMENTS

- Anthropology 127. Primitive Art. (3) I. Mr. Brainerd  
Anthropology 130. Literature of Prehistoric Peoples. (3) II. Mr. Hoijer  
English 115. Primitive Literature. (3) II. Mr. Jones  
German 147. German Folk Song. (2) II. Mr. Arlt  
Music 136. Folk Music. (2) II. Mr. Petran  
Physical Education 155. Folk Festivals. (2) I. Mrs. Pasternak  
Spanish 108. The Folk Song in Spain and Spanish America. (1) I. Mr. Corbató, Mr. Crow

## FRENCH

- \*FRANCIS J. CROWLEY, Ph.D., Professor of French.  
ROBERT V. MERRILL, Ph.D., Professor of French (Chairman of the Department).  
WILLIAM A. NITZE, Ph.D., L.H.D., Professor of French, Emeritus.  
MYRON IRVING BARKER, Ph.D., Associate Professor of French.  
ALEXANDER GREEN FITE, Ph.D., Associate Professor of French.  
CLINTON C. HUMISTON, Ph.D., Associate Professor of French.  
L. GARDNER MILLER, Docteur de l'Université de Strasbourg, Associate Professor of French.  
MARIUS IGNACE BIENCOURT, Docteur de l'Université de Paris, Assistant Professor of French.  
ORESTE F. PUCCIANI, Ph.D., Assistant Professor of French.  
LELAND J. THEILEMANN, Ph.D., Assistant Professor of French.  
HARRY F. WILLIAMS, Ph.D., Assistant Professor of French.  
WALTER STAAKS, Ph.D., Instructor in French.  
KERNAN B. WHITWORTH, JR., M.A., Lecturer in French.  
PAUL BONNET, Lic. ès-Lettres, Associate in French.  
MADELEINE LETESSIER, A.B., Associate in French.

*Letters and Science List.*—All undergraduate courses in French are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—French 1, 2, 3, 4, 42A-42B, or their equivalents. Prospective candidates for the M.A. degree or for a teaching credential

\* Absent on leave, 1950-1951.

must have completed Latin 2 or its equivalent before receiving the A.B. degree. Courses in European history, literature, and philosophy, and in an additional foreign language, are strongly recommended.

*The Major.*—Required: 24 units of upper division French, including courses 101A-101B, 109A-109B, 112A-112B (or 113A-113B), and at least one other year course in literature (except 112A-112B and 113A-113B).

Any of the remaining upper division courses except 109M-109N may be applied on the major. With the permission of the department 4 units of the 24 may be satisfied by appropriate upper division courses in English, German, Greek, Latin, Spanish, Italian, or philosophy.

Students with majors in French will also be required to take a comprehensive examination covering history, geography, literature, and other general information concerning France. Two units credit toward the major will be given for satisfactory record in this examination, which will be given on the second Thursday in January and on the third Thursday in May.

Students intending majors in French must consult a departmental counselor before registering for French courses in the upper division.

#### 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.

*Note on French 1R, 2R, 3R, 4R.*—These courses form a sequence intended to develop ability to read French at a level well above that expected in French 1, 2, 3, 4. Open only to entering freshmen with no experience in French, who expect to take the whole sequence. Not accepted as preparation for the major or minor in French. No transfers possible between the sequence 1R, 2R, 3R, 4R and the sequence 1, 2, 3, 4. Credit for 1R, 2R, 3R, 4R satisfies the foreign language requirement in the College of Letters and Science.

- |  |                          |
|--|--------------------------|
| 1. Elementary French. (4) I, II.<br>Sections meet five hours weekly.   | Miss Letessier in charge |
| 1G. Reading Course for Graduate Students. (No credit) I, II.   | Mr. Miller in charge     |
| 1R. French for Reading. (4) I.<br>Sections meet five times weekly. See <i>Note</i> above.  | Mr. Williams in charge   |
| 2. Elementary French. (4) I, II.<br>Sections meet five hours weekly.<br>Prerequisite: course 1 or two years of high school French.     | Miss Letessier in charge |
| 2R. French for Reading. (4) II.<br>Sections meet five times weekly. See <i>Note</i> above.   | Mr. Williams in charge   |
| 3. Intermediate French. (4) I, II.<br>Sections meet five hours weekly.<br>Prerequisite: course 2 or three years of high school French. | Mr. Bonnet in charge     |
| 3R. French for Reading. (4) I.<br>Sections meet five times weekly. See <i>Note</i> above.  | Mr. Williams in charge   |
| 4. Intermediate French. (4) I, II.<br>Sections meet four hours weekly.<br>Prerequisite: course 3 or four years of high school French.  | Mr. Bonnet in charge     |
| 4R. French for Reading. (4) II.<br>Sections meet five times weekly. See <i>Note</i> above.   | Mr. Williams in charge   |

**8A-8B-8C-8D. French Conversation. (1-1) Beginning each semester.**

Mr. Biencourt in charge  
The class meets two hours weekly. Open to students who have completed course 2 or its equivalent with grade A or B.

**\*25. Advanced French. (5) II.**

Prerequisite: course 4.

Miss Letessier

**25A-25B. Advanced French. (3-3) Yr.**

Prerequisite: course 4.

Mr. Miller

**42A-42B. French Civilization. (2-2) Yr.**

Mr. Pucciani  
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.

**UPPER DIVISION COURSES**

The prerequisite to all upper division courses except 109M and 109N is 16 units in the lower division, including course 4 with a grade A or B, or 25A-25B (or 25).

Courses 42A-42B, 101A-101B, 109A and 109B are ordinarily prerequisite to other upper division courses; but a student whose major is not French may be admitted to any upper division course by permission of the instructor.

All upper division courses, with the exception of 109M and 109N, are conducted mainly in French.

**101A-101B. Composition, Oral and Written. (3-3) Yr. Beginning either semester.**

Mr. Biencourt in charge

**107A-\*107B. French Phonetics. (2-2) Yr.**

Prerequisite: consent of the instructor.

Mr. Pucciani

French pronunciation, diction, intonation in theory and practice; phonetic transcription, phonetic evolution of the modern language; remedial exercises; recordings.

**109A. Survey of French Literature and Culture. (3) I.**

Mr. Miller

Limited to major students in French. Not open to students who have taken or are taking courses 109M, 109N.

The Middle Ages, the Renaissance, and the seventeenth century.

**109B. Survey of French Literature and Culture. (3) II.**

Mr. Miller

Prerequisite: course 109A.

The eighteenth, nineteenth, and twentieth centuries.

**109M. A Survey of French Literature and Culture. (3) I.**

Mr. Humiston

Given in English; does not count on the major in French. Not open to students who have taken or are taking course 109A-109B.

The Middle Ages, the Renaissance, and the seventeenth century.

**109N. A Survey of French Literature and Culture. (3) II.**

Mr. Humiston

Prerequisite: course 109M.

The eighteenth, nineteenth, and twentieth centuries.

**\*112A-112B. The Nineteenth Century. (2-2) Yr.**

Mr. Barker

Lyric poetry, the short story, literary criticism, social movements, and philosophy in the nineteenth century.

**113A. The Nineteenth-Century French Theater. (2) I.**

Mr. Barker

**113B. The Nineteenth-Century French Novel. (2) II.**

Mr. Barker

\* Not to be given, 1950-1951.

- 114A-114B. Contemporary French Literature.** (2-2) Yr. Mr. Pucciani  
The French novel, poetry, and essay since 1885. Symbolism, surrealism, existentialism. Bourget, Barrès, Rimbaud, Mallarmé, Gide, Proust, Apollinaire, Valéry, Cocteau, Romains, Giraudoux, Mauriac, Malraux, Sartre, and others.
- 115A-115B. Modern French Drama.** (2-2) Yr. Mr. Fite  
Outstanding plays of the last half-century. *Le Théâtre d'idées en France*, Porto-Riche, Maeterlinck, Claudel, Romains, Lenormand, Raynal, Sarment, Sartre, and others.
- 118A-118B. The Sixteenth Century.** (2-2) Yr. Mr. Humiston  
Evolution of thought in the Renaissance as represented by Rabelais, Marot, Calvin, Marguerite de Navarre, the *Pléiade*, Montaigne, and others.
- 120A-120B. The Seventeenth Century.** (2-2) Yr. Mr. Merrill  
Le grand siècle de Louis XIV. Reason, volonté, passions; l'idéal classique de la nature humaine. Théâtre, roman, les moralistes.
- 121A-121B. The Eighteenth Century.** (2-2) Mr. Thielemann  
121A. Readings and discussions of the outstanding works of the literature and thought of the period (1680-1789) omitting Voltaire and Rousseau.  
121B. Limited to study of Voltaire and Rousseau.
- 130A-130B. Grammar, Composition, and Style.** (2-2) Yr. Mr. Fite  
Prerequisite: an average grade higher than C in French courses. This course is required of all candidates for the certificate of completion of the teacher-training curriculum, or for the degree of Master of Arts.  
Cours de Style. Study of phonetics, morphology, and syntax of the modern French language. Historical development of modern grammar. Original composition and oral practice.
- 199A-199B. Special Studies in French.** (2-2) Yr. The Staff  
Prerequisite: consent of the instructor. Guided readings and reports.

## GRADUATE COURSES

Prerequisite for candidates for the M.A. degree or a teaching credential: the bachelor's degree in French, including a year of college Latin, or their equivalent.

- \*204A-204B. Studies in Voltaire.** (2-2) Yr. Mr. Crowley  
A study of various phases of Voltaire—the dramatist, the poet, the social reformer, the thinker, the historian, the iconoclast, etc. Investigation of related problems.
- 206A-206B. Old French Readings.** (2-2) Yr. Mr. Merrill  
*Roland*, Marie de France, Chrétien de Troyes, lyrics.
- 219A. Romanticism.** (2) I. Mr. Barker  
Studies in the origins and development of Romanticism from 1789 to 1830.
- \*219B. Romanticism.** (2) I. Mr. Barker  
Studies in the decline of Romanticism and rise of Realism and other contemporary literary movements, 1830-1854.
- \*219C. Romanticism.** (2) II. Mr. Barker  
Studies in literary movements during the second Empire, 1854-1870.
- 219D. Romanticism.** (2) II. Mr. Barker  
Stendhal. Studies in his works and influence.
- \*256A-256B. Sixteenth-Century French Poetry.** (2-2) Yr. Mr. Merrill

\* Not to be given, 1950-1951.

257A-257B. **The Sources of French Tragedy.** (2-2) Yr. Mr. Humiston  
Greek, Latin, and Italian theoreticians of tragedy and their influence on  
the writers of tragedy in the sixteenth century.

290. **Research in French.** (1-6) I, II. The Staff  
Prerequisite: consent of the instructor.

298A-298B. **Problems of Literary Criticism.** (2-2) Yr. Mr. Fite  
Intensive study and analysis of a single author in the modern field of  
French literature.

#### PROFESSIONAL COURSE IN METHOD

370. **The Teaching of French.** (2) I. Mr. Miller  
Prerequisite: courses 101A-101B and 109A-109B, the latter being per-  
mitted concurrently. Required of all candidates for the certificate of comple-  
tion in French; should be completed before practice teaching.

#### RELATED COURSES IN ANOTHER DEPARTMENT (See page 326)

**Romance Languages and Literature 201A-201B. French Historical Gram-  
mar and Methodology of Romance Linguistics.** (2-2) Yr.

Mr. Williams

\***Romance Languages and Literature 203A-203B. Old Provençal: Reading  
of Texts.** (2-2) Yr.

Mr. Williams

## GEOGRAPHY

<sup>1</sup> CHARLES C. COLBY, Ph.D., Visiting Professor of Geography.  
ROBERT M. GLENDINNING, Ph.D., Professor of Geography (Chairman of the  
Department).

CLIFFORD M. ZIEBER, Ph.D., Professor of Geography.

GEORGE MCCUTCHEEN MCBRIDE, Ph.D., Professor of Geography, Emeritus.

RUTH EMILY BAUGH, Ph.D., Associate Professor of Geography.

HENRY J. BRUMAN, Ph.D., Associate Professor of Geography.

JOSEPH E. SPENCER, Ph.D., Associate Professor of Geography.

H. LOUIS KOSTANICK, Ph.D., Assistant Professor of Geography.

RICHARD F. LOGAN, Ph.D., Assistant Professor of Geography.

CLIFFORD H. MACFADDEN, Ph.D., Assistant Professor of Geography.

MYRTA L. MCCLELLAN, M.A., Assistant Professor of Geography, Emeritus.

BENJAMIN E. THOMAS, Ph.D., Assistant Professor of Geography.

HOWARD J. NELSON, Ph.D., Instructor in Geography.

W. GLENN CUNNINGHAM, Ph.D., Lecturer in Geography.

JOHN F. GAINES, Ph.D., Lecturer in Geography.

*Letters and Science List.*—All undergraduate courses in geography are in-  
cluded in the Letters and Science List of Courses. For regulations governing  
this list, see page 62.

Two principal objectives may be recognized for those who select geography  
as a major: (1) *professional* training in the subject and preparation for gradu-  
ate study, and (2) *semiprofessional* training for the student who wishes to  
gain a broad understanding of the world and its people. Most courses in the  
department are designed to meet the needs of both groups of students but some  
are offered primarily to meet the special requirements of students who plan to  
make professional use of geography.

*Preparation for the Major.*—Geography 1A-1B, 3, and 4 are required of all  
majors. In addition, Geology 2, or 5, or 101 is required of professional majors.  
Introductory courses in anthropology, botany, economics, geology, history,  
political science, and the modern foreign languages are recommended for all  
majors.

\* Not to be given, 1950-1951.

<sup>1</sup> In residence first semester only, 1950-1951.

*The Major.*—The minimum requirement for all majors is 30 units of upper division work in geography.

*Professional majors* are required to take as Group I: Geography 101, 105, 115, 175; and three courses from Group II: Geography 121, 122A, 122B, 123A, 123B, 124A, 124B, 125, 126, 131; plus three courses from Group III: Geography 113, 118, 142, 155, 161, 165, 171, 173, 181.

*Semiprofessional majors* are required to take as Group I: Geography 115 and 175; and normally four courses from Group II: Geography 121, 122A, 122B, 123A, 123B, 124A, 124B, 125, 126, 131; plus four courses from Group III: Geography 101, 105, 113, 118, 142, 155, 161, 165, 171, 173, 181.

A list of upper division courses in other departments recommended for geography majors may be secured from the departmental advisers. The development of some competence in an allied subject is recommended for professional majors.

#### LOWER DIVISION COURSES

##### 1A. Introduction to Geography: Physical Elements. (3) I, II.

Mr. Gaines, Mr. Logan, Mr. Thomas

Students who have had course 5A or 100 will receive only half credit for course 1A.

A study of the basic physical elements of geography (especially climate, land forms, soils, and natural vegetation), and their integrated patterns of world distribution.

##### 1B. Introduction to Geography: Cultural Elements. (3) I, II.

Mr. Bruman, Mr. Spencer

Prerequisite: course 1A or 5A. Students who have had course 100 will receive only half credit for course 1B.

A study of the basic cultural elements of geography (population distribution, general land-use patterns, and trade) and their correlation with the physical elements. Delimitation of the major geographic regions of the world.

##### 3. Introduction to Climate and Weather. (3) I, II.

Mr. Logan

A survey of the earth's atmospheric phenomena, with special reference to the causes and regional distribution of climate and weather.

##### 4. Map Reading and Interpretation. (2) I, II.

Mr. MacFadden

Lecture, one hour; laboratory, two hours.

A study of maps in the light of present-day needs, with special emphasis on the geographic interpretation of relationships between the natural and cultural phenomena in representative areas. Includes history of maps, map projections, aerial photographs, and practice in the reading of selected domestic and foreign maps.

##### 5A. Economic Geography. (3) I, II.

Mr. Cunningham, Mr. Kostanick, Mr. MacFadden, Mr. Nelson

Limited to prospective majors in economics and business administration. Not open to students who have credit for course 1A-1B. Students who have credit for course 1A or 100 will receive only 1½ units of credit for course 5A.

A study of those physical and cultural elements of the environment essential to the geographic interpretation of economic activities.

##### 5B. Economic Geography. (3) I, II.

Mr. Cunningham, Mr. Kostanick, Mr. MacFadden, Mr. Nelson

Prerequisite: course 1A, or 5A, or 100. Students who have credit for course 1B will receive only half credit for course 5B.

The principles of economic geography as developed through studies of representative occupations, commodities, and trade.

## UPPER DIVISION COURSES

- 100. Principles of Geography.** (3) I, II. Mr. Thomas  
Prerequisite: senior standing, or candidacy for a teaching credential. Not open to those who have credit for course 1A-1B or 5A-5B; may not be counted on the major in geography.  
A brief survey of the fundamental physical and cultural elements of geography and their integration on a world-wide regional basis.

*Technique Courses*

- 101. Fundamentals of Geographic Field Work.** (3) I, II. Mr. Logan  
Tuesday and Thursday afternoons in the fall semester, and Saturdays in the spring semester. Prerequisite: course 1A-1B or 5A-5B, and consent of the instructor. To be taken by major students normally in the junior year.  
Selected field studies in the Los Angeles area. The course affords training in field mapping of rural and urban types and in techniques of area analysis.
- 105. Cartography.** (3) I, II. Mr. MacFadden  
Prerequisite: course 4 and one of the following: 1A-1B, or 5A-5B, or 100, or consent of the instructor.  
Practical map drawing and graphic representation of geographic data.

*Physical Geography*

- 113. General Climatology.** (3) II. Mr. Logan  
Prerequisite: course 3 and one of the following: 1A-1B or 5A-5B, or 100, or consent of the instructor. To be taken by major students normally in the junior year.  
A study of the causes of climatic phenomena and of the larger features which characterize the climates of the earth.
- 115. Physical Bases of Geography.** (3) I, II. Mr. Glendinning  
Prerequisite: course 1A-1B or 5A-5B. One or two field trips may be required. To be taken by major students in the junior year; by others in either the junior or senior year.  
A study of the basic physical factors existing in each of the major geographic realms, with special emphasis on the interrelationships of climates, land forms, soils, drainage, and natural vegetation.
- 118. Plant Geography.** (3) I, II. Mr. Gaines  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
Character, distribution, and environmental relationships of the principal vegetation regions of the world.

*Regional Courses*

- 121. The Geography of Anglo-America.** (3) I. Mr. Colby  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
Delimitation and analysis of the principal economic geographic divisions of the United States, Canada, and Alaska.
- 122A. The Geography of Middle America.** (3) I. Mr. Bruman  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
A study of the geographic factors, physical and cultural, that are basic to an understanding of the historical development of Middle America and of the contemporary economic and social geography of Mexico and the countries of Central America and the West Indies.
- 122B. The Geography of South America.** (3) II. Mr. Bruman  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
A study of the geographic factors, physical and cultural, that are basic to an understanding of the historical development of South America and of the contemporary economic and social geography of the individual South American countries.

- 123A. The Geography of Western Europe.** (3) I. Miss Baugh  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
A study of geographic conditions and their relation to economic, social, and political problems in the Atlantic states of Europe. Emphasis on France, Germany, the British Isles, Scandinavia, and the Low Countries.
- 123B. The Geography of Eastern and Southern Europe.** (3) II. Miss Baugh  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
A study of geographic conditions and their relation to economic, social, and political problems in eastern and southern Europe. Emphasis on the European area of the U.S.S.R., the Danubian Basin, Balkan Peninsula, and Italy.
- 124A. The Geography of Southern Asia.** (3) I. Mr. Spencer  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
A regional survey of the physical and cultural features which characterize the economic, social, and political geography of southern Asia (India through the East Indies) during historic and modern times.
- 124B. The Geography of Eastern Asia.** (3) II. Mr. Spencer  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
A regional survey of the physical and cultural features which characterize the economic, social, and political geography of eastern Asia (China, Korea, and Japan).
- 125. The Geography of Australia and Oceania.** (3) II. Mr. Zierer  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
A regional synthesis of the physical and human features which characterize Australia and New Zealand, Hawaii, and the islands of the South Pacific.
- 126. The Geography of Africa.** (3) II. Mr. Thomas  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
The regions of Africa in terms of physical features, human settlement, economic production, and political patterns.
- 131. The Geography of California.** (3) I, II. Miss Baugh  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
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.
- Cultural Geography*
- 142. Industrial Geography.** (3) I, II. Mr. Cunningham  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
Analysis of the distribution of the manufacturing industries.
- 155. Urban Geography.** (3) I, II. Mr. Nelson  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
A study of the location, form, and functional evolution of cities.
- 161. The Conservation of Natural Resources.** (3) I. Mr. Colby  
Prerequisite: course 1A-1B, or 5A-5B, or 100, or the consent of the instructor.  
The general principles of conservation and their application, especially in the United States.
- 165. Geographical Aspects of Land Planning.** (3) I. Mr. Colby  
Prerequisite: course 1A-1B, or 5A-5B, and consent of the instructor.  
Normally limited to ten students.  
A study of the role of geographic discipline in land-planning activities.



- \*171. Historical Geography of Anglo-America. (3) II.** Mr. Zierer  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
The geography of the major divisions of the United States and Canada at selected times in the past.
- \*173. The Historical Geography of the Mediterranean Region. (3) I.**  
Prerequisite: course 1A-1B, or 5A-5B, or 100. Miss Baugh  
A study of the geographic factors operative in the Mediterranean lands from ancient to modern times.
- 175. The Cultural Bases of Geography. (3) I, II.** Mr. Bruman, Mr. Spencer  
Prerequisite: course 1A-1B, or 5A-5B, or 100.  
The geographic factor in the evolution of primitive cultures and of advanced civilizations.
- 181. Political Geography. (3) I, II.** Mr. Kostanick  
Prerequisite: course 1A-1B, or 5A-5B, or 100, or consent of the instructor.  
The principles of political geography as developed through regional studies of political phenomena throughout the world. Current problems in domestic and international affairs will be considered.

*Research*

- 199. Problems in Geography. (3) I, II.** The Staff  
Open to seniors and graduate students who have the necessary preparation for undertaking semi-independent study of a problem. Registration only after conference with the instructor in whose field the problem lies.

## GRADUATE COURSES‡

- 250. The Growth of Geographic Thought. Seminar. (3) I.** Mr. Zierer  
Prerequisite: consent of the instructor.  
Normally the first seminar to be taken by graduate students in geography.
- 255. Seminar in the Geography of Asia. (3) I.** Mr. Spencer  
Prerequisite: course 124A, or 124B, or the equivalent, and consent of the instructor.
- \*256. Seminar in the Geography of Anglo-America. (3) II.** Mr. Zierer  
Prerequisite: course 121 or the equivalent, and consent of the instructor.
- 257. Seminar in the Geography of Latin America. (3) II.** Mr. Bruman  
Prerequisite: course 122A, or 122B, or the equivalent, and consent of the instructor.
- 258. Seminar in California Geography. (3) II.** Miss Baugh  
Prerequisite: consent of the instructor.  
Major topic (1951): the Los Angeles lowland.
- 259. Seminar in the Geography of Australia and Oceania. (3) II.** Mr. Zierer  
Prerequisite: course 125 or the equivalent and consent of the instructor.

\* Not to be given, 1950-1951.

‡ Requirements for the master's degree in geography may be met by either Plan I or Plan II.

Plan I, required of those preparing for advanced professional positions, must include at least three courses (one from each of three of the following groups): 250; 255 or 256 or 257 or 258 or 259; 261 or 262; 271; 275 or 280 or 290; and a thesis.

Plan II, required (unless the student elects Plan I) of those preparing for positions below the junior college level, must include at least four courses (normally one from each of the following groups): 250; 255 or 256 or 257 or 258 or 259; 261 or 262; 271; 275 or 280 or 290; and a comprehensive examination.

The general requirements for the Ph.D. degree in geography are described on page 128. of this bulletin.

- \*261. **Seminar in Climatology.** (3) I. \_\_\_\_\_  
Prerequisite: course 113 or the equivalent, and consent of the instructor.
262. **Land Forms and Their Geographic Significance. Seminar.** (3) I, II. Mr. Glendinning  
Prerequisite: course 115 or the equivalent, and consent of the instructor.
271. **Seminar in Political Geography.** (3) II. Mr. Kostanick  
Prerequisite: course 181 or the equivalent, and consent of the instructor.
275. **Advanced Field Problems in Local Geography.** (3) I. Mr. Logan  
Prerequisite: course 101 or the equivalent, and consent of the instructor.
280. **Geographic Writing—Research Techniques and Reports.** (3) I. \_\_\_\_\_  
Prerequisite: consent of the instructor. Miss Baugh
290. **Research in Geography.** (3 or 6) I, II. The Staff  
Prerequisite: consent of the instructor.  
Investigation subsequent to, and growing out of, any of the above seminars.

## GEOLOGY

- M. N. BEAMLETTE, Ph.D., Professor of Geology.  
U. S. GRANT, Ph.D., Professor of Geology.  
JOSEPH MURDOCH, Ph.D., Professor of Geology.  
WILLIAM C. PUTNAM, Ph.D., Professor of Geology (Chairman of the Department).
- † GEORGE TUNELL, Ph.D., Professor of Geology.  
WILLIAM JOHN MILLER, Ph.D., Sc.D., Professor of Geology, Emeritus.  
DANIEL I. AXELROD, Ph.D., Associate Professor of Geology.  
<sup>1</sup> CORDELL DURRELL, Ph.D., Associate Professor of Geology.  
WILLIS P. POPENOE, Ph.D., Associate Professor of Geology.  
KENNETH DE PENCIEER WATSON, Ph.D., Associate Professor of Geology.  
JOHN C. CROWELL, Ph.D., Assistant Professor of Geology.  
CLEMENS A. NELSON, Ph.D., Assistant Professor of Geology.  
EDGAR C. BOWMAN, Ph.D., Instructor in Geology.  
DONALD CARLISLE, Ph.D., Instructor in Geology.  
\_\_\_\_\_, Lecturer in Geology.

- ◇
- DAVID T. GRIGGS, Professor of Geophysics.  
LOUIS B. SLICHTER, Ph.D., Professor of Geophysics and Director of the Institute of Geophysics.  
\_\_\_\_\_, Assistant Professor of Geophysics.

## GEOLOGY

*Letters and Science List.*—All undergraduate courses in geology, mineralogy, and paleontology are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Geology 3, 5, 9 or Engineering 11A-1FA; Mineralogy 6; Chemistry 1A-1B; Physics 2A-2B; Mathematics D or 1, C, and 3A; a reading knowledge of any modern foreign language.

*The Major.*—At least 26 units of upper division courses, including Geology 102A-102B, 103, 107, 116 and 118 or 199 (6 units), and Paleontology 111. Each major program must be approved by the department.

Differential and integral calculus, physical chemistry, and analytic me-

\* Not to be given, 1950-1951.

† Absent on leave, 1950-1951.

<sup>1</sup> In residence first semester only, 1950-1951.

chanics are recommended for students whose chief interest is physical geology. Advanced zoology courses are recommended for students concerned chiefly with paleontology and stratigraphy.

*Fee.*—Geology 118, \$64.

#### GEOPHYSICS

For the interdepartmental curriculum in geophysics, see page 69.

#### GEOLOGY

##### LOWER DIVISION COURSES

#### 2. General Geology—Physical. (3) I, II.

Mr. Carlisle, Mr. Grant, Mr. Durrell, Mr. Putnam

Not open to students who have taken or are taking Geology 5.

An elementary course in the principles of physical geology.

#### 3. General Geology—Historical. (3) I, II.

Mr. Nelson

Prerequisite: course 2 or 5.

The geologic history of the earth and its inhabitants.

#### 5. Physical Geology. (4) I, II.

Mr. Axelrod, Mr. Bowman

Lectures, three hours; laboratory, three hours. Field trips are taken during laboratory period. Prerequisite: elementary chemistry. Not open to students who have taken or are taking Geology 2.

*A beginning course in physical geology for science majors and engineers.*

#### \*9. Geologic Surveying. (3) I, II.

Lectures, two hours; laboratory, three hours. Prerequisite: course 5, or consent of the instructor.

Topographic and geologic surveying with emphasis on the use of the plane table.

##### UPPER DIVISION COURSES

#### 101. Principles of Geology. (3) I.

Mr. Watson

Prerequisite: junior standing. Not open to students who have taken Geology 2, 3, or 5.

A survey of the principles of physical and historical geology.

#### 102A–102B. Field Geology. (3–3) Yr.

Mr. Bowman, Mr. Carlisle, Mr. Crowell, Mr. Nelson

Lecture, one hour; field work, Saturday. Prerequisite: course 3; 9 or Engineering 11A–1FA; 103 (may be taken concurrently).

Principles and methods of geologic mapping.

#### 103. Petrology. (4) I.

Lectures, two hours; laboratory, six hours. Prerequisite: Mineralogy 6; Chemistry 1B (may be taken concurrently).

Origins and characteristics of rocks. Laboratory determination with the hand lens.

#### 107. Geology of North America. (2) II.

Mr. Nelson

Prerequisite: course 3.

A regional study of North American geology.

#### 110. Economic Geology. (3) II.

Mr. Carlisle

Prerequisite: course 103.

Origin and occurrence of the important metallic and nonmetallic mineral deposits.

#### 111. Petroleum Geology. (3) I.

Mr. Crowell

Prerequisite: courses 102A, 116.

Geology applied to the exploration and production of petroleum; techniques of surface and subsurface geology; petroleum engineering problems of concern to geologists.

\* Not to be given, 1950–1951.

116. **Structural Geology.** (3) II. Mr. Bowman  
Lectures, two hours; laboratory, three hours.  
Prerequisite: course 102A and 103. A knowledge of descriptive geometry is desirable.  
Fracture, folding, and flow of rocks. Graphic solution of structural problems.
117. **Geomorphology.** (3) I. Mr. Putnam  
Prerequisite: course 2, or 5, or 101.  
Principles of geomorphology; map studies of selected regions.
118. **Advanced Field Geology.** (6) The Staff  
Eight weeks, commencing with Summer Session. Fee, \$64; camp and commissary fee, about \$75. Prerequisite: Geology 102B, or equivalent.  
Preparation of a map and report concerning the detailed geology of a region.
199. **Special Studies in Geology.** (1 to 6) I, II.  
Open only to seniors. The Staff (Mr. Axelrod in charge)

## GRADUATE COURSES

- \*214A-214B. **Advanced Petrographic Laboratory.** (2-5; 2-5) Yr.  
Prerequisite: Mineralogy 109B. Recommended: course 251.  
Igneous rocks.
- 215A-215B. **Advanced Petrographic Laboratory.** (2-5; 2-5) Yr.  
Prerequisite: Mineralogy 109B. Mr. Durrell  
Metamorphic rocks.
- \*236. **Physical Geology of California.** (3) I. \_\_\_\_\_
- \*251. **Seminar in Chemical Petrology.** (3) II. Mr. Tunell  
Prerequisite: Mineralogy 109B.
252. **Seminar in Geomorphology.** (3) II. Mr. Putnam
255. **Seminar in Dynamical Geology.** (3) I. Mr. Grant  
Prerequisite: consent of the instructor; calculus recommended.
258. **Seminar in Stratigraphy.** (3) I. Mr. Bramlette
- 260A-260B. **Seminar in Structural Geology.** (3-3) Yr.  
Mr. Crowell, Mr. Watson  
The second semester of this course may be taken without the first.
263. **Seminar in Economic Geology.** (3) I. Mr. Carlisle
299. **Research in Geology.** (1 to 6) I, II. The Staff (Mr. Axelrod in charge)

## MINERALOGY

## LOWER DIVISION COURSE

6. **Introduction to Mineralogy.** (4) I, II. Mr. Murdoch  
Lectures, two hours; laboratory, six hours. Prerequisite: elementary chemistry.  
Determination of common rock-forming minerals; origin, relationships, and properties; study of simple crystals; use of blowpipe and chemical tests for minerals.

## UPPER DIVISION COURSES

101. **Paragenesis of Minerals.** (2) I. Mr. Murdoch  
Prerequisite: course 6, and one year of college chemistry.

\* Not to be given, 1950-1951.

- 102. Advanced Mineralogy. (3) II.** Mr. Murdoch  
Lecture, one hour; laboratory, six hours. Prerequisite: course 6 or equivalent.  
Crystallography with study of models and natural crystals; determination with fuller treatment of nonsilicate minerals.
- 109A. Optical Mineralogy and Petrography. (2) I.** Mr. Tunell  
Laboratory, six hours. Prerequisite: course 6; Geology 103 (may be taken concurrently).  
Optical properties of minerals; determination of minerals and rocks with the petrographic microscope.
- 109B. Optical Mineralogy and Petrography. (4) II.** Mr. Watson  
Lecture, one hour; laboratory, nine hours. Prerequisite: course 109A.  
A continuation of course 109A.
- 110. Petrology of Sedimentary Rocks. (3) II.** Mr. Bramlette  
Lecture, one hour; laboratory, six hours. Prerequisite: course 109B (may be taken concurrently).  
Characteristics and origin of sedimentary rocks, physical and mineralogical analysis of sediments, determination of minerals by immersion methods.

## GRADUATE COURSES

- 274. Seminar in Structural Crystallography. (2 to 5) I.** Mr. Tunell  
Seminar, two hours; laboratory, optional. Prerequisite: consent of the instructor.  
Advanced crystallography and the atomic structure of crystals.
- 281. Problems in Mineralogy. (2 to 4) I.** Mr. Murdoch
- 282. Problems in Goniometry. (2 to 4) II.** Mr. Murdoch
- 299. Research in Mineralogy. (1 to 6) I, II.** Mr. Murdoch, Mr. Tunell

## PALEONTOLOGY

## UPPER DIVISION COURSES

- 101. Principles of Paleontology. (3) II.** Mr. Axelrod, Mr. Popenoe  
Prerequisite: junior standing.  
A survey of the principles governing the evolution and distribution of fossil plants and animals.
- 111. Systematic Invertebrate Paleontology. (4) I, II.** Mr. Popenoe  
Lectures, two hours; laboratory, six hours. Prerequisite: Geology 3.  
The study of invertebrate fossils.
- 114. Micropaleontology. (3) I.** Mr. Bramlette  
Lecture, two hours; laboratory, six hours. Prerequisite: course 111 and Geology 102B.  
Study of micro-fossils important in stratigraphic work.
- \*120. Paleobotany. (3) II.** Mr. Axelrod  
Laboratory, 6 hours. Prerequisite: Geology 3, Botany 1A-1B; or Paleontology 101; or consent of the instructor. Offered in alternate years.  
Vegetation of the earth during geologic time.
- 136. Paleontology and Stratigraphy of the Paleozoic and Mesozoic. (3) I.** Mr. Popenoe  
Lecture, two hours; laboratory, three hours. Prerequisite: course 111 and Geology 102A.
- 137. Paleontology and Stratigraphy of the Cenozoic. (3) II.** Mr. Grant  
Lecture, two hours; laboratory, three hours. Prerequisite: course 111 and Geology 102A.

\* Not to be given, 1950-1951.

150. **Advanced Micropaleontology.** (3) II. Mr. Bramlette  
Lecture, one hour; laboratory, six hours. Prerequisite: course 114.

## GRADUATE COURSES

215. **Systematic Conchology and Echinology.** (3) I. Mr. Grant  
Lecture, one hour; laboratory, six hours. Prerequisite: course 111.  
Classification of west-American Cenozoic mollusca and echinoidea.
257. **Seminar in Paleobotany.** (1 to 4) II. Mr. Axelrod  
Seminar. Prerequisite: Paleontology 120 or 101. Offered in alternate years.  
Application of geological and paleontological data to biographical problems.
266. **Seminar in Micropaleontology.** (3) II. Mr. Bramlette  
Prerequisite: course 114.
299. **Research in Paleontology.** (1 to 6) I, II. Mr. Bramlette, Mr. Grant

## GEOPHYSICS

## UPPER DIVISION COURSE

122. **Geophysical Prospecting.** (3) II. \_\_\_\_\_  
Prerequisite: consent of the instructor.  
The principles of geophysical prospecting for ores, petroleum, and other economic minerals.

## GRADUATE COURSES

250. **Seminar in Geophysics.** (3) I. Mr. Slichter  
Fundamental problems in physics of the solid earth.  
The content will vary from year to year.
280. **Experimental Geology.** (3 to 6) II. Mr. Griggs  
Seminar, two hours; laboratory optional. Prerequisite: consent of the instructor.  
The mechanics of rock deformation. Dimensional analysis and model theory applied to geological problems.
290. **Research in Geophysics.** (1-6), I, II. The Staff (Mr. Griggs in charge)

## GEOPHYSICS

For courses in geophysics, see under departments of Geology and Physics, pages 228 and 307.

## GERMANIC LANGUAGES

- GUSTAVE OTTO ARLT, Ph.D., Professor of German.
- <sup>1</sup> FRANK H. REINSCH, Ph.D., Professor of German.
- <sup>2</sup> GILBERT WATERHOUSE, M.A., Litt.D., Visiting Professor of German.
- ALFRED KARL DOLCH, Ph.D., Associate Professor of German.
- CARL WILLIAM HAGGE, Ph.D., Associate Professor of German (chairman of the Department).
- WAYLAND D. HAND, Ph.D., Associate Professor of German.
- WILLIAM J. MULLOY, Ph.D., Associate Professor of German.
- VICTOR A. OSWALD, JR., Ph.D., Associate Professor of German.
- ERIK WAHLGREN, Ph.D., Associate Professor of Scandinavian and German.
- VERN W. ROBINSON, Ph.D., Assistant Professor of Scandinavian and German.

<sup>1</sup> In residence first semester only, 1950-1951.

<sup>2</sup> In residence second semester only, 1950-1951.

ELI SOBEL, Ph.D., Assistant Professor of German.  
 CHRISTEL B. SCHOMAKER, M.A., Assistant Professor of German, Emeritus.

ROBERT O. CLEYMAET, Ph.D., Lecturer in German.  
 FLORENCE MERZLAK, M.A., Lecturer in German.  
 HARRY B. PARTRIDGE, A.B., Lecturer in German.  
 ROBERT D. WAYNE, M.A. Lecturer in German.  
 EDITH A. SCHULZ, M.A. Associate in German.

WILLIAM MELNITZ, Ph.D., Assistant Professor of Theater Arts.

*Letters and Science List.*—All undergraduate courses in German and Scandinavian languages are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Required: courses 1, 2, 3 (3LS, 3PS, 3SS), 4, 6, and 42A-42B, or their equivalents. Recommended: History 4A-4B; English 1A-1B, 36A-36B; Philosophy 20 and 21.

*The Major in German.*—At least 30 units in upper division courses, including 106A, 106B, 107A, 107B, 109B, 117, 118A, 118B, and one course from each of the following groups: (1) 105, 108, 109A, 119, 147; (2) 104A, 104B, 110, 111; (3) 114A, 114B. Students looking forward to the secondary credential should take also 106C-106D. Students desiring a purely literary or philological major, not looking toward secondary teaching, should consult the departmental adviser regarding permissible substitutions of courses.

*Requirements for Admission to Graduate Courses.*

A candidate for admission to graduate courses in Germanic languages and literatures must meet, in addition to the general University requirements, the minimum requirements for an undergraduate major in this department. If the candidate is deficient in this prerequisite he must fulfill it by undergraduate courses taken as a graduate student.

All entering graduate students must take a placement examination in German language and may be required to take an examination in German literature before enrolling in courses.

*Requirements for the Master's Degree.*

For the general requirements, see page 120. The Department of Germanic Languages favors the Comprehensive Examination Plan. For specific departmental requirements, see the ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION.

*Requirements for the Ph.D. Degree.*

For the general requirement, see page 123. For specific departmental requirements, see the ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION.

## 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 on recommendation of the instructor.

1. **Elementary German.** (4) I, II. Mr. Oswald in charge  
 This course corresponds to the first two years of high school German.

1-2. **Elementary German. Intensive Course.** (8) I, II. Mr. Oswald in charge  
 Two hours daily, four times a week.  
 This course stresses the oral-aural approach, and is equivalent to German 1 and German 2.

- 1G. Elementary German for Graduate Students.** (No credit.) I, II.  
Four hours a week. Miss Schulz in charge
- 2. Elementary German.** (4) I, II. Mr. Oswald in charge  
Prerequisite: course 1 or two years of high school German.
- †3. Intermediate German.** (4) I, II. Mr. Robinson in charge  
Prerequisite: course 2 or three years of high school German.  
Readings in literary German.
- †3LS. Intermediate German.** (4) I, II. Mr. Sobel in charge  
Prerequisite: course 2 or three years of high school German.  
Readings in the life sciences.
- †3PS. Intermediate German.** (4) I, II. Mr. Sobel in charge  
Prerequisite: course 2 or three years of high school German.  
Readings in the physical sciences.
- †3SS. Intermediate German.** (4) I. Mr. Hand in charge  
Prerequisite: course 2 or three years of high school German.  
Readings in the social sciences.
- 4. Intermediate German.** (4) I, II. Mr. Robinson in charge  
Prerequisite: any one of courses 3, 3LS, 3PS, or 3SS, or four years of high school German.  
Advanced readings in literary German.
- \*4H. Readings in the Humanities.** (4) II. Mr. Hagge in charge  
Prerequisite: course 3, 3SS, or four years of high school German.  
Reading of representative selections in philosophy, music, art, literary criticism, etc.
- 6. Review of Grammar, Composition, and Conversation.** (2) I, II.  
Mr. Dolch in charge  
Prerequisite: course 2 or three years of high school German.  
Required for the major in German.
- 8A-8B. German Conversation.** (1-1) Beginning each semester.  
Mr. Mulloy in charge  
The class meets two hours weekly. Open to students who have completed course 2 or its equivalent. Course 8A is normally prerequisite to 8B.
- \*8S. Choral Speaking.** (1) I. \_\_\_\_\_  
Prerequisite: course 2 or consent of the instructor. May be repeated once without duplication of credit.
- 42A-42B. German Civilization.** (2-2) Yr. Mr. Sobel  
Lectures and reports. Conducted in English. No knowledge of German required.  
A general survey of the development of German civilization in its more important cultural manifestations. Required for the major in German.

## UPPER DIVISION COURSES

The prerequisite for all upper division courses in course 4 or the equivalent.

- 104A-104B. Readings in the Drama of the Nineteenth Century.** (3-3) Yr.  
Selected readings from nineteenth-century authors. Mr. Robinson
- 105. Lessing's Life and Works.** (3) I. Mr. Hagge  
Lectures and reading of selected texts.

\* Not to be given, 1950-1951.

† Any two of the courses numbered 3, 3LS, 3PS, 3SS, may be taken for credit. It is recommended that German 3 be taken before the specialized courses.



- 106A-106B. Grammar, Composition, and Conversation. (2-2) Yr. Mr. Dolch
- 106C-106D. Grammar, Composition, and Conversation. (2-2) Yr. Mr. Dolch  
Prerequisite: course 106A-106B.
- 107A-107B. Phonetics of the German Language. (1-1) Yr. Mr. Oswald  
Lecture, one hour; laboratory, two hours.
- 107A. Articulatory and acoustic basis of German phonetics; training in transcription and reading of transcriptions.
- 107B. Applied phonetics; relation of *Bühnenaussprache* to general problems of orthoëpy.
108. Schiller's Life and Works. (3) II. Mr. Hagge  
Lectures and reading of selected texts.
- 109A. Introduction to Goethe. (3) I. Mr. Reinsch  
Goethe's prose.
- 109B. Goethe's Dramas. (3) II. Mr. Reinsch
110. The German Lyric. (3) II. Mr. Mulloy  
Lectures in German. Prerequisite: 6 units of upper division German, or consent of the instructor.  
A survey from 1750 to 1880.
111. German Narrative Prose. (3) I. Mr. Mulloy  
Lectures in German. Prerequisite: 6 units of upper division German, or consent of the instructor.  
A survey from 1750 to 1880, with special reference to the *Novelle*.
- 114A. German Literature from 1875 to the Present. (3) I. Mr. Hand  
Prerequisite: 6 units of upper division German, or consent of the instructor.  
Dramatic literature.
- 114B. German Literature from 1875 to the Present. (3) II. Mr. Oswald  
Prerequisite: 6 units of upper division German, or consent of the instructor.  
Prose and poetry.
117. History of the German Language. (3) II. Mr. Sobel  
Prerequisite: course 106A-106B, 107A-107B, or consent of the instructor.
- 118A. History of German Literature. (3) I. Mr. Arit  
Prerequisite: 6 units of upper division German, or consent of the instructor. Lectures in German.  
The Middle Ages to 1624.
- 118B. History of German Literature. (3) II. Mr. Arit  
Prerequisite: 6 units of upper division German, or consent of the instructor. Lectures in German.  
From 1624 to 1850.
119. Middle High German. (3) I. Mr. Dolch  
Prerequisite: courses 117 and 118A.  
Outline of grammar; selection from Middle High German poetry.
- 121A. German Literature in Translation. (2) I. The Staff  
Prerequisite: junior standing or familiarity with literary criticism. Not accepted as part of the major in German.  
The classical period.
- 121B. German Literature in Translation. (2) II. The Staff  
Prerequisite: junior standing or familiarity with literary criticism. Not accepted as part of the major in German.  
The modern period.

147. **German Folk Song.** (2) II. Mr. Arlt  
A survey of German folk song from its beginnings to the present.
- 199A-199B. **Special Study for Advanced Undergraduates.** (1 to 3) I, II. The Staff  
Topics selected with the approval of the department and studied under the direction of one of the staff.

## GRADUATE COURSES

201. **Bibliography and Methods of Literary History.** (2) I. Mr. Arlt  
Required for the M.A. and Ph.D. degrees.
- \*208. **The Sixteenth and Seventeenth Centuries.** (3) I. Mr. Arlt
210. **The Age of Goethe.** (3) I. Mr. Reinsch
- \*212. **German Romanticism.** (3) II. Mr. Mulloy
213. **The Enlightenment and Pre-Romanticism.** (3) II. Mr. Waterhouse
222. **Goethe's Faust.** (2) II. Mr. Reinsch
225. **The Nineteenth-Century Drama.** (3) I. Mr. Robinson
226. **Naturalism.** (3) II. Mr. Hand
- \*228. **German Literature after 1890.** (3) I. Mr. Oswald
- \*229. **Expressionism.** (2) II. Mr. Melnitz
230. **Survey of Germanic Philology.** (3) I. Mr. Dolch
- \*231. **Gothic.** (3) I. Mr. Dolch
- \*232. **Old High German.** (3) II. Mr. Dolch
233. **Old Saxon.** (3) II. Mr. Oswald
239. **Readings in Middle High German Literature.** (3) II. Mr. Dolch  
Prerequisite: course 119 or the equivalent.  
Required for the M.A. degree.
- \*251. **Seminar on the Age of Goethe.** (3) II. Mr. Reinsch
253. **Seminar in Nineteenth-Century Literature.** (3) I. Mr. Mulloy  
Seminar: Theodor Storm.
- \*254. **Seminar in the Enlightenment and Pre-Romanticism.** (3) I. Mr. Hage
- \*257. **Seminar in Sixteenth- and Seventeenth-Century Literature.** (3) II. Mr. Arlt  
Prerequisite: course 208.
- \*259. **Seminar in Germanic Linguistics.** (1 to 3) II. Mr. Dolch  
Prerequisite: course 230 and one dialect or the equivalent.
- 298A-298B. **Special Studies.** (1-6; 1-6) Yr. The Staff

## PROFESSIONAL COURSE IN METHOD

370. **The Teaching of German.** (3) I. Mr. Reinsch  
Prerequisite: graduate standing in the Department of Germanic Languages. Required of all candidates for the general secondary credential in German. To be taken concurrently with Education 370.

\* Not to be given, 1950-1951.

**SCANDINAVIAN LANGUAGES**

## LOWER DIVISION COURSES

- \*1. **Elementary Swedish.** (4) I. Mr. Wahlgren  
 \*2. **Intermediate Swedish.** (4) II. Mr. Wahlgren  
 Prerequisite: course 1 or the equivalent.  
 11. **Elementary Danish and Norwegian.** (4) I. Mr. Wahlgren  
 12. **Intermediate Danish and Norwegian.** (4) II. Mr. Wahlgren  
 Prerequisite: course 11 or the equivalent.

## UPPER DIVISION COURSES

- 141A. **Scandinavian Literature in English Translation.** (2) I.  
 No prerequisite; open to all upper division students. Mr. Wahlgren  
 From earliest times to 1750.  
 141B. **Scandinavian Literature in English Translation.** (2) II.  
 No prerequisite; open to all upper division students. Mr. Wahlgren  
 From 1750 to the present.

## GRADUATE COURSES

243. **Old Icelandic.** (3) I. Mr. Wahlgren  
 244. **Old Norse-Icelandic Prose and Poetry.** (2) II. Mr. Wahlgren

## RELATED COURSES (See page 215)

**Folklore**

145. **Introduction to Folklore.** (3) I. Mr. Hand  
 245. **The Folk Tale.** (2) II. Mr. Hand

**HISTORY**

- DAVID K. BJORK, Ph.D., Professor of History.  
 JOHN W. CAUGHEY, Ph.D., Professor of History.  
 \* BRAINERD DYER, Ph.D., Professor of History (Chairman of the Department).  
 † CLINTON N. HOWARD, Ph.D., Professor of History.  
 † ROLAND D. HUSSEY, Ph.D., Professor of History (Acting Chairman of the Department, first semester).  
 LOUIS KNOTT KOONTZ, Ph.D., Professor of History.  
 † GEORGE E. MOWRY, Ph.D., Professor of History.  
 FRANK J. KLINGBERG, Ph.D., Professor of History, Emeritus.  
 WALDEMAR WESTERGAARD, Ph.D., Professor of History, Emeritus.  
 RAYMOND H. FISHER, Ph.D., Associate Professor of History.  
 YU-SHAN HAN, Ph.D., Associate Professor of History.  
 CHARLES L. MOWAT, Ph.D., Associate Professor of History.  
 JOHN W. OLMSTED, Ph.D., Associate Professor of History.  
 THEODORE A. SALOUTOS, Ph.D., Associate Professor of History.  
 \* TRUESDELL S. BROWN, Ph.D., Assistant Professor of History.  
 ROBERT N. BURR, Ph.D., Assistant Professor of History.  
 JOHN S. GALBRAITH, Ph.D., Assistant Professor of History.  
 JOHN HIGHAM, Ph.D., Assistant Professor of History.  
 JERE C. KING, Ph.D., Assistant Professor of History.

\* Not to be given, 1950-1951.

† Absent on leave, 1950-1951.

‡ In residence first semester only, 1950-1951.

§ In residence second semester only, 1950-1951.

LUCY M. GAINES, M.A., Assistant Professor of History, Emeritus.  
 WALLACE T. MACCAFFREY, Ph.D., Instructor in History.  
 ROBERT WILSON, Ph.D., Instructor in History.



ALBERT HOXIE, M.A., Lecturer in History.  
 WILLIAM B. HITCHCOCK, M.A., Lecturer in History.  
 ANDREW LOSSKY, Ph.D., Lecturer in History.

*Letters and Science List.*—All undergraduate courses in history are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Required: (1) course 4A-4B or 5A-5B, to be taken in the freshman year, and (2) course 7A-7B or 8A-8B, to be taken in the sophomore year, or equivalent preparation for students transferring from other departments or other institutions. History majors who take course 5A-5B must take 6 units of continental European history in the upper division. History majors who take course 8A-8B must take 6 units of United States history in the upper division. Recommended: Political Science 1, 2, Economics 1A-1B, Geography 1A-1B, and Philosophy 20, 21. One of these recommended courses may be substituted for one of the required history courses, with approval of the department.

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

#### *The Major.*

(1) Twenty-four units of upper division work in history, including

a. A 6-unit combination of broad scope in Old World history. Approved combinations are courses 111A-111B, 121A-121B; 140A-140B; 142, 143; 143, 144; 144, 145; 145, 147; 149A-149B; 152A-152B; 153A-153B; 154, 155; 155, 156; 156, 157; 158A-158B.

b. A 6-unit combination of broad scope in New World History. Approved combinations are courses 162A-162B; 171, 172; 172, 173; 173, 174; 175, 176; 176, 178; 176, 179; 177, 178; 177, 179; 178, 179; 178, 181; 181, 188.

c. Course 197 or 198.

d. Course 199 in a field for which preparation has been made in the junior year.

(2) Six units of approved upper division courses in an allied field. Allied fields include anthropology, art history, economics, geography, philosophy, political science, sociology, and a national literature of the field of the student's emphasis, e.g., English literature in combination with an English history emphasis.

*Honors in History.*—Inquiries regarding honors may be directed to the Chairman of the Department.

*Graduate Work in History.*—See the ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION, and the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

#### LOWER DIVISION COURSES

**4A-4B. History of Europe.** (3-3) Yr. Beginning either semester.

Mr. Bjork, Mr. Fisher, Mr. Olmsted

Lectures, two hours; quiz section, one hour.

The growth of European civilization from the decline of the Roman Empire to the present time.

**5A-5B. History of England and Greater Britain.** (3-3) Yr. Beginning either semester. Mr. Howard, Mr. Mowat, Mr. MacCaffrey

Lectures, two hours; quiz section, one hour.

The political, economic, and cultural development of the British Isles and the Empire from the earliest times to the present.

**7A-7B. Political and Social History of the United States.** (3-3) Yr. Beginning either semester. Mr. Dyer, Mr. Mowry, Mr. Saloutos

Lectures, two hours; quiz section, one hour.

This course is designed for students in the social sciences who want a thorough survey of the political and social development of the United States as a background for their major work and for students in other departments who desire to increase their understanding of the rise of American civilization.

**8A-8B. History of the Americas.** (3-3) Yr. Beginning either semester.

Lectures, two hours; quiz section, one hour. Mr. Caughey, Mr. Hussey

A study of the development of the Western Hemisphere from the discovery to the present. Attention in the first semester to exploration and settlement, colonial growth, imperial rivalries, and the achievement of independence. In the second semester, emphasis upon the evolution of the American nations and people in the nineteenth and twentieth centuries.

**\*39. Pacific Coast History.** (2) I, II. Mr. Caughey

**\*49A. Great Personalities: United States.** (2) I. Mr. Dyer  
(Former number, 9A.)

**\*49B. Great Personalities: Latin America.** (2) II. Mr. Hussey  
(Former number, 9B.)

**\*49C. Great Personalities: Modern Europe and England.** (2) II. Mr. Howard  
(Former number, 9C.)

**\*49D. Great Personalities: Ancient and Medieval Continental Europe.**  
(2) I.  
(Former number, 9D.)

#### UPPER DIVISION COURSES

The prerequisite for course 101 is upper division standing. The prerequisite for all other upper division courses is upper division standing and course 4A-4B, or 5A-5B, or 7A-7B, or 8A-8B, or other preparation satisfactory to the instructor.

**101. Main Currents in American History.** (2) I, II. Mr. Dyer, Mr. Higham, Mr. Burr

A one-semester survey of United States history, with emphasis upon the growth and development of American principles and ideals. Not open to students who have credit for course 7A, 7B, or 8B. Not to be counted toward the major.

**111A-111B. History of the Ancient Mediterranean World.** (3-3) Yr. Mr. Brown

A survey of the history of the ancient Mediterranean world from earliest times to the reign of Constantine. The work of the first semester ends with the death of Alexander.

**112A-112B. History of Ancient Greece.** (3-3) Yr. Mr. Brown

112A. The Greek city-state. The emphasis will be on the period between the Persian Wars and the rise of Macedon.

112B. The Hellenistic Period. A consideration of the new patterns in government, social life, science, and the arts that appeared between the Macedonian conquest and the decisive intervention of Rome.

**\*113A-113B. History of Rome. (3-3) Yr.**

Mr. Brown

113A. To the death of Caesar. Emphasis will be placed on the development of imperialism and on the constitutional and social struggles of the late Republic.

113B. From the death of Caesar to the time of Constantine. The early empire will be treated in more detail supplemented by a survey of the social and economic changes in the third century.

**\*114. History of the Founding of Christianity. (2)****121A. The Early Middle Ages. (3) I.**

Mr. Bjork

Prerequisite: course 4A-4B or 5A-5B, or consent of the instructor.

A survey of the main events of European history from the fall of the Roman Empire to about 1150 A.D.

**121B. The Civilization of the Later Middle Ages. (3) II.**

Mr. Bjork

Prerequisite: course 4A-4B or 5A-5B, or consent of the instructor.

A survey of European history, 1150-1450, with emphasis upon social, cultural, religious, and economic foundations of Western Europe.

**140A-140B. History of Modern Europe, 1500-1914. (3-3) Yr.**

Mr. Fisher

Not open to students who have credit for History 4B. Students who have credit for History 142 or 143 will not receive credit for 140A; those who have credit for History 144 or 145 will not receive credit for 140B.

A general course emphasizing the political and economic development of continental Europe.

**141A-141B. Europe in Transition, 1450-1610. (2-2) Yr.**

141A. The Renaissance.

Mr. Olmsted, Mr. Hitchcock

141B. The Reformation.

**142. Europe in the Seventeenth Century, 1610-1715. (3) I.**

Mr. Olmsted

European culture, institutions, and politics from the Thirty Years' War to the death of Louis XIV.

Students who have credit for History 140A may not take this course for credit.

**143. Europe in the Eighteenth Century, 1715-1815. (3) II.**

Mr. Olmsted

European culture, institutions, and politics from the death of Louis XIV to the collapse of the Napoleonic Empire.

Students who have credit for History 140A may not take this course for credit.

**144. Europe, 1815-1870. (3) I.**

Mr. King

The history of Europe from the decline of Napoleon to the end of the Franco-Prussian War; a survey covering international relations and internal conditions of the major European countries, with special stress on the rise of nationalism and liberalism.

Students who have credit for History 140B may not take this course for credit.

**145. Europe, 1870-1914. (3) I, II.**

Mr. Fisher, Mr. King

The history of Europe from the end of the Franco-Prussian War to the eve of the First World War. A survey covering internal conditions of the major European countries, nationalism, neoimperialism, the rise of socialism, the spread of the industrial revolution, and the diplomatic background of the First World War.

Students who have credit for History 140B may not take this course for credit.

\* Not to be given, 1950-1951.

- 147. Europe Since 1914. (3) II.** Mr. King  
Political, economic, and cultural developments since the outbreak of the First World War.
- 148A-148B. European Diplomacy and Imperialism. (3-3) Yr.** Mr. Hitchcock  
A study of European international rivalries primarily in the nineteenth and twentieth centuries.
- 149A-149B. History of Russia. (3-3) Yr.** Mr. Fisher  
149A. History of Russia to 1801.  
Political, economic, and social developments and the foreign relations of Russia in the Kievan, Muscovite, and imperial periods.  
149B. History of Russia since 1801.  
The agrarian problem, the great reforms, the radical movement, the revolutions of 1905 and 1917, and the Soviet state; Russia in international politics, especially the Near Eastern question.
- 149C. France Since the Founding of the Third Republic. (3) I.** Mr. King  
Recommended preparation: course 4A-4B.  
An intensive study of modern France, emphasizing the nation's search for political and economic stability and for military security in the twentieth century.
- 152A-152B. Constitutional History of England. (3-3) Yr.** Mr. Howard, Mr. Mowat  
Prerequisite: course 5A-5B or consent of the instructor.  
A study of the growth of the institutions of British government.
- 153A-153B. History of the British People in Modern Times. (3-3) Yr.** Mr. Howard, Mr. Mowat, Mr. MacCaffrey  
History 153A is not open to students who have had course 154 or 155; History 153B is not open to students who have course 156.  
A study of the main currents in the thought, culture, and social progress of the British people from Henry VIII to the death of Victoria.
- 154. Renaissance England. (3) I.** Mr. Howard, Mr. MacCaffrey  
Not open to students who have had 153A.  
A study of the intellectual forces and the social, economic, and political conditions in England in the age of the Renaissance. The Reformation, the Elizabethan era, and the Puritan revolution will receive attention.
- 155. Great Britain in the Eighteenth Century (1688-1783). (3) II.** Mr. Howard  
Not open to students who have had 153A.  
The structure of the British government, society, and economic life under Hanoverians.
- 156. Great Britain in the Nineteenth Century. (3) I.** Mr. Mowat  
Not open to students who have had History 153B.  
British culture, institutions, and politics in the Great Century from the French Revolution to the death of Victoria.
- 157. Great Britain in the Twentieth Century. (3) II.** Mr. Mowat  
The changing British scene in war and peace from the accession of Edward VII to the present.
- 158A-158B. The British Empire Since 1783. (3-3) Yr.** Mr. Galbraith  
The political and economic development of the British Empire, including the evolution of colonial nationalism, the development of the commonwealth idea, and changes in British colonial policy. The work of the first semester covers to 1900.

159. **History of Canada.** (3) I. Mr. Galbraith  
A survey of the growth of Canada from its beginnings under the French and British colonial empires into a modern nation-state.
- \*160. **History of the Caribbean.** (3) I. Mr. Hussey
- \*161. **History of Spain and Portugal.** (3) I. Mr. Hussey  
The history of Spain from early times to the present.
- 162A-162B. **Hispanic America from the Discovery to the Present.** (3-3) Yr.  
Mr. Hussey, Mr. Burr
- 166A-166B. **History of Mexico.** (2-2) Yr. Mr. Burr  
The development of the viceroyalty of New Spain and the Mexican nation, with emphasis upon the problems of the period since Díaz.
169. **History of Inter-American Relations.** (3) I. Mr. Burr  
Emphasizes the historical development of a distinctive system of international relations among the nations of the Western Hemisphere, from 1808 to the present.
171. **The United States: Colonial Period.** (3) I. Mr. Koontz  
Political and social history of the Thirteen Colonies and their neighbors; European background, settlement and westward expansion, intercolonial conflicts, beginnings of culture, colonial opposition to imperial authority.
172. **The United States: The New Nation.** (3) II. Mr. Koontz  
Political and social history of the American nation from 1750 to 1815, with emphasis upon the rise of the New West; revolution, confederation, and union; the fathers of the Constitution; the New Nationalism.
173. **The United States: Civil War and Reconstruction.** (3) I. Mr. Dyer  
The topics studied will include: the rise of sectionalism, the anti-slavery crusade; the formation of the Confederate States; the war years; political and social reconstruction.
174. **The United States: The Twentieth Century.** (3) II. Mr. Mowry, Mr. Higham  
A general survey of political, economic, and cultural aspects of American democracy in recent years.
175. **Economic History of the United States Since the Civil War.** (3) I. Mr. Saloutos  
Recommended preparation: courses 7A-7B and Economics 11.  
A study of the rise of capitalism and industrialism and of the resultant problems in agriculture, labor, business, and government.
176. **American Reform Movements and Reformers.** (3) II. Mr. Saloutos  
A study of educational, monetary, labor, and agrarian reforms advocated in the nineteenth and twentieth centuries.
177. **Intellectual History of the United States Since 1776.** (3) I. Mr. Higham  
Changing patterns of ideas and sentiments in relation to their social environment and their cultural expression.
178. **History of the Foreign Relations of the United States.** (3) I. ———  
A general survey of American diplomacy from the Revolution to the Paris Peace Conference of 1919.

\* Not to be given, 1950-1951.



- 179. Constitutional History of the United States. (3) II.** Mr. Dyer  
Prerequisite: 6 units of United States history or government, or consent of the instructor.  
A study of the Federal Constitution from the historical point of view with emphasis upon the constitutional convention and the constitutional controversies of the nineteenth century.
- 181. The American West. (3) I.** Mr. Caughey, Mr. Mowry  
Recommended preparation: course 8A-8B.  
A study of the West as frontier and as region, in transit from the Atlantic seaboard to the Pacific, and from the seventeenth century to the present.
- 188. History of California. (3) II.** Mr. Caughey  
Recommended preparation: course 8A-8B or 39.  
The economic, social, intellectual, and political development of California from the earliest times to the present.
- \*190. History of the Pacific Area. (3) I.** Mr. Caughey, ———  
Exploration, trade, international rivalries, and social evolution in the Pacific Ocean and in the lands immediately tributary thereto, from the first European contacts to the present. Emphasis on the role of the United States.
- 191A. History of the Far East. (3) I.** Mr. Han, Mr. Wilson  
China and Japan from the earliest times to the beginning of Westernization.
- 191B. History of the Far East. (3) II.** Mr. Han, Mr. Wilson  
Transformation of the Far East in modern times under the impact of Western civilization.
- 192A-192B. The Twentieth-Century Far East. (2-2) Yr.** Mr. Han  
A study of the social, economic, and political development of the Far Eastern countries since 1898, with special attention to the changes in ideas and institutions after a century of Western impact.
- 194A-194B. History of Modern China. (3-3) Yr.** Mr. Han  
Final consolidation of the Tungus peoples in Manchuria and their rule over China; social, economic, political, and literary achievements; movements for modernization towards the end of the nineteenth century; the founding of the Republic.
- 195A-195B. History of Modern Japan. (2-2) Yr.** Mr. Wilson  
The political, economic, and cultural development of Japan since the establishment of the Tokugawa Shogunate in 1603.
- 196A. History of India Prior to 1526. (3) I.** Mr. Han  
A survey of the literature and civilization of the Vedic and the Brahmanic periods; the rise of Jainism and Buddhism; the Magadha and the Kushan Empires; the Gupta period; Mohammedan invasions and conquest to the establishment of the Mogul Empire.
- 196B. India and the Indies Since 1505. (3) II.** Mr. Han  
A survey of European expansion into India and the Indies, the decline of the Mogul Empire, and the rise of native leadership. Special attention will be given to India under British administration, including the rise of nationalism and the establishment of the Dominions of Pakistan and Hindustan.
- 197. Aids to Historical Research. (3) II.** Mr. Bjork  
Study of the auxiliary sciences. A senior course.

\* Not to be given, 1950-1951.

- 198. History and Historians.** (3) I, II. The Staff  
 A study of historiography, including the intellectual processes by which history is written, the results of these processes, and the sources and development of history. Attention also to representative historians. A senior course.
- 199. Special Studies in History.** (3) I, II. The Staff  
 An introduction to historical method, followed by individual investigation of selected topics.  
 Required of all history majors. To be taken in the senior year in a field for which specific preparation has been made in the junior year.
- |  |                       |
|--|-----------------------|
| Section 1. Ancient History.              | Mr. Brown             |
| Section 2. Medieval History.             | Mr. Bjork             |
| Section 3. European History.             | Mr. Hitchcock         |
| Section 4. European History.             | Mr. Olmsted, Mr. King |
| Section 5. English History.              | Mr. Howard, Mr. Mowat |
| Section 6. American Colonial History.    | Mr. Koontz            |
| *Section 7. The American Revolution.     |                       |
| Section 8. Recent United States History. | Mr. Salontos          |
| Section 9. Hispanic-American History.    | Mr. Burr              |
| Section 10. Pacific Coast History.       | Mr. Caughey           |
| Section 11. The British Empire.          | Mr. Galbraith         |
| Section 12. The Far East.                | Mr. Han, Mr. Wilson   |

## GRADUATE COURSES

- \*201. Historiography and Bibliography.** (3) I. Mr. Hussey
- 251A-251B. Seminar in Ancient History.** (3-3) Yr. Mr. Brown
- 254A-254B. Seminar in Medieval History.** (3-3) Yr. Mr. Bjork
- 256A-256B. Seminar in Modern European History.** (3-3) Yr. Mr. Olmsted  
 Studies in European political and cultural history of the seventeenth and eighteenth centuries.
- 257A-257B. Seminar in Modern European History.** (3-3) Yr. Mr. King  
 Studies in continental European history since 1789.
- \*258A-258B. Seminar in European Intellectual History.** (3-3) Yr. Mr. Olmsted  
 Readings in the intellectual history of the seventeenth and eighteenth centuries.
- 259A-259B. Seminar in Slavic History.** (3-3) Yr. Mr. Fisher  
 Prerequisite: the student should have a reading knowledge of at least one European language.  
 Studies in the history of Russia and other Slavic countries.
- 260A-260B. Seminar in English History.** (3-3) Yr. Mr. Howard  
 Studies in the Stuart period.
- 261A-261B. Seminar in British Empire History.** (3-3) Yr. Mr. Galbraith  
 Studies in nineteenth- and twentieth-century imperial history.
- 262A-262B. Seminar in English History.** (3-3) Yr. Mr. Mowat  
 Studies in the late nineteenth century and the twentieth century.
- 265A-265B. Seminar in Hispanic-American History.** (3-3) Yr. Mr. Hussey  
 Studies in the colonial and early national periods.
- 269A-269B. Seminar in United States History.** (3-3) Yr. Mr. Koontz  
 Studies in the colonial frontier.
- \*270A. Seminar in United States History.** (3) I. \_\_\_\_\_  
 Studies in colonial history.

\* Not to be given, 1950-1951.

- 271A-271B. Seminar in United States History. (3-3) Yr. Mr. Saloutos  
Studies in recent United States history.
- 272A-272B. Seminar in United States History. (3-3) Yr. Mr. Dyer  
Studies in political and social problems of the middle nineteenth century.
- 274A-274B. Seminar in American History. (3-3) Yr. Mr. Caughey  
Studies of the American West.
290. Research in History. (1 to 6) I, II. The Staff

## HOME ECONOMICS

HELEN B. THOMPSON, Ph.D., Professor of Home Economics, Emeritus.  
Associate Professor of Home Economics.

DOROTHY LEAHY, Ed.D., Associate Professor of Home Economics (Chairman  
of the Department).

MARGUERITE G. MALLON, Ph.D., Associate Professor of Home Economics.

GRETA GRAY, Ph.D., Associate Professor of Home Economics, Emeritus.

MILDRED L. BRICKER, Ph.D., Assistant Professor of Home Economics.

HAZEL S. KRAEMER, Ph.D., Assistant Professor of Home Economics.

CLARICE H. LINDSEY, M.S., Assistant Professor of Home Economics.

OLIVE HALL, M.S., Instructor in Home Economics.

NORMA N. SHENK, M.S., Associate in Home Economics.

GWENDOLYN BYMERS, M.A., Lecturer in Home Economics.

FLORENCE C. MCGUCKEN, M.S., Lecturer in Home Economics.

ETHEL M. MARTIN, Ed.B., Lecturer in Home Economics.

FRANCES OBST, M.S., Lecturer in Home Economics.

STEFANIA PRZEWORSKA, Lecturer in Home Economics.

FRANCES TACIONIS, M.S., Lecturer in Home Economics.

RUTH BALDWIN, M.S., Associate in Home Economics.

THEODORA COREY, M.A., Associate in Home Economics.

R. JUNE ERICSON, M.A., Associate in Home Economics.

ELIZABETH LATHROP, M.A., Associate in Home Economics.

### College of Applied Arts

The Department of Home Economics offers the following majors:

1. *General Home Economics*, for those who wish home economics as a background for everyday living and homemaking. This major may be selected by students who desire to work toward the general elementary teaching credential.

*Preparation for the Major.*—Courses 1A-1B, 2, 6, 7, 9, 15; Art 2A, 21A; Chemistry 2A.

*The Major.*—Courses 134, 135, 138, 140, 143, 144, 155, 161; Psychology 112; 12 or 13 units selected from other home economics courses; and additional courses that are closely related to home economics to total 36 units.

2. *Home Economics Teacher Education.*

*Preparation for the Major.*—Courses 1A-1B, 6, 7, 9, 15; Art 2A, 21A; Chemistry 2A and 10 or 1A-1B and 8; Psychology 1A-1B; Zoölogy 15.

*The Major.*—Courses 113 (4 units), 116, 134, 135, 138, 140, 143, 144, 155, 160, 175, 181, 370; additional home economics courses, or courses from psychology and education to total 36 units.

3. *Foods and Nutrition*, for students preparing for dietetic internships, institutional management, and promotional work in foods.

*Preparation for the Major.*—Courses 1A-1B, 9; Bacteriology 1; Business Administration 1A; Chemistry 2A and 10 or 1A-1B and 8; Economics 1A-1B; English 1A-1B, or Speech 1A-1B; Psychology 1A-1B; Zoölogy 15.

*The Major.*—Courses 100, 101, 105, 113 (4 units), 114, 116, 121, 122, 370 or Psychology 110; Business Administration 150, 160 or Agricultural Economics 101A.

4. *Foods and Nutrition*, for students preparing for graduate work or research positions.

*Preparation for the Major.*—Courses 1A-1B, 9; Bacteriology 1; Chemistry 1A-1B, 8; Mathematics C and 1 (or equivalent), 3A-3B; Physics 2A-2B; Zoology 15.

*The Major.*—Courses 100, 101, 105, 113 (4 units), 114, 116; the remainder of the 36 units of the major to be selected from other home economics courses, Bacteriology 103, Physics 107, 113, Chemistry 109A-109B, Public Health 160A, Statistics 131A.

The minor should be in chemistry and should include Chemistry 5A and 9.

5. *Clothing and Textiles*.

*Preparation for the Major.*—Courses 6, 7, 9, 15; Art 2A-2B, 21A, 32A; Chemistry 2A and 10 or 1A-1B and 8; Economics 1A-1B.

*The Major.*—Courses 160, 161, 163, 170, 175, 176A, 177A; Art 101B, 183A-183B; and additional units chosen from courses 134, 135, 138, 143, 144, 171A, 181, 199A, and upper division courses in art to total 36 units.

For courses required in the curriculum in apparel merchandising and in the curriculum in apparel design, see page 108.

### College of Letters and Science

*Letters and Science List.*—Courses 113, 114, 143, 154, and 170 are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

#### LOWER DIVISION COURSES

1A-1B. *Elementary Foods*. (3-3) Yr.

Miss Baldwin

(Former number, 11A-11B.)

Lecture, one hour; laboratory, six hours.

A study of the principles of selection and preparation of standard food products; meal planning and serving.

2. *Elementary Nutrition*. (2) I, II.

Miss Mallon, Miss Bricker

(Former number, 32.)

Prerequisite: 6 units of natural science.

The principles of nutrition and their application in normal conditions of growth and physical development. Family food budgets and food habits in relation to nutritive requirements.

6. *Elementary Textiles*. (3) I, II.

Mrs. Lindsey and the Staff

(Former number, 7.)

Lecture, two hours; demonstration-laboratory, two hours.

A study of the sources and characteristics of textile fibers and the processes used in the manufacture of textile materials, as a background for intelligent selection, use, and care.

7. *Elementary Clothing*. (3) I, II.

Miss Corey and the Staff

(Former number, 1A.)

Lecture, two hours; laboratory, four hours. Prerequisite: course 6.

Fundamental problems of clothing construction, including the use of commercial patterns and the selection, care, and use of equipment.

9. *Introduction to Home Economics*. (2) I.

Miss Leahy

(Former number, 8.)

Required of all freshmen in home economics.

Orientation and study of the various areas in home economics.

- 15. Selection of House Furnishings.** (3) I, II. Miss Obst  
(Former number, 12.)  
A study of floor plans, furniture selection and arrangement, suitable materials for floor coverings, wall decorations, curtains, draperies, and upholstery, table linens, china, glass, and silver.

## UPPER DIVISION COURSES

- 100. Food Economics.** (3) I. Mrs. McGucken  
Lecture, one hour; laboratory, six hours.  
Prerequisite: course 1B. Recommended: Economics 1A, 1B.  
The production and distribution of food; grades and standards; legal controls; the cost to consumers and the relations to nutritive values.
- 101. Food Analysis.** (3) I. Miss Goddard  
Lecture, one hour; laboratory, six hours. Prerequisite or concurrent: course 113. The application of quantitative methods to the study of foods. Detection of preservatives and adulterants.
- 105. Experimental Cookery.** (3) I. Miss Bricker  
Prerequisite: course 1B; Chemistry 8 or 10.  
Qualitative and quantitative methods in food preparation under controlled conditions.
- 112. Nutrition in Family Health Service.** (2) I, II. Mrs. McGucken  
Lecture, one hour; laboratory, two hours. Prerequisite: consent of the instructor.  
A study of food service for family groups at moderate and low income levels, considering persons of various ages within the family group. Also special consideration to be given to special dietary problems, food purchasing, protective food legislation, and the adaptation of foreign food habits to good nutrition.
- 113. Advanced Nutrition.** (3 or 4) I, II. Miss Mallon, Miss Bricker  
Lecture, three hours; laboratory, three hours. Prerequisite: Chemistry 8 or 10, Zoölogy 15. (The lectures may be taken separately with credit value of 3 units.)  
A chemical study of carbohydrates, fats, proteins, minerals, and vitamins in relation to human nutrition. Qualitative laboratory studies upon the components of foods and of tissues, and upon the products of digestion.
- 114. Metabolism Methods.** (4) II. Miss Bricker  
Lecture, two hours; laboratory, six hours. Prerequisite: course 101 or the equivalent.  
Observations of the influence of special diets upon various phases of metabolism; practice in the methods of determining blood constituents, basal metabolic rate, and nitrogen and mineral excretions.
- 116. Diet in Health and Disease.** (3) I, II. Miss Mallon  
Lecture, two hours; laboratory, three hours. Prerequisite: courses 1B, 113.  
Human requirements for dietary essentials for infancy, childhood, adult life; dietary calculations; modification of normal diet for specific diseases.
- 121. Quantity Food Study.** (4) I. Mrs. McGucken  
Lecture, three hours; laboratory, four hours. Prerequisite: course 1B and Economics 1A-1B.  
A study of economic principles and problems involved in the purchase and preparation of foods in quantity.
- 122. Institutional Organization and Management.** (4) II. Mrs. McGucken  
Lecture, three hours; laboratory, four hours. Prerequisite: course 1B and Economics 1A-1B.  
A study of organization and administration as applied to institutional households such as residence halls, hotels, hospitals, school cafeterias, etc.

- 134. Child Care and Guidance.** (3) I, II. Mrs. Kraemer  
Prerequisite: Psychology 112.  
Application of the principles of growth and development to the care and guidance of young children in the home.
- 135. Laboratory in Child Study.** (2) I, II. Mrs. Kraemer  
Prerequisite: course 134 and Psychology 112, or consent of the instructor.  
Enrollment is limited to majors in home economics.  
Further study of the growth and development of children with emphasis on the preschool period. Observation and participation in the nursery school with discussion on nursery school theory and practice.
- 138. Family Relationships.** (3) I, II. Mrs. Kraemer  
Recommended: Psychology 1A, 33.  
A study of the modern family and its relationships. Emphasis on personal adjustment of the individual, problems concerning marriage relations, parenthood and family administration.
- 140. Family Food Service and Household Equipment Study.** (3) II. Mrs. McGucken  
Lecture, one hour; laboratory, six hours. Prerequisite: courses 1B, 2 or 113; Chemistry 8 or 9.  
Organization and management of family food service at different economic levels. Emphasis is placed on standard products, meal service, efficient kitchen planning, use and care of kitchen and dining equipment.
- 143. The Economic Problems of Families.** (2) I. Miss Bymers  
Distribution of families as to size, composition, domicile, income, and expenditures. Economic and social developments which have influenced the activities of the members of the household and brought about changes in the family's economic problems and standards of living.
- 144. Management of Individual and Family Finances.** (2) I, II. Miss Bymers  
Methods of payment for goods, budgeting, property laws, investments, and insurance; the business cycle as a factor in financial planning.
- 154. Housing.** (3) I, II. Miss Bymers  
The contemporary housing situation, essentials of healthful housing, improvement in housing, and municipal, state, and federal activities.
- 155. House Planning and Furnishings.** (2) I. Miss Obst  
Lecture, one hour; laboratory, three hours.  
Planning the home with reference to livability, selection of furnishings and equipment, arrangements for minimizing work, and adaptation to the needs of families of varying positions and incomes.
- 160. Textiles.** (2) I. Mrs. Lindsey  
Laboratory, six hours. Prerequisite: course 6, Chemistry 8 or 10.  
A study of the chemical and physical properties of textile materials with opportunity to apply textile analysis of problems in retail buying.
- 161. Decorative Textiles.** (2) I, II. Miss Lathrop  
Prerequisite: course 6.  
Studies in the appreciation of the construction and historical background of woven, printed, and embroidered textiles; handmade laces; the damasks, brocades, and prints of China, Persia, and India; French tapestries; oriental rugs; French and English prints, and early American textiles.
- 163. Advanced Textiles.** (3) II.  
Lecture, two hours; laboratory, three hours. Prerequisite: courses 6, 160; Chemistry 2A and 10, or 1A-1B and 8.  
An intensive study of textile materials with special emphasis on the nature of the raw material and quantitative methods in textile analysis.

**170. History and Development of the Clothing Industry. (3) I, II.**

Miss Ericson

A study of the ready-to-wear industry in the United States. Important inventions in the field of textiles; fashion in relation to clothing; French and American designers; distribution through wholesale and retail establishments.

**171A-171B\*. Millinery. (2-2) Yr.**

Mme. Przeworska

Lecture, one hour; laboratory, three hours. Prerequisite: course 7.

The development of head covering as a part of apparel design. Study of design and construction of the modern hat and its relation to various types of individuals and styles of clothing. Experience in construction of hats.

**175. Tailoring Problems. (3) I, II. Miss Corey, Mrs. Lindsey, Miss Tacionis**

Lecture, two hours; laboratory, four hours. Prerequisite: course 7, Art 21A.

The design, fashion, construction, and economic factors involved in selecting and in making tailored garments.

**176A-176B\*. Advanced Dress Design. (3-3) Yr. Miss Tacionis, Miss Shenk**

Lecture, two hours; laboratory, four hours. Prerequisite: course 175, Art 21A.

French draping, selection, and manipulation of fabrics; creation of original designs.

**177A-177B\*. Pattern Analysis. (3-3) Yr.**

Miss Shenk

Lecture, two hours; laboratory, four hours. Prerequisite: course 7.

A study of drafting and grading of patterns in relation to the problems of design with consideration of personal and industrial needs.

**181. Problems in Home Economics. (2) I, II.**

Miss Leahy

Prerequisite: course 370.

A study of special problems in the teaching of homemaking selected in accordance with the needs of the student. Emphasis is placed on the contribution of homemaking to school and community life.

**199A-199B. Special Studies in Home Economics. (2-4; 2-4) Yr. The Staff**

Prerequisite: a B average in home economics courses and senior standing.

Assigned problems for individual investigation, to be directed by the instructor in whose field of work the problems lie.

## GRADUATE COURSES

**227. Physical Analysis of Textiles. (8) I.**

Lecture, one hour; laboratory, six hours.

Prerequisite: courses 6, 160, 163, or equivalent.

Investigations into the physical and microscopic characteristics of fibers, yarns, and fabric structure in relation to fabric performance.

**228. Chemical Analysis of Textiles. (3) II.**

Lecture, one hour; laboratory, six hours. Prerequisite: courses 6, 160, 163, or equivalent.

Chemical analysis and research related to the natural and synthetic textile fibers and finishes used for clothing and furnishings. Investigations made of the chemical changes occurring during the use, maintenance, and storage of fabrics.

**229. Methods of Research in Home Economics. (2) I.**

Miss Leahy

A study of the methods of research applicable to the various areas of home economics. Individual guidance in research in a selected problem. Assistance in statistical treatment of data.

\* B section not to be given, 1950-1951.

251. **Seminar in Nutrition.** (2) I. Miss Mallon  
Recent advances in the science of nutrition and in the dietetic treatment of disease.
255. **Food Technology Seminar.** (2) II. Miss Bricker  
Review of recent and current developments in food study and cookery.
262. **Personal and Family Economics Seminar.** (2) I, II. \_\_\_\_\_  
Review of budget studies representative of various levels of living and of those based on quantity budgets.
263. **Seminar in Textiles and Clothing.** (1) II. \_\_\_\_\_  
Prerequisite: graduate standing.  
Readings and discussion of recent developments in textiles and clothing.
271. **Seminar in Home Economics Education.** (2) I, II. Miss Leahy  
Prerequisite: teaching experience or Education H375.  
Review of recent and current developments in the teaching of home economics.
272. **Seminar in the Supervision of Home Economics.** (2) I, II. Miss Leahy  
Prerequisite: Education 170 and teaching experience.  
Individual investigation of the nature and function of supervision of home economics at all school levels.
273. **Seminar in the Organization and Administration of Home Economics.** (2) I, II. Miss Leahy  
Prerequisite: Education 170 and teaching experience.  
A review of the literature, and intensive individual study of problems concerned with the organization and administration of home economics at all school levels.
- 282A-282B. **Selected Problems.** (2-4; 2-4) Yr. The Staff  
Laboratory or field investigation in a specialized area of home economics.

PROFESSIONAL COURSE IN METHOD

370. **Principles of Home Economics Teaching.** (3) II. Mrs. Martin  
Prerequisite: courses 1B, 6, 7, 185, 138.  
The development of home economics as an educational movement; home-making courses and their presentation in high schools; critical review of texts and references in relation to curriculum requirements in different types of schools.

## HORTICULTURE

For courses in horticulture, see under Floriculture and Ornamental Horticulture, page 214, and Subtropical Horticulture, page 337.

## HUMANITIES

PIER-MARIA PASINETTI, Ph.D., Assistant Professor of Italian.

*Letters and Science List.*—Course 1A-1B is included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

- 1A-1B. **World Literature.** (3-3) Yr. Mr. Pasinetti  
A course in world literature for the general student. Recommended as a course to satisfy requirement (G) (1) in the College of Letters and Science.



## IRRIGATION AND SOILS

A Division of the Department of Agriculture

MARTIN R. HUBERTY, Engr., Professor of Irrigation (Chairman of the Division).

DAVID APPLEMAN, Ph.D., Associate Professor of Plant Nutrition.

ARTHUR F. PILLSBURY, Engr., Associate Professor of Irrigation.

\_\_\_\_\_, Assistant Professor of Soils.

*The Major.*—The major in irrigation science is offered only on the Davis campus and the soil science curriculum only on the Berkeley campus. See the PROSPECTUS OF THE COLLEGE OF AGRICULTURE and consult the appropriate advisers.

### UPPER DIVISION COURSES

105. Principles of Irrigation. (4) II. Mr. Pillsbury  
Lectures, three hours; laboratory, three hours. Prerequisite: Physics 2A-2B, or the equivalent.

Irrigation as a factor in agriculture; soil-plant water relations; hydraulics of farm irrigation systems.

110A. The Soil as a Medium for Plant Growth. (3) II. Mr. Appleman  
Lectures, three hours. Prerequisite: Chemistry 1A-1B and 8, or the equivalent.

Nutritional requirements of plants; studies of the absorption of mineral elements by plants, and related processes; chemical composition of soils; current views of the soil solution and of base exchange; factors determining productivity of soils; soil and plant interrelations.

126. Development and Characteristics of Soils. (3) I. Mr. Huberty  
Lectures, three hours. Prerequisite: introductory college chemistry and physics; geology recommended.

An introduction to the origin, classification, and utilization of soils, and to their physical and chemical properties.

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

Prerequisite: senior standing and consent of the instructor. The Staff

### GRADUATE COURSE

280A-280B. Research in Irrigation and Soils. (2-4; 2-4) Yr.

The Staff (Mr. Huberty in charge)

## ITALIAN

CHARLES SPERONI, Ph.D., Associate Professor of Italian (Chairman of the Department).

CARLO L. GOLINO, Ph.D., Assistant Professor of Italian.

PIER-MARIA PASINETTI, Ph.D., Assistant Professor of Italian.

RINA S. CIANCAGLINI, Dottoressa in Lettere, Assistant in Italian.

*Letters and Science List.*—All undergraduate courses in Italian are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Italian 1, 2, 3, 4, 42A-42B, or the equivalent to be tested by examination; Latin 1 or two years of high school Latin. Recommended: History 4A-4B; Philosophy 2A-2B, and an additional foreign language.

*The Major.*—Twenty-four units of upper division courses, of which at least 20 must be in Italian. Four units may be taken in French, German, Greek, Latin, Portuguese, or Spanish literature.

As electives the department recommends courses in (1) European history, anthropology, geography, political institutions, and international relations, particularly as they relate to Italy; (2) English literature; (3) French, German, Greek, Latin, Portuguese, and Spanish language and literature.

#### LOWER DIVISION COURSES

1. **Elementary Italian—Beginning.** (4) I, II. Mr. Speroni, ———  
This course corresponds to the first two years of high school Italian.
2. **Elementary Italian—Continued.** (4) I, II. Mrs. Ciancaglini  
Prerequisite: course 1, or two years of high school Italian.
3. **Intermediate Italian.** (4) I, II. Mr. Golino  
Prerequisite: course 2, or three years of high school Italian.
4. **Intermediate Italian—Continued.** (4) II. Mr. Golino  
Prerequisite: course 3, or four years of high school Italian.
- 8A–8B. **Italian Conversation.** (1–1) Yr. Mrs. Ciancaglini  
The class meets two hours weekly. Open to students who have completed course 3. Those with grade A or B in course 2 may be admitted.
- 42A–42B. **Italian Civilization.** (2–2) Yr. Mr. Golino  
A study in the growth and development of Italian culture in the various fields. There are no prerequisites for this course. Lectures in English, reading in Italian or English.

#### UPPER DIVISION COURSES

Sixteen units of lower division courses in Italian, or the equivalent, are required for admission to any upper division course. All upper division courses, with the exception of 109A–109B, are conducted mainly in Italian.

- 101A–101B. **Composition, Oral and Written.** (3–3) Yr. Mr. Speroni
- \*103A–103B. **Survey of Italian Literature.** (3–3) Yr. Mr. Speroni
- 104A–104B. **Italian Literature of the Nineteenth and Twentieth Centuries.** (2–2) Yr. Mr. Golino
- 109A–109B. **Dante's Divina Commedia.** (3–3) Yr. Mr. Speroni  
With the consent of the instructor this course may also be taken by students who have a thorough preparation in French, Spanish, or Portuguese.
- \*130A–130B. **Advanced Grammar and Composition.** (2–2) Yr. ———  
Prerequisite: course 101A–101B.
- 152A–152B. **English Approach to Italian Literature.** (3–3) Yr. Mr. Pasinetti  
Given in English. A study of Italian literature with special emphasis on the English-Italian and American-Italian literary exchange from Dante to Hemingway. Individual topics assigned. Italian texts read either in the original or in English translations of some literary interest.
- 199A–199B. **Special Studies in Italian.** (1–3; 1–3) Yr. The Staff  
Prerequisite: senior standing, and at least nine units of upper division Italian.

\* Not to be given, 1950–1951.

## JOURNALISM

**JOSEPH A. BRANDT, M.A., B.Litt., Litt.D.,** Professor of Journalism (Chairman of Department).

**HARVA KAAREN SPRAGER, A.B., M.S.,** Instructor in Journalism.

**ROBERT E. G. HARRIS, A.B., M.A.,** Lecturer in Political Reporting.

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**LAWRENCE M. DORRIS,** Lecturer in Copy Editing.

**GEORGE M. LACKS,** Lecturer in Journalism Photography.

**GEORGE F. WASSON, JR., A.B., J.D.,** Lecturer in Libel.

**FRANKLIN FEARING, Ph.D.,** Professor of Psychology.

The Graduate Department of Journalism offers a one-year program leading to the Master of Arts or Master of Science degree. Applicants for admission must meet all requirements of the Graduate Division of the University as outlined in the Announcement of that Division. In addition, all prospective students must complete a departmental application form which may be obtained by writing to the Chairman, Graduate Department of Journalism. Personal interviews will be arranged at the request of the faculty.

The Graduate Department of Journalism offers either Plan I or Plan II; work in either plan starts in the fall semester only and must be completed within one year (two semesters).

Plan I is for students who have had an adequate undergraduate preparation in Journalism or a sufficient period of professional experience to warrant their being excused, at the discretion of the faculty, from a part of News Communication for the first semester. Such students will be required to write a publishable dissertation, although actual publication will not be required.

Plan II requires students to take the prescribed program of courses as determined by the department.

Students may enroll in the program at the beginning of the fall semester only and, since there are approximately forty hours of class work each week, must be prepared to devote full time to their studies. Because of limited space and facilities, the enrollment each year will not exceed twenty.

### GRADUATE COURSES

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|--|--------------|
| 202. Law of Radio and Press Libel. (1) I.              | Mr. Wasson   |
| 204. The Ethics and Obligations of Journalism. (1) I.  | Mr. Brandt   |
| 218. Radio and Television News Communication. (1) II.  | Miss Sprager |
| 250. News Communication. (4) I.                        |              |
| Mr. Brandt, Mr. Harris, Miss Sprager and the Staff     |              |
| 251. News Communication and Production. (5) II.        |              |
| Mr. Brandt, Mr. Harris, Miss Sprager and the Staff     |              |
| 252. Editing the Newspaper. (2) I.                     | Mr. Dorris   |
| 260A-260B. Ideas That Changed History. (1-1) Yr.       |              |
| Mr. Brandt and the Staff                               |              |
| 262A-262B. Theory and Practice of the Press. (1-1) Yr. | Mr. Brandt   |
| 265. Interpretation of Public Affairs. (2) II.         | Mr. Harris   |
| 275A-275B. Problems in Investigation. (1-1) Yr.        |              |
| Mr. Brandt and the Staff                               |              |

### RELATED COURSE IN ANOTHER DEPARTMENT

- Psychology 267. Mass Communications as a Social Force. (3) I.**  
Mr. Fearing

## LAW

**L. DALE COFFMAN, B.A., J.D., LL.M., S.J.D.,** Dean of the School of Law and Professor of Law.

**JAMES H. CHADBOURN, A.B., J.D.,** Professor of Law.

**BRAINERD CURRIE, A.B., LL.B., LL.M.,** Professor of Law.

**ROLLIN M. PERKINS, A.B., J.D., S.J.D.,** Professor of Law.

**ROSCOE POUND, Ph.D., LL.D., J.U.D.,** Visiting Professor of Law.

**HAROLD E. VERRALL, B.A., M.A., LL.B., J.S.D.,** Professor of Law.

**THOMAS S. DABAGH, A.B., J.D.,** Law Librarian and Associate Professor of Law.

**K. H. YORK, A.B., LL.B.,** Visiting Associate Professor of Law.

### FIRST YEAR

**200. Contracts. (6) Yr.**

Mr. Currie

The general scope and purpose of the legal protection accorded contracts; mutual assent; consideration; contracts for the benefit of third persons; assignment; the effect of changed or unforeseen circumstances; conditions in contracts; the Statute of Frauds. Problems of negotiation, draftsmanship, and planning are considered in addition to the problems of contracts in litigation.

**202. Criminal Law and Procedure. (6) Yr.**

Mr. Perkins

A study of the characteristics of particular crimes, the general principles of liability to punishment, and some of the basic problems in criminal law enforcement.

**203. Agency. (3) II.**

Mr. Pound

Master and servant and vicarious liability, the agency relationship, authority, parties, unauthorized transactions, ratification and restitution.

**204. Procedure. (3) I.**

Mr. Chadbourn

An introduction to federal and state court organization, jurisdiction and procedure; the historical development of common law actions; an introduction to the study of law and the legal profession.

**208. Property. (6) Yr.**

Mr. Verrall

Development of the law of property in personalty, and in land. Consideration of possession of unappropriated or lost chattels, bailments, liens, gifts, accession, confusion, judgments, fixtures, emblements, adverse possession, prescription, possessory estates in land, concurrent interests, and an introductory consideration of remainders, reversions, executory interests, and powers.

**212. Torts. (6) Yr.**

Mr. Coffman

Legal liability for wrongful interference with tangible property, real and personal, intangible interests, and advantageous relations.

### SECOND YEAR

**222. Business Associations. (4) II.**

The law of private corporations, partnerships, joint stock companies, and business trusts.

**224. Constitutional Law. (3) II.**

Mr. Currie

A study of the federal system under the Constitution of the United States. The doctrine of judicial review in constitutional cases; division of powers as between the states and the national government, and within the national government; the powers of Congress; the powers of the President; limitations on the powers of state and national governments for the protection of life, liberty, and property; national and state citizenship.

**226. Evidence. (4) II.**

Mr. Chadbourn

The law of evidence in trials at common law and in equity, including examination, competency and privileges of witnesses, judicial notice, burden of proof and presumptions, functions of judge and jury, common law and statutory rules and principles of admissibility, exclusion, and selection.

**228. Sales. (3) I.**

A study of the rules and principles applicable in sales transactions; transfer of property rights; ascertained and unascertained goods, fungibles, goods potentially possessed; appropriation; documents of title; financing methods; security; conditional sales; trust receipts; rights, liabilities, and remedies of the buyer and the seller.

**230. Commercial Paper. (3) I.**

Mr. Perkins

The law of bills of exchange, promissory notes, checks and certificates of deposit with special reference to the Negotiable Instruments Law.

**232. Pleading. (2) I.**

Mr. Chadbourn

Pleading in civil actions under modern codes, State and Federal.

**234. Conveyances. (3) I.**

Mr. Verrall

A study of the law relating to the transfer of interests in land. Consideration of the execution and delivery of deeds of conveyance, description of land conveyed, incorporeal interests, covenants running with the land, estoppel by deed, and recording.

**236. Trusts. (3) I.**

Mr. Pound

Origin of trust; its parties; its subject matter; its creation, including intention, conveyance, Wills Acts, Statute of Frauds; incidents of trust relationship; classification of trusts; problems of administration, including investments, capital and income accounts, contracts of trustee, torts of trustee, alteration of trust, termination; remedies available for the enforcement of trusts.

**237. Family Law and Community Property. (3) II.**

Mr. Verrall

Creation and dissolution of the marital status; relations of husband and wife; community property; parent and child; legitimacy; custody; adoption.

**\*238. Equity. (3) I.**

Nature of equitable relief, specific performance of contracts, specific reparation and prevention of torts, cancellation and reformation of instruments, interpleader, bills of peace, quieting title, protection of personality.

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## LIFE SCIENCES

For courses in Life Sciences, see under Zoölogy, page 351.

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## LINGUISTICS AND PHILOLOGY

HARRY HOIJER, Ph.D., Professor of Anthropology.

### UPPER DIVISION COURSES

**170. Introduction to Linguistics. (3) I.**

Mr. Hoijer

An introduction to the fundamentals of general and historical linguistics, including phonetics; linguistic elements; grammatical categories; linguistic change; dialect geography; language, race, and culture.

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\* Not to be given, 1950-1951.

171. Introduction to Phonetics. (3) II. Mr. Hoijer  
The speech sound and the phoneme; phonetic transcription; types of phonemes; phonetic forms; practice in recording English and other languages phonetically.

\*195. Introduction to Indo-European Linguistics. (3) I. \_\_\_\_\_

RELATED COURSES IN OTHER DEPARTMENTS

LOWER DIVISION COURSES

Greek 40. The Greek Element in English. (2) I, II. Miss Caldwell

Latin 40. The Latin Element in English. (2) I, II. Miss Caldwell

UPPER DIVISION COURSES

Anthropology 110. Language and Culture. (3) I. Mr. Hoijer

English 110. Introduction to English Language. (3) I.

Mr. Matthews, Mr. Bird

English 111. The English Language in America. (3) II.

Mr. Matthews, Mr. Bird

German 107A-107B. Phonetics of the German Language. (1-1) Yr.

Mr. Oswald

German 117. History of the German Language. (3) II.

Mr. Sobel

German 119. Middle High German. (3) I.

Mr. Dolch

Spanish 171. Contemporary Spanish Linguistics. (3) II.

Mr. Bull

GRADUATE COURSES

Anthropology 271A-271B. Linguistic Analysis. (2-2) Yr. Mr. Hoijer

Anthropology 292A-292B. Research in American Indian Languages.

(1-4; 1-4) Yr.

Mr. Hoijer

English 211. Old English. (3) I.

Mr. Matthews, Mr. Bird

English 212. Middle English. (3) II.

Mr. Matthews

English 213. The Development of Modern English. (3) I.

Mr. Matthews

English 250. History of the English Language. Seminar. (3)

Mr. Matthews

English 260A-260B-260C. Studies in Old and Middle English. Seminar.

Mr. Matthews

German 230. Survey of Germanic Philology. (3) I.

Mr. Dolch

\*German 231. Gothic. (3) I.

Mr. Dolch

\*German 232. Old High German. (3) II.

Mr. Dolch

German 233. Old Saxon. (3) II.

Mr. Oswald

\*German 259. Seminar in Germanic Linguistics. (1 to 3) II.

Mr. Dolch

Romance Languages 201A-201B. French Historical Grammar and Methodology of Romance Linguistics. (2-2) Yr.

Mr. Williams, Mr. Merrill

\*Romance Languages 203A-203B. Old Provençal: Reading Texts. (2-2) Yr.

Mr. Williams

Scandinavian 243. Old Icelandic. (3) I.

Scandinavian 244. Old Norse-Icelandic Prose and Poetry. (2) II.

Spanish 212A-212B. Historical Grammar and Old Spanish Readings. (2-2) Yr.

Mr. Zeitlin

\* Not to be given, 1950-1951.

## MATHEMATICS

EDWIN F. BECKENBACH, Ph.D., Professor of Mathematics.

\*PAUL H. DAUS, Ph.D., Professor of Mathematics.

MAGNUS R. HESTENES, Ph.D., Professor of Mathematics (Chairman of the Department).

PAUL G. HOEL, Ph.D., Professor of Mathematics.

GEORGE E. F. SHEERWOOD, Ph.D., Professor of Mathematics.

THEORALP A. SKOLEM, Ph.D., Visiting Professor of Mathematics.

I. S. SOKOLNIKOFF, Ph.D., Professor of Mathematics.

ANGUS E. TAYLOR, Ph.D., Professor of Mathematics.

CLIFFORD BELL, Ph.D., Associate Professor of Mathematics.

JOHN W. GREEN, Ph.D., Associate Professor of Mathematics.

WILLIAM T. PUCKETT, JR., Ph.D., Associate Professor of Mathematics.

FREDERICK A. VALENTINE, Ph.D., Associate Professor of Mathematics.

GLENN JAMES, Ph.D., Associate Professor of Mathematics, Emeritus.

RICHARD ARENS, Ph.D., Assistant Professor of Mathematics.

PHILIP G. HODGE, JR., Ph.D., Assistant Professor of Mathematics.

ALFRED HORN, Ph.D., Assistant Professor of Mathematics.

LOWELL J. PAIGE, Ph.D., Assistant Professor of Mathematics.

ROBERT H. SOBGENFREY, Ph.D., Assistant Professor of Mathematics.

ROBERT STEINBERG, Ph.D., Assistant Professor of Mathematics.

ERNST G. STRAUS, Ph.D., Assistant Professor of Mathematics.

J. DEAN SWIFT, Ph.D., Assistant Professor of Mathematics.

HARRIET E. GLAZIER, M.A., Assistant Professor of Mathematics, Emeritus.

GUY H. HUNT, C.E., Assistant Professor of Applied Mathematics, Emeritus.

EUPHEMIA B. WORTHINGTON, Ph.D., Assistant Professor of Mathematics, Emeritus.

R. M. REDHEFFER, Instructor in Mathematics.

G. MILTON WING, Ph.D., Lecturer in Mathematics.



JOHN L. BARNES, Ph.D., Professor of Engineering.

WILBUR H. DUTTON, Ed.D., Assistant Professor of Education and Associate Director of Training.

GEORGE E. FORSYTHE, Ph.D., Mathematician, Institute for Numerical Analysis.



GEORGE W. BROWN, Ph.D., Visiting Professor of Mathematical Statistics.

ALEXANDER M. MOOD, Ph.D., Visiting Professor of Mathematical Statistics.

THEODORE E. HARRIS, Ph.D., Visiting Assistant Professor of Mathematical Statistics.

JOHN E. WALSH, Ph.D., Visiting Assistant Professor of Mathematical Statistics.

*Letters and Science List.*—All undergraduate courses in mathematics and statistics are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Required: courses C (or the equivalent), 1-3A, 3B, 4A, 4B, with an average grade of C or higher, except that students who have completed two years of high school algebra and also trigonometry may be excused, upon examination, from course 1. Recommended: physics, astronomy, and a reading knowledge of French and German.

\* Absent on leave, 1950-1951.

*The Major.*—Courses 108, 112A, and 119A, together with enough additional upper division units, approved by the upper division adviser, to total 24 units taken while in the upper division. At most 3 of these units may be taken in related courses in other departments, provided approval has been obtained in advance from a departmental adviser. Candidates for a teaching credential may include Mathematics 370 in the required 24 units. The student must maintain an average grade of at least C in upper division courses in mathematics.

Students who are preparing to teach mathematics in high school are advised to elect courses 100 and 370.

Students who expect to continue with graduate study are advised to elect courses 111A and 122A-122B.

*Teaching Minor.*—Not less than 20 units in the Department of Mathematics, of which 6 units are in the one-hundred sequence, including 100 or 108.

*Business Administration.*—Freshmen preparing for this School are required to take courses E and 2 or course 2E.

*Engineering.*—Lower division students in this College are required to take courses 5A, 5B, 6A, 6B.

#### LOWER DIVISION COURSES

##### C. Trigonometry. (3) I, II.

Mr. Bell in charge

Prerequisite: plane geometry and one and one-half years of high school algebra or course D. Students with one and one-half years of high school algebra may enroll in course C concurrently with course D.

Course C includes plane trigonometry and spherical right triangles.

Two units of credit will be allowed to students who have had trigonometry in high school.

##### D. Intermediate Algebra. (3) I, II.

Mr. Valentine in charge

Prerequisite: one year or one and one-half years of high school algebra. Students who need extra review and drill will be required to attend the class five times a week. Not open for credit to students who have received credit for two years of high school algebra, trigonometry, course E, 1, or 3A.

##### E. Commercial Algebra. (3) I, II.

Mr. Valentine in charge

Prerequisite: at least one year of high school algebra. Prescribed in the School of Business Administration. Not open for credit to students who have credit for courses D, 1, or 2.

##### 1. College Algebra. (3) I, II.

Mr. Valentine in charge

Prerequisite: two years of high school algebra and also trigonometry or course C concurrently. Not open for credit to students who have received credit in courses D, E, or 3A. A student who has had only one and one-half years of algebra and trigonometry should consult the Department of Mathematics.

##### 1-3A. College Algebra and Plane Analytic Geometry. (5) I, II.

Mr. Valentine in charge

Prerequisite: two years of high school algebra and also trigonometry. A combination of courses 1 and 3A. Students who have received credit in courses D, E, or 1 will receive only 3 units of credit for this course.

##### 2. Mathematics of Finance and Business. (3) I, II.

Mr. Bell in charge

Prerequisite: courses D, E, or 1. Students who have had two years of high school algebra and trigonometry may be excused from course E by examination. This examination will be given the Tuesday afternoon before the start of classes. Applicants for this examination must make previous arrangements with the instructor in charge of course E. Credit for course E by special examination may be obtained under rule 460 for those who qualify.



**2E. Commercial Algebra and Mathematics of Finance. (5) I.**

Mr. Bell in charge

Prerequisite: at least one and one-half years of high school algebra.

A combination of courses E and 2. Students who have received credit in courses D, E, or 1 will receive only 3 units for this course.

**3A. Plane Analytic Geometry. (3) I, II.**

Mr. Valentine in charge

Prerequisite: course C or high school trigonometry, and course D or 1.

Students who have had two years of high school algebra and trigonometry may be excused from course 1 by examination. This examination will be given the Tuesday afternoon before the start of classes. Applicants for this examination must make previous arrangements with the instructor in charge of course 1. Credit for course 1 by special examination may be obtained under rule 460 for those who qualify.

**3B. First Course in Calculus. (3) I, II.**

Mr. Sherwood in charge

Prerequisite: course 3A.

Differentiation of algebraic and transcendental functions with applications.

**4A. Second Course in Calculus. (3) I, II.**

Mr. Sherwood in charge

Prerequisite: course 3B.

Integration with applications; infinite series.

**4B. Third Course in Calculus. (3) I, II.**

Mr. Sherwood in charge

Prerequisite: course 4A.

Solid analytic geometry, partial differentiation, multiple integration with applications.

Upper division credit will be allowed to students who are not majors in mathematics or engineering, who take the course while in the upper division.

**5A. Analytic Geometry and Calculus. (5) I, II.**

Mr. Swift in charge

Prerequisite: two years of high school algebra and trigonometry; admission to the College of Engineering. Prescribed in the College of Engineering. Nonengineering students will be admitted by special examination as prescribed under course 3A.

A unified course in analytic geometry and calculus. Coördinate systems, geometry of a line and circle, conic sections, curve tracing, systems of linear equations, determinants, topics from theory of equations, derivatives, maxima and minima, rectilinear motion, rates, introduction to integration.

**5B. Analytic Geometry and Calculus. (3) I, II.**

Mr. Swift in charge

Prerequisite: course 5A.

Curve tracing, analytical trigonometry, differentiation of trigonometric and exponential functions, curvilinear motion, simple differential equations with physical applications.

**6A. Differential and Integral Calculus. (3) I, II.**

Mr. Sherwood in charge

Prerequisite: course 5B.

Indefinite and definite integrals, technique of integration, applications, infinite series.

**6B. Differential and Integral Calculus. (3) I, II.**

Mr. Sherwood in charge

Prerequisite: course 6A.

Solid analytic geometry, partial differentiation, multiple integrals, centers of gravity, moments of inertia, ordinary differential equations with applications.

**37. Mathematics for Social and Life Sciences. (3) II.**

Mr. Bell

(Former number, 7.)

Prerequisite: course D or 1.

This course gives in brief form an introduction to analytic geometry and

calculus, and other mathematical material particularly designed for students of the social and life sciences.

38. **Fundamentals of Arithmetic.** (2) I, II. Mr. Bell, Mr. Dutton  
(Former number, 18.)  
Prerequisite: sophomore standing.

UPPER DIVISION COURSES

100. **College Geometry.** (3) I. Mr. Bell  
Prerequisite: course 4A.  
Selected topics in geometry with particular emphasis on recent developments.
108. **Theory of Algebraic Equations.** (3) I, II. Mr. Steinberg, Mr. Paige  
Prerequisite: course 4A.
- 110AB. **Advanced Engineering Mathematics.** (4) I, II.  
Mr. Sokolnikoff in charge  
Prerequisite: course 4B. Not open to students who have taken course 6B or any course containing one unit of work in differential equations. Students in the engineering curriculum are required to take course 110AB or 110C, depending upon the prerequisite.  
Fourier series, partial differentiation, line integrals, differential equations, vector analysis.
- 110C. **Advanced Engineering Mathematics.** (3) I, II.  
Mr. Sokolnikoff in charge  
Prerequisite: course 6B, or an equivalent course containing at least one unit of differential equations. Students who have credit for course 119A will be limited to two units of credit.
- 110D. **Advanced Engineering Mathematics.** (3) II.  
Mr. Sokolnikoff in charge  
Prerequisite: course 110AB or 110C.  
Complex variable, probability, curve fitting.
- 111A. **Introduction to Higher Algebra.** (3) II. Mr. Puckett  
Prerequisite: course 108.  
Selected topics in algebra, with particular reference to modern points of view.
- 112A. **Introduction to Higher Geometry.** (3) I, II. Mr. Bell  
Prerequisite: course 108.  
Homogenous point and line coördinate, cross ratio, one- and two-dimensional projective geometry, point and line conics.
- 112B. **Introduction to Metric Differential Geometry.** (3) II.  
Prerequisite: course 119A, or consent of the instructor. Mr. Beekensbach
- \*113. **Synthetic Projective Geometry.** (3) II. Mr. Daus  
Prerequisite: course 112A, or consent of the instructor.
- \*115A. **Theory of Numbers.** (3) I. Mr. Swift  
Prerequisite: course 108, or consent of the instructor.  
Divisibility, congruences, diophantine analysis.
- 115B. **Theory of Numbers.** (3) I. Mr. Skolem  
Prerequisite: course 115A.  
Selected topics in the theory of primes, algebraic number theory, and diophantine equations.

\* Not to be given, 1950-1951.

\* In alternate years, course 115B will not be given and course 115A will be given the second semester instead of the first semester.

- 119A. Differential Equations.** (3) I, II. Mr. Valentine  
 Prerequisite: course 4B. Not open to students who have credit for course 110AB or 110C.
- 119B. Differential Equations.** (3) II. Mr. Valentine  
 Prerequisite: course 119A.  
 Numerical methods, special equations and functions, and partial differential equations.
- 120. Probability.** (3) II. Mr. Wing  
 Prerequisite: senior standing in mathematics.  
 Basic laws of probability, Bayes' formula, discrete and continuous variable problems, mathematical expectations, laws of large numbers.
- 122A-122B. Advanced Calculus.** (3-3) Yr. Mr. Sherwood  
 Prerequisite: course 110A or 119A.
- 124. Vector Analysis.** (3) I. Mr. Taylor  
 Prerequisite: course 119A or 110AB.  
 Vector algebra, vector functions and vector calculus, linear vector functions, field theory, transformations of integrals.
- 125. Analytic Mechanics.** (3) I. Mr. Valentine  
 Prerequisite: course 119A or 110A-110B, and Physics 105.
- 128. Potential Theory.** (3) II. Mr. Hodge  
 Prerequisite: course 4B and one year of college physics. Recommended: course 110A or 119A.
- 127A-127B. Foundations of Mathematics.** (3-3) Yr. Mr. Skolem  
 Prerequisite: senior standing in mathematics. Juniors with exceptional ability may be admitted with special consent of the instructor.  
 Course 127A covers the basic logical ideas by means of symbolic logic.  
 \*Course 127B covers set theory, theory of relations, the logical background of function theory, the number system, and induction.
- 135A-135B. Numerical Mathematical Analysis.** (3-3) Yr. Mr. Forsythe  
 Prerequisite: course 4A. Course 135A is not open to students who have credit for Astronomy 108.
- 199. Special Problems in Mathematics.** (3) I, II. The Staff  
 Prerequisite: consent of the department.

GRADUATE COURSES

(Open only to students who have regular graduate status.)

- †205. **Analytic Number Theory.** (3) I. Mr. Swift  
 Prerequisite: courses 111A, 115A and 122A, completed or taken concurrently.  
 Domain of real integers, additive and multiplicative theory, integral domains, partitions, special series, prime number theory.
- \*208. **Foundations of Geometry.** (3) I. Mr. Daus
- \*212. **Algebraic Geometry.** (3) II. Mr. Paige  
 Prerequisite: courses 111A and 112A.  
 Algebraic preliminaries, projective space, Grassmann coordinates, collineations and correlations.
215. **Non-Euclidean Geometry.** (3) II. Mr. Steinberg  
 Prerequisite: consent of the instructor. Recommended: course 113 or 208.

\* Not to be given, 1950-1951.

† Not to be given, 1950-1951; to be given, 1951-1952.

- 221A-221B. Higher Algebra.** (3-3) Yr. Mr. Paige  
Prerequisite: course 111A.
- 222. Theory of Groups.** (3) II. Mr. Arens  
Prerequisite: course 221A-221B or 111A and consent of the instructor.  
Classical theorems of general group theory, permutation groups, group representations, basic facts on topological and Lie groups.
- 224A-224B. Functions of a Complex Variable.** (3-3) Yr. Mr. Green  
Prerequisite: course 122A-122B.
- \*225A-225B. Theory of Elasticity.** (3-3) Yr. Mr. Sokolnikoff  
Prerequisite: course 122A-122B or consent of the instructor.  
Course 225A deals with the theory of mechanics of deformable media, analysis of stress, analysis of strain, stress-strain relations, energy theorems, fundamental boundary value problems of mechanics of continua.  
Course 225B deals with the variational methods of solution of problems of elasticity, uses of the analytic function theory in two-dimensional problems, theory of plates and shells.
- 226A-226B. Topology.** (3-3) Yr. Mr. Sorgenfrey  
Course 226A deals with the theory of point sets, including topological, Hausdorff, and perfectly separable metric spaces; continuous functions and homeomorphisms.  
Course 226B deals with continua, locally connected spaces, cyclic element theory, transformations, and dimension theory.
- 229. Theory of Plasticity.** (3) I. Mr. Hodge  
Prerequisite: course 225A or consent of the instructor.  
Yield conditions and theories of plastic flow; applications of perfect plasticity to torsion and plane strain; variational principles.
- \*236. Topological Groups.** (3) II. Mr. Arens  
Prerequisite: course 224A and 226A, or consent of the instructor.  
Invariant integration, group algebras, representation of abelian and compact groups.
- 237A-237B. Calculus of Variations.** (3-3) Yr. Mr. Hestenes  
Prerequisite: course 122A-122B or consent of the instructor.  
The differential equation of a curve minimizing a definite integral. Other properties of a minimizing curve analogous to those deduced by Legendre, Weierstrass, and Jacobi. Conditions which insure the existence of a minimum, extensions to multiple integrals.
- 239. Boolean Algebras.** (3) II. Mr. Horn  
Prerequisite: course 226A or consent of the instructor.  
Axioms and elementary properties, completeness properties, distributivity laws, ideal theory, sub-algebras and quotient algebras, representation theory, applications to topology, Boolean algebras with operators, closure algebras.
- 242A-242B. Functions of a Real Variable.** (3-3) Yr. Beginning second semester. Mr. Hestenes  
Prerequisite: course 122A-122B.  
The real number system, point set theory, Lebesgue measure and Lebesgue integral. Iterated integration, absolute continuity, and fundamental theorem of the calculus.
- \*243. Ordinary Differential Equations.** (3) I. Mr. Hestenes  
Prerequisite: course 224A, 242A, or consent of instructor.  
Existence theorems, properties of systems of linear differential equations, Green's matrix, boundary value problems, expansion theorems, and allied topics.

\* Not to be given, 1950-1951.

- \*245. **Integral Equations.** (3) II. Mr. Horn
- 246A-246B. **Partial Differential Equations of Mathematical Physics.** (3-3) Yr. Mr. Straus, Mr. Barnes  
 Prerequisite: course 224A or 242A or Engineering 181A.  
 Boundary value and characteristic value problems. Separation of variables and expansion in series of characteristic functions. Fourier and Laplace transforms. Green's functions. Integral equations. Characteristic approximate solutions.
- 247A-247B. **Tensor Analysis.** (3-3) Yr. Mr. Sokolnikoff  
 Prerequisite: course 122A-122B or consent of the instructor.
- 247A. **Vectors in n-dimensional and infinitely dimensional manifolds.** Linear transformations. Algebra and calculus of tensors. Applications to geometry.
- 247B. **Applications to differential geometry of curves and surfaces.** First and second differential forms, geodesics in Riemannian manifolds. Equations of Gauss and Codazzi. Applications to various branches of applied mathematics, including the theory of relativity.
248. **Normed Linear Spaces.** (3) I. Mr. Taylor  
 Prerequisite: course 242A.  
 Abstract Banach spaces, vector spaces, and spaces of functions.
260. **Seminars in Mathematics.** (3) I, II. The Staff  
 Topics in analysis, geometry, and algebra, and in their applications, by means of lectures and informal conferences with members of the staff.
290. **Research in Mathematics.** (1 to 6) I, II. The Staff

PROFESSIONAL COURSE IN METHOD

370. **The Teaching of Mathematics.** (3) II. Mr. Bell  
 Prerequisite: course 4A and senior standing.  
 A critical inquiry into present-day tendencies in the teaching of mathematics.

STATISTICS

LOWER DIVISION COURSE

1. **Elementary Statistics.** (2) I, II. Mr. Hoel in charge  
 For students without the mathematical background for course 131A. Emphasis is placed on the understanding of statistical methods. Topics covered are frequency distributions, measures of central tendency, measures of variation, moments, theoretical frequency distributions, sampling, standard errors, linear regression and correlation.

UPPER DIVISION COURSE

- 131A-131B. **Statistics.** (3-3) Yr. Mr. Hoel, Mr. Walsh  
 Prerequisite: Mathematics 4A.  
 A basic introductory course in the theory and applications of statistical methods.

GRADUATE COURSES

231. **Multivariate Analysis.** (3) I. Mr. Hoel  
 Prerequisite: Statistics 131A-131B; recommended: Mathematics 122A.  
 Multivariate normal distribution. Analysis of variance. Distribution of product moments. Normal correlation and regression. Chi-square distribution.
- \*232. **Theory of Estimation and Testing Hypotheses.** (3) I. Mr. Hoel  
 Prerequisite: Statistics 131A-131B; recommended: Mathematics 122A.  
 Estimates. Asymptotic efficiency and normality. Neyman-Pearson theory of tests.

\* Not to be given, 1950-1951; to be given, 1951-1952.

**233. Stochastic Processes. (3) I.**

Mr. Harris

Prerequisite: an upper division course in probability or mathematical statistics, or consent of the instructor.

Elements of Markoff processes, with applications to physics, biology, and engineering. Stationary processes with applications to electronics and other fields.

**260. Seminars.**

Prerequisite: Statistics 231 or 232.

**Theoretical Statistics. (3) II.**

Mr. Mood

Topics will be selected from distribution theory, advanced probability, theory of inference, theory of experimental design, multivariate analysis, sequential analysis, nonparametric methods.

**Applied Statistics. (3) II.**

Mr. Brown

Topics will be selected from those listed under Theoretical Statistics but the emphasis will be on applications.

**INSTITUTE FOR NUMERICAL ANALYSIS**

The Institute for Numerical Analysis, a section of the National Bureau of Standards, is housed on the Los Angeles campus of the University of California. The Institute carries on basic research pertinent to the efficient exploitation and further development of high speed automatic digital computing equipment, and training in the use of computing machines. The Institute also provides a computing service for the southern California area and gives assistance in the formulation and analytical solution of problems in applied mathematics. The Institute is equipped with desk calculators and with punched-card machinery. It will be supplied with a general purpose automatic electronic digital computing machine which is now being constructed at the Institute.

It is expected that among others the following mathematicians will be in residence at the Institute during all or part of the academic year 1950-1951: Dr. J. Barkley Rosser, Dr. Forman S. Acton, Dr. Gertrude Blanch, Dr. R. P. Feynman, Dr. George E. Forsythe, Dr. R. Fortet, Dr. Magnus R. Hestenes, Dr. Harry D. Huskey, Dr. Mark Kac, Dr. Cornelius Lanczos, Dr. E. J. McShane, and Dr. Wolfgang R. Wasow.

The research program of the Institute is at present underwritten by the Office of Naval Research. The principal sponsor of the computing service is the Air Matériel Command of the United States Air Force. Further information may be obtained by consulting the Administrative Officer in Temporary Building 3U.

**METEOROLOGY**

<sup>1</sup> JAKOB BJERKNES, Ph.D., Professor of Meteorology.

JÜRGEN HOLMBOE, M.Sc., Professor of Meteorology (Chairman of the Department).

MORRIS NEIBURGER, Ph.D., Associate Professor of Meteorology.

ZDENEK SEKERA, Ph.D., Associate Professor of Meteorology.

J. Y. GILBERT, S.M., Lecturer in Meteorology.

YALE MINTZ, Ph.D., Assistant Professor of Meteorology.

AYLMER H. THOMPSON, M.A., Lecturer in Meteorology.



ROBERT E. HOLZER, Ph.D., Professor of Geophysics.

JOSEPH KAPLAN, Ph.D., Professor of Physics.

WILLIAM W. KELLOGG, Ph.D., Assistant Professor of Geophysics.

<sup>1</sup> In residence first semester only, 1950-1951.

*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.*—course 3; Physics 1A, 1B, 2B, or Physics 2A–2B; Mathematics 1–3A, 3B, 4A, 4B, or Mathematics 5A, 5B, 6A, 6B. Chemistry 2A is recommended for students who have not had high school chemistry. Meteorology 5 is required but may be taken during the junior year.

*The Major.*—courses 100A–100B, 107, 110, 115, 120; and 9 units to be selected from upper division courses in physics, mathematics, or statistics, of which 3 units must be in upper division physics.

LOWER DIVISION COURSES

- 3. Descriptive Meteorology.** (3) I, II. Mr. Gilbert  
 Prerequisite: Physics 2A or 1B.  
 Elementary survey of the causes and regional distribution of weather and climate.
- 5. Weather Observations.** (3) II. Mr. Gilbert  
 Lecture, two hours; laboratory, three hours.  
 Prerequisite or concurrent: course 3.  
 Technique of synoptic and airways observations; upper-air wind observations; theory and care of the common meteorological instruments; weather codes.

UPPER DIVISION COURSES

- 100A. Synoptic Meteorology.** (3) I. Mr. Neiburger  
 Prerequisite: course 3 and Mathematics 4A; prerequisite or concurrent: course 107.  
 Three dimensional structure of atmosphere; world-wide survey of weather; fundamentals of weather map analysis and weather forecasting.
- 100B. Synoptic Meteorology.** (3) II. Mr. Neiburger  
 Prerequisite: courses 100A and 120.  
 Theory of special weather phenomena, including condensation forms, thunderstorms, icing, ceiling, and visibility; application of theory of pressure variations to weather forecasting.
- 102. Physics of the Higher Atmosphere.** (3) II. Mr. Kaplan  
 Prerequisite: course 104, or Physics 113, or consent of the instructor. Not open to students having credit for Astronomy 127.  
 Constitution of the atmosphere at various levels; the ozone layer; the ionosphere; cosmic rays; optional phenomena.
- 103. Oceanography.** (2) II.  
 The Staff of Scripps Institution of Oceanography  
 Prerequisite: courses 107, 120.  
 Principles and methods of physical oceanography. Energy exchange between ocean and atmosphere. Distribution of temperature. Current systems. Wind waves and swell.
- 104. Meteorological Physics.** (2) I. Mr. Kellogg  
 Prerequisite: Physics 2A–2B, or 1A, 1B, 1C, 1D.  
 Theory of radiation with emphasis on its meteorological applications. Atmospheric electricity. Theory of visibility.
- 107. Meteorological Thermodynamics.** (3) I. Mr. Sekera  
 Prerequisite: Physics 2A–2B or 1A, 1B, 1C, 1D; prerequisite or concurrent: Mathematics 4B.  
 Thermal properties of dry air, water vapor, and moist air. Atmospheric hydrostatics. Evaluation of aerological soundings.

- 108A. Physical Climatology. (2) I.** Mr. Mintz  
Prerequisite: courses 3, 107.  
The general circulation of the atmosphere and the mean fields of cloudiness, precipitation, and temperature over the earth.
- 108B. Physical Climatology. (2) II.** Mr. Mintz  
Prerequisite: courses 3, 107.  
Structure and geographical distribution of the normal air-masses and fronts.
- 110. Meteorological Laboratory. (3) I.** Mr. Neiburger, Mr. Thompson  
Prerequisite: course 5; prerequisite or concurrent: course 100A.  
Weather codes and weather-map plotting. Exercises in analysis of the surface weather map; introduction to weather forecasting.
- 111. Modern Meteorological Instruments. (3) I.** Mr. Gilbert  
Lecture, two hours; laboratory, three hours.  
Prerequisite: course 5; prerequisite or concurrent: course 100B.  
A survey course designed to increase the meteorologist's understanding of modern instruments, their uses and limitations. Meteorological instrumentation with emphasis on accuracy and applicability of various techniques; measurement of special meteorological elements; upper-air sounding methods; radar storm detection, sferics; rawins.
- 115. Meteorological Laboratory. (5) II.** Mr. Neiburger, Mr. Thompson  
Prerequisite: course 110; prerequisite or concurrent: course 100B.  
Practice in weather-map analysis and forecasting; use of upper-air data.
- 120. Dynamic Meteorology. (3) II.** Mr. Sekera  
Prerequisite: course 107.  
Equations of atmospheric motion. Gradient wind. Thermal wind. Fronts. Stability of hydrostatic equilibrium.
- 121. Dynamic Meteorology. (3) I.** Mr. Sekera  
Prerequisite: course 120.  
Theory of pressure changes. Circulation and vorticity. Frictional effects.
- 130. Numerical Methods in Meteorology. (3) II.** Mr. Sekera  
Prerequisite: courses 107, 120.  
Application of numerical mathematics and statistics to selected meteorological problems.
- 199A-199B. Special Problems in Meteorology. (1-3; 1-3) Yr.** Mr. Neiburger

## GRADUATE COURSES

Prerequisite to all graduate courses: courses 100AB, 107, 110, 115, 120.

- 201A-201B. Advanced Synoptic Meteorology. (2-2) Yr.** Mr. Bjerknæs, Mr. Neiburger
- 210A-210B. Meteorological Laboratory. (4-4) Yr.** Mr. Bjerknæs, Mr. Mintz
- 217. Meteorological Hydrodynamics. (3) II.** Mr. Holmboe
- 220. Advanced Dynamic Meteorology. (3) I.** Mr. Holmboe
- 260. Seminar in Meteorology. (2) I, II.** Mr. Holmboe
- 290A-290B. Research in Meteorology. (1-6; 1-6) Yr.** Mr. Bjerknæs, Mr. Holmboe in charge



## MILITARY SCIENCE AND TACTICS

- FRANK N. ROBERTS, Colonel, Infantry, Professor of Military Science and Tactics (Chairman of the Department).
- CARL A. BUECHNER, JR., Lt. Colonel, Infantry, Associate Professor of Military Science and Tactics.
- DOUGLAS B. MURRAY, Lt. Colonel, Coast Artillery Corps, Associate Professor of Military Science and Tactics.
- MATT P. DOBRINIC, Major, Infantry, Associate Professor of Military Science and Tactics.
- JAMES T. PASSMAN, Major, Quartermaster Corps, Associate Professor of Military Science and Tactics.
- KERMIT J. SILVERWOOD, Major, Quartermaster Corps, Associate Professor of Military Science and Tactics.
- WILLIAM T. VAN DE GRAAFF, Major, Infantry, Associate Professor of Military Science and Tactics.
- BERTRAM C. WRIGHT, Major, Coast Artillery Corps, Associate Professor of Military Science and Tactics.
- HENRY W. BYNUM, Captain, Infantry, Assistant Professor of Military Science and Tactics.
- JOSEPH CONTE, Captain, Quartermaster Corps, Assistant Professor of Military Science and Tactics.
- STEVE F. PHILLIPS, JR., Captain, Infantry, Assistant Professor of Military Science and Tactics.
- WILLIAM C. LINDAHL, First Lieutenant, Infantry, Instructor in 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.

### ARMY RESERVE OFFICERS' TRAINING CORPS

In accordance with the National Defense Act of 1920, and with the concurrence of the Regents of the University, a unit of the Senior Division, Army Reserve Officers' Training Corps, was established on the Los Angeles campus of the University in February, 1921.

The purpose of the Army R.O.T.C. is to qualify male students as leaders in peace and war, and to acquaint them with the military factors of our national life to the end that they may more intelligently perform their duties as future leaders of their communities; and to qualify selected students for commissions as Second Lieutenants in either the United States Army Reserve or the Regular Army.

The courses in military science are those prescribed by the Department of the Army and are standard in all Army R.O.T.C. college units. Specialized courses are offered at the University of California, Los Angeles, in either infantry or quartermaster.

The United States furnishes arms, equipment, uniforms, and textbooks on a loan basis for the use of regularly enrolled students in this department.

### BASIC COURSE

The purpose of this course is to qualify the student as a leader whether in peace or in war, and to help prepare him to discharge his duties as a citizen.

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 are between the ages of fourteen and twenty-four years at the time of admission to the University. A first-year or second-year student claiming exemption because of noncitizenship, physical disability, age, or service in the armed forces

of the United States, 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.

The Professor of Military Science and Tactics may at his discretion allow up to two years' credit in the basic course for prior active service in the armed forces.

A student who has received training in a junior division R.O.T.C. unit, equivalent training at a government recognized military school, or senior division R.O.T.C. training at another university, may be granted credit by the Professor of Military Science and Tactics, on the basis of the previous R.O.T.C. training completed. For example, satisfactory completion of the junior R.O.T.C. program will entitle the student to credit for the first year of senior R.O.T.C. It is essential that each entering student, with previous R.O.T.C. training as indicated above, who desires to receive R.O.T.C. credit, should, prior to his enrollment, secure from the high school, or other institution concerned, a transcript of his previous R.O.T.C. training. This transcript should be presented by the student at the time he enrolls in military science and tactics.

**1A-1B. First-Year Basic Military Science. (1½-1½) Yr. The Staff**

Two hours of classwork and one hour of leadership, drill, and exercise of command each week. This course is identical with Air Science 1A-1B in scope, units, and class hours. Students may enroll in either course.

Military organization; military policy of the United States, National Defense Act and R.O.T.C.; evolution of warfare; maps and aerial photographs; military psychology and personnel management; first aid and hygiene; geographical foundations of national power; military problems of the United States; military mobilization and demobilization.

**20A-20B. Second-Year Basic Military Science, Infantry. (1½-1½) Yr.**

The Staff

Two hours of classwork and one hour of leadership, drill, and exercise of command each week.

Organization, weapons, marksmanship, technique of fire, combat formations, scouting and patrolling, and tactics of the rifle squad.

**26A-26B. Second-Year Basic Military Science, Quartermaster.**

(1½-1½) Yr.

The Staff

Two hours of classwork and one hour of leadership, drill, and exercise of command each week.

Organization for supply in the Army, functions of the Quartermaster Corps, classification of supplies, property accountability and responsibility, research and development of supplies in the QMC, operation of QM units, and unit and organizational supply.

**THE ADVANCED COURSE**

The advanced course is a major source of officers for the United States Army Reserve. In addition, it provides one of the principal means of procurement of junior officers for the Regular Army through designation of outstanding students as Distinguished Military Graduates for direct appointment, and through competitive active duty tours of other officers commissioned from the R.O.T.C., from whom are selected additional personnel for Regular Army appointments.

The advanced course is offered for regularly enrolled students who are graduates of the basic course or veterans exempted from the basic course, physically fit, and not more than twenty-seven years of age at the time of admission to the advanced course. In addition, advanced course students must have at least two more academic years before graduation. Advanced students receive from the

government commutation of subsistence (approximately \$27 per month), in addition to uniforms, arms, equipment, and textbooks.

Advanced course students are required to attend a course of summer camp training for six weeks during the summer vacation period, normally following the student's completion of the first year of the advanced course. The United States furnishes uniforms, equipment, transportation, and subsistence, and pays the student while at camp at the rate of pay of an Army recruit (now \$75 per month). Students who attend camp receive one-half unit of credit for each week of the duration of the camp.

Acceptance by the student of the monetary allowances listed above will make the completion of the advanced course a prerequisite to graduation from the University.

**130A-130B. First-Year Advanced Military Science, Infantry. (4-4) Yr.**

The Staff

Four weeks of classwork and one hour of leadership, drill, and exercise of command each week.

Organization, weapons, gunnery, communications, combat intelligence, estimate of the situation and combat orders, field fortifications, tactics of the rifle and heavy weapons platoons and companies.

**136A-136B. First-Year Advanced Military Science, Quartermaster.**

(4-4) Yr.

The Staff

Four hours of classwork and one hour of leadership, drill, and exercise of command each week.

Station and depot supply, storage and warehousing, commissary operation, salvage and reclamation, food service activities, individual weapons and marksmanship.

**\*140A-140B. Second-Year Advanced Military Science, Infantry.**

(4-4) Yr.

The Staff

Four hours of classwork and one hour of leadership, drill, and exercise of command each week.

Organization, command and staff, communications, motors and transportation, supply and evacuation, troop movements, new developments, the military team, tactics of the infantry battalion in attack and defense.

**\*146A-146B. Second-Year Advanced Military Science, Quartermaster.**

(4-4) Yr.

The Staff

Fiscal and procurement procedures, command and staff, combat intelligence, technical intelligence, the military team, QM operations in the zone of the interior and in the theater of operations.

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## MUSIC

LAURENCE A. PETRAN, Mus.M., Ph.D., F.A.G.O., Professor of Music and University Organist.

JOHN N. VINCENT, JR., Ph.D., Professor of Music (Chairman of the Department).

ARNOLD SCHOENBERG, Professor of Music, Emeritus.

LEROY W. ALLEN, M.A., Associate Professor of Music.

RAYMOND MOREMEN, M.S.M., Associate Professor of Music.

ROBERT U. NELSON, Ph.D., Associate Professor of Music.

H. JAN POPPER, Ph.D., Associate Professor of Music.

WALTER H. RUBSAMEN, Ph.D., Associate Professor of Music.

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\* Instruction in all sections covers military administration, military teaching methods, psychological warfare, and military law.

GLADYS TIPTON, Ed.D., Associate Professor of Music.  
 FRANCES WRIGHT, Associate Professor of Music, Emeritus.  
 HENRY LELAND CLARKE, Ph.D., Assistant Professor of Music.  
 BORIS A. KREMENLIEV, Ph.D., Assistant Professor of Music.  
 FERRI ROTH, Mus.Doc., Assistant Professor of Music.  
 ROBERT M. STEVENSON, Ph.D., Instructor in Music.



FRIEDA BELINFANTE, Lecturer in Music.  
 ALBERT GOLDBERG, Mus.M., Lecturer in Music.  
 HENRY P. JOHNSON, Mus.M., Lecturer in Music.  
 GUY MAIER, Mus.Doc., Lecturer in Music.  
 W. THOMAS MARROCCO, M.A., Lecturer in Music.  
 GERALD CAYLOR, Lecturer in Music.  
 \_\_\_\_\_, Lecturer in Music.

<sup>2</sup> H. JAN POPPER, Ph.D., Lecturer in Music.  
 WALDO WINGER, A.B., Lecturer in Music.  
 PATTON C. MCNAUGHTON, M.A., Associate in Music.



HELEN CHUTE DILL, M.A., Supervisor of Training, Music.  
 MARJORIE F. KLUTH, A.B., Supervisor of Training, Music.

Specialization in music presupposes ability in piano playing and some knowledge of the fundamentals of music:

1. A Placement Test in the fundamentals of music will be given entering freshmen during the week prior to registration. According to the result the student may be excused from all or part of Solfege (Music 1A-1B), or if insufficiently prepared may be required to take Music 31, which course carries no credit for majors.

2. Piano Requirement: Upon entering, all students intending to major in music will be tested in their ability to play the piano. Students found deficient will be expected to prepare to meet the requirement through appropriate study but no credit can be allowed for it; moreover, each semester until the requirement is met, students must reduce their study list two units below the normal limits. A student may present himself for reexamination at the end of any semester but, at the latest, is expected to pass the piano requirement by the end of the sophomore year. (Beginning September, 1950, the piano requirement will be prerequisite to Music 104A-104B.)

Each music major shall enroll in one of the performing organizations (band, orchestra, chamber music, or choral group) during each semester.

The student may select a major in music in either the College of Letters and Science or in the College of Applied Arts; these majors lead to the degree of Bachelor of Arts in both instances. Attention is called to the new curriculum in applied music in the College of Applied Arts. See "3" below. For information concerning teaching credentials, consult the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

### College of Letters and Science

*Letters and Science List.*—All undergraduate courses, except 108A-108B, 110, 111A-111B, 112, 116, 140A-140B, 141A-141B, 142A-142B, 158, 161, 164, but not more than 8 units from courses numbered from 40 through 64 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, 3A-3B, 5A-5B, 20A-20B, and some ability in piano playing. Recommended: a reading knowledge of French, German, Italian, or Spanish, and Physics 2A-2B or 10.

<sup>2</sup> In residence second semester only, 1950-1951.

*The Major.*—Twenty-four units of upper division courses, including: (a) course 104A-104B; (b) 6 units chosen from courses 120A-120B, 121, 123, 125, 127, 130, 131, 132, 136, 137, 138, 139, 170, 171, 172, 173, 174, 199; (c) 4 units chosen from courses 101A-101B, 103A-103B, 105A-105B, 107A-107B, 109A-109B; and (d) 4 units chosen from courses 141A-141B, 142A-142B, 158, 159A-159B, 160, 161, 163, 164, 165A-165B, 166A-166B; and 6 additional units in upper division courses in music.

### College of Applied Arts

Three curricula are available:

1. *For the bachelor's degree alone.*

*Preparation for the Major.*—Courses 1A-1B, 3A-3B, 5A-5B, 20A-20B, and some ability in piano playing. Recommended: a reading knowledge of French, German, Italian, or Spanish, and Physics 2A-2B or 10.

*The Major.*—Thirty-six units of upper division courses, including (a) course 104A-104B; (b) 6 units chosen from courses 120A-120B, 121, 123, 125, 127, 130, 131, 132, 136, 137, 138, 139, 170, 171, 172, 173, 174, 199; (c) 4 units chosen from courses 101A-101B, 103A-103B, 105A-105B, 107A-107B, 109A-109B; and (d) 4 units chosen from courses 141A-141B, 142A-142B, 158, 159A-159B, 160, 161, 163, 164, 165A-165B, 166A-166B; and 18 additional units in upper division courses in music.

2. *For the bachelor's degree leading to the special secondary teaching credential.* This curriculum meets the departmental requirements for admission to the graduate courses leading to the general secondary credential.

*Preparation for the Major.*—Courses 1A-1B, 3A-3B, 5A-5B, 20A-20B, 40A-40B, and some ability in piano playing. Recommended: a reading knowledge of French, German, Italian, or Spanish, and Physics 2A-2B or 10.

*The Major.*—Thirty-six units of upper division courses, including (a) courses 104A-104B, 107A, 109A, 111A-111B; (b) 8 units chosen from courses 115A-115B-115C-115D, 140A-140B; (c) 6 units chosen from courses 120A-120B, 121, 123, 125, 127, 130, 131, 132, 136, 137, 138, 139, 170, 171, 172, 173, 174, 199; (d) 4 units chosen from courses 141A-141B, 142A-142B, 158, 159A-159B, 160, 161, 163, 164, 165A-165B, 166A-166B; and 6 additional units in upper division courses in music.

*The Minor in Music.*—Twenty units of coördinated courses, 6 of which must be in the upper division.

3. *For the bachelor's degree with diploma in performance music.* This curriculum normally requires five years for completion. The study list for each semester should not include more than 12 units of courses other than applied music.

*Preparation for the Major.*—Courses 1A-1B, 3A-3B, 5A-5B, 20A-20B; a two-year course from the lower division applied music classes (40 through 55); four semesters of membership in a performance organization (60 through 64); and some ability in piano playing. Recommended: a reading knowledge of French, German, Italian, or Spanish, and Physics 2A-2B or 10.

*The Major.*—A two-year course from the upper division applied music classes (140 through 155); a year course from the master classes (180 through 195); six semesters of membership in a performance organization (160 through 164); plus thirty-six units of upper division courses, including (a) courses 104A-104B, 107A, 109A, 111A-111B; (b) 6 units chosen from courses 120A-120B, 121, 123, 125, 127, 130, 131, 132, 136, 137, 138, 139, 170, 171, 172, 173, 174, 199; (c) 4 units chosen from courses 101A-101B, 103A-103B, 105A-105B, 107B, 109B; (d) 4 units chosen from courses 158, 159A-159B, 160, 161, 163, 164, 165A-165B, 166A-166B; and 10 additional units in upper division courses in music.

### Graduate Division

Students who are admitted to regular graduate status in music are expected to take a guidance examination given in the fall and spring-semester a few days prior to the beginning of classes. This examination is designed to point out to the student possible weaknesses or gaps in his undergraduate work, and thus enables him to remove them early in his graduate program. Subjects tested include sight singing, dictation, harmony, keyboard harmony, counterpoint, analysis, orchestration, score reading, conducting, solo performance, piano playing, history and literature of music, and stylistic analysis of scores. The successful passing of the examination in its entirety is prerequisite to the final examination for the M.A. degree and the qualifying examination for the Ph.D. degree. Candidates for teaching credentials should also undertake to pass the complete examination so that the department will be better able to recommend them for positions.

**A. Requirements for the General Secondary Credential.**—Consult the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

**B. Requirements for Admission to Graduate Courses.**—

1. *As a candidate for the general secondary credential:* ordinarily the undergraduate major in music, or its equivalent, including courses 104A-104B, 107, 109A, 111A-111B; 8 units chosen from courses 115A-115B-115C-115D, 140A-140B; 6 units chosen from courses 120A-120B, 121, 123, 125, 127, 130, 131, 132, 136, 137, 138, 139, 170, 171, 173, 174, 199; and 4 units chosen from courses 141A-141B, 142A-142B, 158, 159A-159B, 160, 161, 163, 164, 165A, 166A. It is recommended that course 370B be taken in the junior year, as it is prerequisite to Education G377.

2. *As a candidate for the master's degree:* ordinarily the undergraduate major of 24 upper division units of music.

**C. Requirements for the Master's Degree.**—For the general requirements, see page 120. The Department of Music favors the Thesis Plan (Plan I).

### LOWER DIVISION COURSES

#### Theory

\***A. Fundamentals of Musicianship.** (No credit) I, II.  
Terminology and notation.

**1A-1B. Solfege.** (3-3) Yr. Beginning either semester.

Mr. Vincent in charge  
Basic course for the major and minor in music. (Music 31 is for general university students.) Elementary theory, dictation, and music reading.

**3A-3B. Harmony.** (3-3) Yr. Beginning either semester.

Mr. Petran in charge  
Prerequisite: course 1A-1B or its equivalent; may be taken concurrently with 1A-1B with consent of the instructor.

**5A-5B. Counterpoint.** (2-2) Yr. Beginning either semester.

Mr. Nelson in charge  
Prerequisite: course 3A-3B, or consent of the instructor.

\***20A-20B. A Survey of Musical History and Literature.** (2-2) Yr.

Designed for majors in music. Mr. Marrocco

Prerequisite: course 3A, or concurrent registration in 3A.

The study of representative musical masterworks, with special emphasis upon the aesthetics of style.

\* Not to be given, 1950-1951.

\* The course formerly designated as Music 2A-2B has been replaced by courses 20A-20B and 30A-30B, the former primarily for majors and minors in music and the latter primarily for the general university student.

**\*30A-30B. History and Appreciation of Music. (2-2) Yr.**

Mr. Rubsamen, Mr. Stevenson

Designed primarily for the general university student. (Students who are majoring in music should take Music 20A-20B.)

No prerequisite.

A general survey of music with a consideration of its function, history, and aesthetics.

**31. Fundamentals of Musicianship. (3) I, II.** Mr. Johnson, Miss Tipton

Designed for general university students.

Basic course for the general elementary teaching credential. Notation, terminology, and music reading.

**Group Instruction in Applied Music**

Prerequisite: audition for consent of the instructor.

**40A-B-C-D. Voice.** (2 units each semester). Mr. Moreman in charge  
(Former number, 7A-7B.)

**41A-B-C-D. Piano.** (2 units each semester). Mr. Maier  
(Former number, 37A-37B.)

**42A-B-C-D. Violin.** (2 units each semester). Mr. Roth, Mr. Marrocco  
(Former number, 42A-42B.)

**43A-B-C-D. Viola.** (2 units each semester). Mr. Johnson  
(Former number, 43A-43B.)

**44A-B-C-D. Cello.** (2 units each semester). Mrs. Belinfante  
(Former number, 44A-44B.)

**45A-B-C-D. Bass Viol.** (2 units each semester). \_\_\_\_\_

**46A-B-C-D. Flute.** (2 units each semester). \_\_\_\_\_

**47A-B-C-D. Oboe.** (2 units each semester). \_\_\_\_\_

**48A-B-C-D. Clarinet.** (2 units each semester). Mr. Caylor  
(Former number, 48A-48B.)

**50A-B-C-D. Bassoon.** (2 units each semester). \_\_\_\_\_

**51A-B-C-D. French Horn.** (2 units each semester). \_\_\_\_\_

**52A-B-C-D. Trumpet.** (2 units each semester). Mr. Allen  
(Former number, 52A-52B.)

**53A-B-C-D. Trombone.** (2 units each semester). \_\_\_\_\_  
(Former number, 53A-53B.)

**55A-B-C-D. Percussion.** (2 units each semester). \_\_\_\_\_

**Performance Organizations**

Prerequisite: audition for consent of the instructor.

**60. University Symphony Orchestra.** (1-2) I, II. Mr. Vincent  
(Former number, 10.)

Two two-hour rehearsals each week. May be repeated once without duplication of credit.

The study and performance of standard symphonic literature.

**61. University Band.** (2) I, II. Mr. McNaughton  
(Former number, 46.)

Two two-hour rehearsals each week. May be repeated once without duplication of credit.

\* The course formerly designated as Music 2A-2B has been replaced by courses 20A-20B and 30A-30B, the former primarily for majors and minors in music and the latter primarily for the general university student.

62. **University Chorus.** (1) I, II. Mr. Moremen  
(Former number, 12.)
63. **University A Cappella Choir.** (2) I, II. Mr. Moremen  
(Former number, 11.)  
Three one-hour rehearsals and one section meeting each week. May be repeated once without duplication of credit.  
The study and performance of standard choral works.
64. **University Glee Club.** (1) I, II. Mr. Moremen  
(Former number, 9.)  
Two one-hour rehearsals each week. May be repeated once without duplication of credit.

## UPPER DIVISION COURSES

## Theory

- 101A-101B. **Keyboard Harmony and Score Reading.** (2-2) Yr. Mr. Stevenson  
(Former number, 102A-102B.)  
Prerequisite: course 3A-3B.
- 103A-103B. **Advanced Harmony.** (2-2) Yr. Mr. Kremenliev  
Prerequisite: course 3A-3B.
- 104A-104B. **Form and Analysis.** (2-2) Yr. Mr. Clarke, Mr. Stevenson  
Prerequisite: course 3A-3B, and successful passing of piano examination.  
Analysis of homophonic and contrapuntal music.
- 105A-105B. **Advanced Counterpoint.** (2-2) Yr. Mr. Nelson  
(Former number, 122A-122B.)  
Prerequisite: course 5A-5B and consent of the instructor.  
Invertible counterpoint, chorale prelude, and fugue.
- 107A-107B. **Composition.** (2-2) Yr.  
Mr. Vincent, Mr. Clarke, Mr. Nelson, Mr. Kremenliev  
(Former number, 105A-105B.)  
Prerequisite: courses 3A-3B, 5A-5B, 104A-104B, and consent of instructor; 104A-104B may be taken concurrently.  
Vocal and instrumental compositions in the smaller forms.
- 108A-108B. **Composition for the Motion Picture.** (3-3) Yr. ———  
(Former number, 176A-176B.)  
Prerequisite: courses 104A-104B, 107A-107B, or the equivalent as determined by the department.  
Theory and practice in the writing of music for film use.
- 109A. **Instrumentation.** (2) I, II. Mr. Allen, Mr. Kremenliev  
(Former number, 114A.)  
Prerequisite: course 3A-3B.  
Theory and practice of writing for instrumental ensembles. The study of orchestral scores and an introduction to symphonic orchestration.
- 109B. **Instrumentation.** (2) II. Mr. Kremenliev  
(Former number, 114B.)  
Prerequisite: course 109A.
110. **Arranging for Radio and the Motion Picture.** (2) II. ———  
(Former number, 178.)  
Prerequisite: courses 107A-107B, 109A-109B, or the equivalent as determined by the department.
- 111A. **Conducting.** (2) I, II. Mr. Moremen  
(Former number, 109A.)  
Prerequisite: courses 1A-1B, 3A-3B, 40A-40B.  
The theory and practice of conducting choral organizations.



- 111B. Conducting.** (2) I, II. Mr. Allen  
 (Former number, 109B.)  
 Prerequisite: courses 1A-1B, 3A-3B.  
 The theory and practice of conducting instrumental organizations.
- 112. Conducting for the Motion Picture.** (2) II. \_\_\_\_\_  
 (Former number, 177.)  
 Prerequisite: course 111A-111B, or the equivalent as determined by the department.  
 Theory and practice of conducting music for the screen. Study of methods of recording.
- 115A-B-C-D. Instrumental Technique.** Mr. Allen, Mr. Johnson  
 A practical and theoretical study of the technique of orchestra and band instruments, including the principles of arranging music for representative combinations. Appropriate literature for instrumental ensembles.
- 115A. Strings.** (2) I.  
**115B. Woodwind.** (2) II.  
**115C. Brass.** (2) I.  
**115D. Percussion and Ensemble.** (2) II.
- 116. Workshop in Radio Music.** (2) II. Mr. Kremenliev  
 (Former number, 179.)  
 Prerequisite: course 107A-107B, or the equivalent as determined by the department.  
 The function of music in radio. Problems of programming, acoustics, recording, and editing. Microphone technique. The nature of background music. Preparation of radio programs. Composition for radio.

### History and Literature

- 120A-120B. History of Music in Western Civilization.** (3-3) Yr. Mr. Rubsamem  
 (Former number, 111A-111B.)  
 Prerequisite: courses 3A-3B, 20A-20B, or their equivalent.  
 The stylistic development of music with a background of its relationship to other arts and to culture in general.
- 121. History of Music in America.** (2) I. Mr. Marrocco  
 (Former number, 142.)  
 Prerequisite: course 20A-20B or consent of the instructor.  
 A survey of music in the United States from the colonial period to the present day.
- 123. Music in the Middle Ages.** (3) II. Mr. Marrocco  
 Prerequisite: course 120A.  
 A detailed study of the musical forms and the notation of sacred and secular music during the period 900 to 1400.
- 125. The Romantic Symphony.** (2) I. Mr. Roth  
 (Former number, 129.)  
 Prerequisite: courses 3A-3B, 20A-20B.
- 127. Modern Tendencies in Music.** (2) II. \_\_\_\_\_  
 (Former number, 128.)  
 Prerequisite: courses 3A-3B, 5A-5B.  
 A study of form, style, and idiom in contemporary music.
- 130. Bach.** (2) I. \_\_\_\_\_  
 (Former number, 124.)  
 Prerequisite: courses 3A-3B, 20A-20B.
- 131. Beethoven.** (2) II. \_\_\_\_\_  
 (Former number, 125.)  
 Prerequisite: courses 3A-3B, 20A-20B.

132. **Brahms. (2) II.** \_\_\_\_\_  
 (Former number, 134.)  
 Prerequisite: course 20A-20B or its equivalent.
136. **Folk Music. (2) I.** Mr. Petran  
 Prerequisite: consent of the instructor.  
 Origins, types, and illustrations of the folk music of various countries.
137. **Music for the Theater, Cinema, and Radio Drama. (2) II.** \_\_\_\_\_  
 (Former number, 151.)  
 Prerequisite: consent of the instructor.  
 Music as a factor of design in the legitimate drama, the cinema, and the radio theater. The history of incidental music to theatrical performances, including a study of musical styles in relation to the periods of dramatic presentation.
138. **Music and Political Ideology. (2) I.** Mr. Rubsamen  
 Prerequisite: consent of the instructor.  
 The interrelationship between political ideologies and the arts, particularly music, in Soviet Russia, Nazi Germany, and Fascist Italy; the cultural policies of totalitarianism; the state as a patron of music.
139. **Aesthetics of Music. (2) II.** Mr. Marrocco  
 (Former number, 168.)  
 A study of the principles of beauty and standards of evaluation as they relate to musical composition and performance.
170. **History of the Opera. (2) I.** Mr. Rubsamen  
 (Former number, 127.)  
 Prerequisite: consent of the instructor.  
 A survey of operatic music from its inception to the present day.
171. **History and Literature of Church Music. (2) I.** Mr. Stevenson  
 (Former number, 130.)  
 Prerequisite: 20A-20B.  
 A study of the history and development of church music, including worship forms and liturgies.
172. **Oratorio Literature. (2) II.** Mr. Petran  
 (Former number, 131.)  
 Prerequisite: courses 3A-3B, 20A-20B.  
 A survey of oratorio music from its inception until the present day.
173. **The Concerto. (2) II.** \_\_\_\_\_  
 (Former number, 132.)  
 Prerequisite: courses 3A-3B, 20A-20B, or consent of the instructor.  
 Origins and development of the concerto with emphasis on the classical period.
174. **History of the Sonata. (2) I.** Mr. Nelson  
 (Former number, 126.)  
 The development of the sonata from its beginnings to the close of the romantic period.
175. **Music Criticism. (2) II.** Mr. Goldberg  
 (Former number, 113.)  
 Prerequisite: consent of the instructor.  
 A study of factors involved in critical evaluation of musical works in performance.
- Group Instruction in Applied Music**
- Prerequisite: audition for consent of the instructor.
- 140A-B-C-D. **Advanced Voice. (2 units each semester)**  
 (Former number, 108A-108B.) Mr. Moremen in charge  
 Prerequisite: course 40A-B-C-D.

- 141A-B-C-D. **Advanced Piano.** (2 units each semester) Mr. Maier  
(Former number, 116A-116B.)
- 142A-B-C-D. **Advanced Violin.** (2 units each semester) Mr. Roth  
(Former number, 119A-119B.)
158. **Studies in Accompanying.** (1-2) II. \_\_\_\_\_  
(Former number, 118.)  
Pianists enroll for two units; other instrumentalists and singers desiring work in repertoire and interpretation may enroll for one unit.
- †159A-159B. **Opera Repertoire and Interpretation.** (2-2) Yr. Mr. Popper  
(Former number, 120A-120B.)

**Performance Organizations**

Prerequisite: audition for consent of the instructor.

160. **University Symphony Orchestra.** (1-2) I, II. Mr. Vincent  
Two two-hour rehearsals each week. May be repeated once without duplication of credit.  
Prerequisite: completion of 4 units of course 60 or its equivalent.  
The study and performance of standard symphonic literature.
161. **University Band.** (2) I, II. Mr. McNaughton  
(Former number, 166.)  
Two two-hour rehearsals each week. May be repeated once without duplication of credit.  
Prerequisite: completion of 4 units of course 61 or its equivalent.
163. **University A Cappella Choir.** (2) I, II. Mr. Moremen  
(Former number, 161.)  
Three one-hour rehearsals and one section meeting each week. May be repeated once without duplication of credit.  
Prerequisite: completion of 4 units of course 63 or its equivalent.  
The study and performance of standard choral works.
164. **University Glee Club.** (1) I, II. Mr. Moremen  
(Former number, 159.)  
Two one-hour rehearsals each week. May be repeated once without duplication of credit.  
Prerequisite: completion of 2 units of course 64 or its equivalent.
- 165A-165B. **Madrigal Choir.** (2-2) Yr. Mr. Moremen  
(Former number, 117A-117B.)  
The study and performance of significant music of the madrigal school.
- 166A-166B. **Chamber Music Ensemble.** (2-2) Yr. Mr. Roth  
(Former number, 110A-110B.)  
The study and interpretation of chamber music literature.

**\*Master Classes**

Prerequisite: audition for consent of the instructor.

- 180A-180B. **Voice.** (2-2) Yr. \_\_\_\_\_
- 181A-181B. **Piano.** (2-2) Yr. \_\_\_\_\_
- 182A-182B. **Violin.** (2-2) Yr. \_\_\_\_\_
- 183A-183B. **Viola.** (2-2) Yr. \_\_\_\_\_
- 184A-184B. **Cello.** (2-2) Yr. \_\_\_\_\_
- 185A-185B. **Bass Viol.** (2-2) Yr. \_\_\_\_\_

\* Not to be given, 1950-1951.

† 159A not to be given; 159B to be given spring semester only, 1950-1951.

186A-186B. Flute. (2-2) Yr.	_____
187A-187B. Oboe. (2-2) Yr.	_____
188A-188B. Clarinet. (2-2) Yr.	_____
190A-190B. Bassoon. (2-2) Yr.	_____
191A-191B. French Horn. (2-2) Yr.	_____
192A-192B. Trumpet. (2-2) Yr.	_____
193A-193B. Trombone. (2-2) Yr.	_____
195A-195B. Percussion. (2-2) Yr.	_____
199. Special Studies in Music. (1-4) I, II.	The Staff
Prerequisite: consent of the instructor.	

## GRADUATE COURSES

201A-201B. Advanced Composition. (3-3) Yr.	Mr. Vincent
*202A-202B. Advanced Orchestration. (2-2) Yr.	_____
205. History of Pianoforte Style. (2) II.	_____
206. History of Organ Style. (2) I.	Mr. Petran
207. Variation Form. (2) I.	Mr. Nelson
Prerequisite: courses 107A-107B and 120A-120B, or their equivalents.	
230. Pianoforte Sonatas of Beethoven. (2) II.	_____
Detailed chronological study of the development of Beethoven's sonata style.	
231. Wagner's Operas. (2) II.	Mr. Popper
A study of the operatic works with the exception of "The Ring."	
253A-253B. Seminar in Historical Musicology. (3-3) Yr.	Mr. Rubsamen
Prerequisite: course 120A-120B or the equivalent.	
255. Seminar in American Music. (2) II.	Mr. Vincent
261. Special Studies for Composers. Seminar. (2) I, II.	Mr. Vincent
262. Seminar: Special Studies in Contemporary Music. (2) I.	Mr. Nelson
263. Seminar in Music Theory. (2) II.	Mr. Nelson
264. Seminar in Comparative Musicology. (2) II.	Mr. Petran
268. Seminar in Aesthetics. (2) II.	Mr. Marroco
270A-270B. Seminar in Music Education. (2-2) Yr.	Mr. Vincent
299. Special Problems in Music. (1-4) I, II.	The Staff

## PROFESSIONAL COURSES IN METHOD

330. Elementary Music Education. (3) I, II.	Mrs. Dill
Prerequisite: sophomore standing and course 31 or its equivalent. Required of candidates for the general elementary credential.	
A course in music education for the general elementary teacher. A professionalized subject-matter course to equip the student to teach in the modern school.	
370A-370B. Music Education. (3-3) Yr.	Miss Tipton
Prerequisite: junior standing. Should be taken in the junior year if possible.	
Organization and administration of music in elementary and secondary schools.	
Course 370B is required of candidates for the general secondary credential with music as a major.	

\* Not to be given, 1950-1951.

380. Piano Pedagogy. (2) II.

Prerequisite: advanced standing in piano or consent of the instructor.

For teachers and prospective teachers of piano. A survey of graded piano literature. The class approach explored and evaluated.

RELATED COURSE IN ANOTHER DEPARTMENT

Psychology 172A-172B. Psychology of Music. (3-3) Yr.

Mr. Petran

## NAVAL SCIENCE

LAWRENCE C. GRANNIS, M.S., Captain, U.S. Navy; Professor of Naval Science (Chairman of the Department).

JOHN A. COPELAND, B.S., Lt. Colonel, U.S. Marine Corps, Associate Professor of Naval Science.

ROBERT H. MATHEW, JR., B.S., Lieut. Comdr., U.S. Navy, Associate Professor of Naval Science.

EDGAR F. CARNEY, JR., Major, U.S. Marine Corps; Associate Professor of Naval Science.

JAMES J. CLANCY, B.S., Lieut., U.S. Navy; Assistant Professor of Naval Science.

THEODORE M. GILLILAND, B.S., Lieut., U.S. Navy; Assistant Professor of Naval Science.

*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.

### Naval Reserve Officers' Training Corps

By action of the Secretary of the Navy and of The Regents of the University of California in June, 1938, provision was made for the establishment of a unit of the Naval Reserve Officers' Training Corps on the Los Angeles campus.

The primary object of the Naval Reserve Officers' Training Corps is to provide at civil institutions systematic instruction and training which will qualify selected students of such institutions for appointment as officers in the Regular Navy, Naval Reserve, Marine Corps, and Marine Corps Reserve. The Naval Reserve Officers' Training Corps is expected to train junior officers for the Regular Navy, Naval Reserve, Marine Corps, and Marine Corps Reserve, and thus assist in meeting a demand for increased commissioned personnel in time of war or national emergency.

Courses in naval science are given for those who intend to complete the four years of training for a commission in the Regular Navy, Naval Reserve, Marine Corps, and Marine Corps Reserve. While only students signifying such a purpose will be admitted, students who for sufficient reasons are forced to discontinue their training before their commission is granted, will be permitted, at the end of two years, to count such training in lieu of the military training prescribed by the University. All courses in naval science described herein include infantry drill or other practical drill for two hours weekly for all Naval R.O.T.C. students.

Initial enrollment is restricted to able-bodied male students who are citizens of the United States and are between the ages of sixteen and twenty-one years. Students must pass the same physical examination as is required of all candidates for admission to the Naval Academy.

All courses listed are those prescribed by the Navy Department for the Naval Reserve Officers' Training Corps. The United States furnishes on loan to the individual arms, equipment, uniforms, and naval science textbooks for the use of these students. Upon satisfactory completion of the course, a uniform becomes the property of the student who was enrolled in the Regular or Contract status.

*Types of N.R.O.T.C. students.*—Officer candidates in the N.R.O.T.C. will be of three types:

(a) *Regular N.R.O.T.C. students* are appointed Midshipmen, U.S.N.R., and receive retainer pay at a rate of \$600 per year for a maximum period of four years while under instruction at the N.R.O.T.C. institution or during summer training periods. Their tuition, fees, books, and laboratory expenses are paid by the U.S. government during the above period. These students assume an obligation to make all required summer practice cruises (three) and to serve at least fifteen months on active duty after commissioning as Ensigns, U.S. Navy, or Second Lieutenants, U.S. Marine Corps. Students enrolled in this status are selected by nation-wide examination and selection, conducted during the spring preceding the student's entrance into the University in the fall.

(b) *Contract N.R.O.T.C. students* have the status of civilians who have entered into a mutual contract with the Navy. For administrative purposes, they are styled Midshipmen. During their junior and seniors years they are entitled to commutation of subsistence from the first day during an academic term until they complete the course at the institution or their connection with the Naval Reserve Officers' Training Corps is severed in accordance with the regulations prescribed, except that subsistence in kind will be furnished in lieu of commutation of subsistence for any periods devoted to cruises. The amount allowed for subsistence, which will be fixed from time to time by the Secretary of the Navy, will not exceed the value prescribed by law for a commuted ration in the Navy. Contract N.R.O.T.C. students agree to accept a commission in the Naval Reserve or in the Marine Corps Reserve but may, if they so desire and if their services are required, be commissioned as Ensigns, U.S.N., or Second Lieutenants, U.S.M.C., and serve for not less than fifteen months on active duty. Contract N.R.O.T.C. students are required to make one summer practice cruise.

(c) *Naval Science Students*

(1) With the approval of the academic authorities, and the Bureau of Naval Personnel, students may be permitted to pursue naval science courses for college credit only. They are not eligible to make N.R.O.T.C. practice cruises nor to be paid any compensation or benefits.

(2) Naval science students may become eligible for enrollment in N.R.O.T.C. as candidates for commissions provided they comply in every respect with the requirements for original enrollment, when vacancies occur in the unit quota.

Credit may be allowed for work completed during practice cruises and summer camps at the rate of one-half units per each two weeks' duty performed, not to exceed a total of six units.

*Freshman Year*

- |   |           |
|---|-----------|
| 1A. Introduction to Naval Science. (3) I.<br>(Former number, 11.)<br>Orientation, naval administration, and basic seamanship.<br>(BuPers Curriculum NS101.) | The Staff |
| 1B. Communications and Tactics. (3) II.<br>(Former number, 12.)<br>Naval communication, system, and basic tactics.<br>(BuPers Curriculum NS102.)            | The Staff |

*Sophomore Year*

- |   |           |
|---|-----------|
| 2A. Naval Weapons. (3) I.<br>(Former number, 21.)<br>Naval ordnance and gunnery, elementary fire-control.<br>(BuPers Curriculum NS201.) | The Staff |
|---|-----------|

- |   |                  |
|---|------------------|
| <b>2B. Naval Weapons. (3) II.</b><br>(Former number, 22.)<br>Advanced fire control, sound, and electronic devices.<br>(BuPers Curriculum NS202.)  | <b>The Staff</b> |
| <i>Junior Year</i>  |                  |
| <b>101A. Navigation. (3) I.</b><br>(Former number, 131.)<br>Piloting, aerology, celestial navigation.<br>Prerequisite: Mathematics C.<br>(BuPers Curriculum NS301.)                         | <b>The Staff</b> |
| <b>101B. Advanced Seamanship. (3)</b><br>(Former number, 132.)<br>Ship handling, maneuvering board, escort trainer, attack teacher.<br>(BuPers Curriculum NS302.)                           | <b>The Staff</b> |
| <b>*103. Military Principles and the History of War. (3) II.</b><br>(Former number, 133.)<br>(BuPers Curriculum NS302M.)  | <b>The Staff</b> |
| <i>Senior Year</i>  |                  |
| <b>102A. Naval Engineering. (3) I.</b><br>(Former number, 141.)<br>Naval machinery, steam, electrical and Diesel, including auxiliary equipment.<br>(BuPers Curriculum NS401.)              | <b>The Staff</b> |
| <b>102B. Naval Engineering and Damage Control. (3) II.</b><br>(Former number, 142.)<br>A continuation of course 141 followed by principles of damage control.<br>(BuPers Curriculum NS402.) | <b>The Staff</b> |
| <b>*104. Tactics and Technique. (3) I.</b><br>(Former number, 143.)<br>(BuPers Curriculum NS401M.)  | <b>The Staff</b> |
| <b>*105. Amphibious Operations. (3) II.</b><br>(Former number, 144.)<br>The landing team and smaller units.<br>(BuPers Curriculum NS402M.)  | <b>The Staff</b> |

## NURSING

- LULU K. WOLF, R.N., M.P.H., Professor of Nursing (Chairman of the Department).
- ELINOR LEE BEEBE, R.N., Ph.D., Associate Professor of Public Health Nursing.
- ANNA M. STEFFEN, R.N., M.A., Associate Professor of Nursing.
- JANET F. WALKER, R.N., M.S., Associate Professor of Public Health Nursing.
- ELEANORE B. BOTSFORD, R.N., M.A., Assistant Professor of Obstetric Nursing.
- DOROTHY E. JOHNSON, R.N., M.P.H., Assistant Professor of Pediatric Nursing.
- AGNES A. O'LEARY, R.N., M.P.H., Assistant Professor of Public Health Nursing.
- FLORENCE B. WEINER, R.N., M.Litt., Assistant Professor of Psychiatric Nursing.

\* These courses to be pursued by candidates for commissions in the Marine Corps or Marine Corps Reserves in place of courses 101B, 102A, and 102B.

\_\_\_\_\_, Assistant Professor of Nursing.

DORIS S. BERNHAGEN, M.A., Instructor in Social Work Methods.

MARION S. MAYNE, R.N., B.S., Instructor in Industrial Nursing.

\_\_\_\_\_, Instructor in Nursing.



JUDITH A. DAVIES, R.N., M.S., Lecturer in Public Health Nursing.

ANN LUISE FINCH, R.N., B.S., Lecturer in Public Health Nursing.

ETHEL MAY GOLDBRICK, R.N., P.H.N. Certificate, Lecturer in Public Health Nursing.

OLIVE WHITLOCK KLUMP, R.N., B.S., Lecturer in Public Health Nursing.

EDELL F. LITTLE, R.N., B.S., Lecturer in Public Health Nursing.

MARJORIE E. LYFORD, R.N., B.S., Lecturer in Public Health Nursing.

RUTH G. McDONALD, R.N., B.S., Lecturer in Public Health Nursing.

MARY MCQUILLEN, R.N., M.A., Lecturer in Public Health Nursing.

EDITH V. MARTINS, R.N., B.S., Lecturer in Public Health Nursing.

MYONA M. MORRISON, R.N., M.P.H., Lecturer in Public Health Nursing.

IRENE F. TUGEND, Professional Certificate in Social Case Work, Lecturer in Public Health Nursing.

HELEN L. WOODWORTH, R.N., B.S., Lecturer in Public Health Nursing.

### College of Applied Arts

The Department of Nursing offers to graduate registered nurses\* two curricula leading to the Bachelor of Science degree. These curricula include theory and practice in public health nursing and industrial nursing, and are designed to prepare registered nurses for health services to individuals and families in the hospital, home, school, industry, and public health agency. The degree of Bachelor of Science will be awarded to students meeting requirements for graduation in the College of Applied Arts as listed on page 105.

Requirements for admission to the major are: graduation from an approved school of nursing and evidence of the fulfillment of the legal requirements for the practice of nursing.° The faculty of the Department of Nursing reserves the right to reject any student or applicant on the ground of obvious physical, mental, or moral disability.

#### 1. Major in Nursing.

*Preparation for the Major.*—English 1A–1B, Psychology 1A–1B, Sociology 3 or its equivalent, Chemistry 2A or its equivalent. All students who have not had experience in public health nursing must complete Nursing 319A before enrolling in other nursing courses.†

*The Major.*—Thirty-six units of upper division courses, including courses 105, 110, 111A–111B, 112, 113, 115, 140, 319A–319B, Home Economics 112, Public Health 100A, 145, 162, Education 151.

#### 2. Major in Industrial Nursing.

*Preparation for the Major.*—English 1A–1B, Psychology 1A–1B, Economics 1A–1B, Chemistry 2A or its equivalent. All students who have not had experience in public health nursing must complete Nursing 319A before enrolling in other nursing courses.†

\* Twenty-four units of credit will be granted for the hospital nursing course.

† Those planning to enroll in September should make arrangements to take Nursing 319A in August; those enrolling in February should take Nursing 319A in January. Students must contact the Department of Nursing two months in advance of enrollment date.

° Evidence of nurse registration should be sent to the Office of Admissions with the application for admission to the University.



*The Major.*—Thirty-six units of upper division courses, including courses 105, 110, 111A-111B, 112, 113, 115, 140, 319A-319B, Education 151, Home Economics 112, Public Health 145, 162, 170.

*California State Certificate in Public Health Nursing.*—Students make application for this certificate directly to the Bureau of Public Health Nursing, State Department of Public Health, San Francisco.

*California State Health and Development Credential.*—Students make application for this credential directly to the Credential Technician, State Department of Education, Sacramento.

#### UPPER DIVISION COURSES

Admission to all upper division courses requires upper division standing and completion of course prerequisites. Course 319A must be taken before all other nursing courses.

#### 105. Community Health and Welfare Programs. (2) I, II.

Miss Botsford, Miss Walker

Examination of the nature, functions, and activities of health and welfare agencies at the community level; emphasis is placed upon the interrelationship of various public and private social welfare resources and facilities, upon factors influencing the development and nature of such facilities, and upon ways in which one makes use of available facilities. Field trips.

#### 110. Social Work Methods and Nursing. (2) I, II.

Mrs. Bernhagen

Discussion of interviewing, the preparation of social histories, and other social work methods useful to nurses; an introduction to case work, group work, and other specialized social work methods commonly employed by social welfare agencies with which nurses often work.

#### 111A. Survey of Nursing. (2) I, II.

Miss Steffen

The history and development of nursing, its scope, functions, and objectives; principles of organization and administration as they apply to schools of nursing and the practice of nursing in the various fields.

#### 111B. Survey of Nursing. (2) I, II.

Miss Beebe

The history and development of public health nursing, its scope, functions, and objectives.

#### 112. Maternal and Child Health. (2) I, II.

Miss Botsford, Miss Johnson

Newer theories and principles of maternal, infant, and child care which are significant to public health nursing; public health nursing functions and responsibilities in the promotion of maternal, infant, and child health.

#### 113. Adult Health and Morbidity Services. (2) I, II.

Miss O'Leary

Public health nursing functions and responsibilities in the prevention of disease, the care of the sick, and the promotion of health in the adult with special emphasis on mental health, nutrition, industrial hygiene, heart disease, cancer, diabetes, and the problems of the aged. Field trips.

#### 115. Individual and Family Welfare. (2) I.

Miss Weiner

Analysis of the physical, psychological, and social requirements for personal and social well-being; includes examination of the dynamics of interpersonal relationships and of the effect of cultural, community, and environmental factors upon individual and family welfare.

#### 140. Health Teaching. (3) I, II.

Miss O'Leary, Miss Johnson

A discussion of the content, methods, and materials of instruction as applied to individual, family, and community needs. Field observations and guided participation in group teaching.

- 151. Development and Principles of Industrial Nursing.** (3) I. Mrs. Mayne  
An interpretation of in-plant health services and the functions of the nurse in industry; a study of her interrelationship with management and labor organizations; a discussion of workmen's compensation and insurance programs. Field trips.
- 160. Psychiatric Nursing.** (3) II. Miss Weiner  
Basic concepts of psychiatric nursing and a consideration of how these concepts may be applied to nursing problems and particularly to those problems met in the nursing care of psychiatric patients. Lectures and demonstrations.
- 161. Field Work in Psychiatric Nursing.** (3-5) II. Miss Weiner  
Observation of, and guided experience in the care of psychiatric patients. Minimum of twelve hours per week, including two to three hours of staff meetings and conferences.
- 319. Field Experience in Public Health Nursing.** (1-8) I, II. The Staff  
Prerequisite: consent of the instructor.  
Supervised field assignment with designated affiliated agencies of the Los Angeles area.
- 319A. Orientation to the Public Health Nursing Field.** (2) I, II. The Staff  
Planned observation and guided participation in a generalized public health nursing program. Required of all students who have not had previous experience in public health nursing. One month. Offered in August and January.
- 319B. Field Experience in Public Health Nursing.** (4-6) I, II. The Staff  
Guided experience in a generalized public health nursing program or a bedside care program or both.

## GRADUATE COURSES

- 205. Nursing Research and Statistical Data.** (2) I, II. Miss Steffen and the Staff  
Exploration and evaluation of studies and research in nursing. Use of the scientific method and the handling of statistical data as an aid in the selection and solution of studies and thesis problems.
- 210. Changing Perspectives in the Nursing Profession.** (2) II. Miss Wolf and the Staff  
A critical examination of the current situation in nursing and a consideration of the changing perspectives in the health fields. Consideration of the social and economic aspects of nursing and the interrelationship of the nurse as a member of the health team. Discussion is directed toward developing a working philosophy for leaders of professional nursing.
- 225. Administration in Nursing.** (2) I, II. Miss Wolf and the Staff  
A systematic study of the fundamentals of organization and administration with emphasis upon their application to the field of nursing.
- 230. Curriculum Development in Nursing.** (2) I. The Staff  
A critical evaluation of present-day nursing curricula, with a consideration of objectives, teaching methods, source materials, community resources, and sequence of instruction. Individual and group studies in university nursing-curriculum building.
- 252. Seminar in Nursing Service Administration.** (2-4) II. Miss Steffen  
Evaluation of the fundamentals of hospital nursing service administration including ward administration, personnel management, in-service education programs, nursing functions, team activities, and community relationships. Individual and group study and field work.

- 254. Seminar in Nursing School Administration. (2-4) II. Miss Wolf**  
Evaluation of the fundamentals of nursing school administration including organization, control, personnel, physical and clinical facilities, curriculum, teaching, student selection, and student welfare. Individual and group study and field work.
- 256. Seminar in Public Health Nursing Administration. (2-4) II. Miss O'Leary, Miss Walker**  
Evaluation of the fundamentals of public health nursing administration including agency interrelationships, student welfare, supervisory activities, and program planning in official and nonofficial agencies in urban and rural areas. Individual and group study and field work.
- 258. Seminar in Advanced Pediatric Nursing. (2-4) II. Miss Johnson**  
Evaluation of the needs of infants and children at different age levels and the various programs designed to meet these needs in urban and rural areas. Individual and group study and field work in child-care programs.
- 262. Seminar in Advanced Obstetric Nursing. (2-4) II. Miss Botsford**  
Evaluation of present obstetric practices, and analysis of recent advances and changing philosophy in the care of mother and baby; community organization for maternal and child care; individual and group study and field work.

## OCEANOGRAPHY

- ROGER R. REVELLE, Ph.D., Acting Director of the Scripps Institution of Oceanography and Professor of Oceanography.  
 CARL ECKART, Ph.D., Professor of Geophysics.  
 DENIS L. FOX, Ph.D., Professor of Marine Biochemistry.  
 CARL L. HUBBS, Ph.D., Professor of Biology.  
 MARTIN W. JOHNSON, Ph.D., Professor of Marine Biology.  
 G. F. MCEWEN, Ph.D., Professor and Curator of Physical Oceanography.  
 NORRIS W. RAKESTRAW, Ph.D., Professor of Chemistry.  
 FRANCIS P. SHEPARD, Ph.D., Professor of Submarine Geology.  
 CLAUDE E. ZOBELL, Ph.D., Professor of Marine Microbiology.  
 WALTER H. MUNK, Ph.D., Associate Professor of Geophysics.  
 FRED B. PHLEGER, Ph.D., Visiting Associate Professor of Submarine Geology.  
 RUSSELL W. RAITT, Ph.D., Associate Professor of Geophysics.  
 MARSTON C. SARGENT, Ph.D., Assistant Professor of Oceanography.  
 THEODORE J. WALKER, Ph.D., Instructor in Oceanography.  
 ROBERT S. DIETZ, Ph.D., Lecturer in Submarine Geology.  
 R. DANA RUSSELL, Ph.D., Lecturer in Submarine Geology.  
 ROBERT S. ARTHUR, A.B., Assistant Oceanographer.  
 ROBERT O. REID, M.S., Assistant Oceanographer.  
 GIFFORD C. EWING, M.S., Associate in Oceanography.

The courses in oceanography are given at the Scripps Institution of Oceanography at La Jolla, California. For further information concerning the Institution write to the Director.

*Letters and Science List.*—All courses in oceanography are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Advanced degrees.*—Work leading to the master's or Ph.D. degree in oceanography and certain other marine sciences is offered to a limited number of qualified students subject to the rules and regulations of the University as set forth in the ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION. The student must be well trained in the fundamentals before coming to La Jolla. Resident work at Los Angeles or Berkeley may be required of candidates for advanced degrees.

*Preliminary requirements for a degree in oceanography.†*

(a) Graduation from an approved college or university, with major concentration in: mathematics, meteorology, engineering, or one of the physical or biological sciences.

(b) At least one one-year course in each of the following: mathematics, physics, chemistry, and one of the biological sciences.

(c) Preparation in foreign languages sufficient to pass a reading examination in German and/or French by the beginning of the second year. (Only one foreign language is required for the master's degree, but two for the doctor's degree.)

(d) Preparation in physical chemistry, organic chemistry, integral calculus, and geology is recommended.

During their first year, graduate students in oceanography will normally take the four upper division courses, 110, 111, 112, 113.

*Requirements for an advanced degree in other fields of study.*—Through a cooperative arrangement with other departments of the University, a student may do his research work in certain fields of study closely related to oceanography, i.e., chemistry, geological sciences, meteorology, microbiology, physical-biological science, plant science, and zoölogy. The preliminary requirements are the same as those listed under the corresponding departments or fields of study in this bulletin and in the ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION. In addition, the student is required to complete at least two of courses 110 to 114 besides the work done in his special field. The credentials and proposed study program of the student must be approved by the chairman of the proper department or field of study, the Dean of the Graduate Division, Southern Section, and the Director of the Scripps Institution.

Any department of the University is invited to send its students to the Scripps Institution for special work. Ordinarily the department sending students will be responsible for the direction of the work but arrangements can be made for such students to work under the joint direction of the department and the staff of the Institution. Such students may register in one or more of the marine sciences at the Institution or they may register for some other subject in some other department of the University.

Students may not undertake graduate work at the Scripps Institution without approval in advance from the Dean of the Graduate Division, Southern Section.

## UPPER DIVISION COURSES

- |  |                       |
|--|-----------------------|
| 110. Introduction to Physical Oceanography. (3) I. | Mr. Revelle, Mr. Reid |
| 111. Submarine Geology. (3) I.                     | Mr. Shepard           |
| 112. Biology of the Sea. (3) I.                    | Mr. Johnson           |
| 113. Chemistry of Sea Water. (3) I.                | Mr. Bakestraw         |
| 114. Marine Vertebrates. (3) I.                    | Mr. Hubbs             |
| 116. Principles of Underwater Sound. (2) II.       | Mr. Raitt             |

Elementary discussion of the propagation of sound in an ideal medium. Differences between the ocean and an ideal medium. Refraction of sound rays by the temperature gradients in the ocean. Experimental results on the transmission of sound in the ocean. Oceanography of temperature gradients. The scattering of sound by the ocean surface, bottom, and volume. Theoretical and experimental results on backward scattering (reverberation).

† Students who fail to meet these requirements may be admitted in "unclassified" status until deficiencies are removed.

117. **Chemical Methods.** (1) II. Mr. Rakestraw  
 Prerequisite: Oceanography 113.  
 A laboratory course dealing with the chemical methods of analysis in routine use in oceanographic observations and the assembling and correlating of chemical data.
118. **Statistics.** (2) II. Mr. McEwen  
 Theory of correlation; frequency distribution; interpolation; harmonic analysis.
121. **Marine Microbiology.** (3) II. Mr. ZoBell  
 Prerequisite: courses 110, 112, and 113.  
 Methods of studying bacteria and allied microorganisms with particular reference to their importance as biochemical and geological agents in the sea.
122. **Marine Biochemistry.** (2) II. Mr. Fox  
 Prerequisite: fundamental courses in chemistry and biology, or Oceanography 112 and 113, and consent of the instructor.  
 The chemistry of living matter; marine colloids, comparative biochemical and physiological activities of marine animals; biochemical cycles in the sea.
199. **Special Studies in Oceanography.** (1-4) I, II. The Staff  
 Introduction to the observational and experimental methods, research problems, and literature of one or more of the following oceanographic sciences: physical oceanography; submarine geology; chemical oceanography; biological oceanography, including marine biochemistry, marine microbiology, marine botany, marine vertebrates and invertebrates. Open to advanced students by arrangement.

GRADUATE COURSES

210. **Physical Oceanography—General.** (3) II. Mr. Munk  
 Dynamics of ocean currents; turbulence; wind currents; atmospheric boundary layer; water masses and currents of the ocean; work at sea.
211. **Waves.** (3) II. Mr. Arthur  
 Theory of surface and internal waves; wind waves, swell and surf; wave action on beaches; methods of observation; field work.
212. **Tides.** (3) I. Mr. McEwen  
 Theory of tides; seiches; tides in adjacent seas; character of tides in different oceans; application of harmonic analysis.
217. **Hydrodynamics.** (3) I. Mr. Eckart  
 A systematic exposition of the principles governing the flow of fluids. The various mathematical forms of the conservation principles (matter, momentum, energy), and of the second law of thermodynamics, are derived and illustrated by examples and problems.
- 218A-218B. **Marine Sediments.** (3-3) Yr.  
 Mr. Dietz, Mr. Revells, Mr. Russell, Mr. Shepard  
 Lectures and laboratory. Origin, distribution, interpretation, and methods of study of marine sediments.
219. **Micropaleontology.** (2) II. Mr. Phleger  
 Prerequisite: course 111 or the equivalent.  
 Laboratory work, with occasional lectures, on the identification and ecology of foraminifera, with special emphasis on their significance in marine geology.
220. **Special Topics in Oceanography.** (2) I. The Staff and Visitors  
 Lectures and demonstrations by different members of the staff and visitors. Present problems in oceanography; applications of oceanographic knowledge.

250. Seminar in Oceanography. (1) I, II. The Staff  
 251. Problems in General Oceanography. (3) I. Mr. Ewing  
 Presentation of reports and review of literature in general oceanography.

## RESEARCH COURSE

299. Research in Oceanography. (1-6) I, II. The Staff  
 Research in one or more of the following oceanographic sciences: physical oceanography; submarine geology; chemical oceanography; biological oceanography, including marine biochemistry, marine microbiology, marine botany, marine vertebrates and invertebrates. Students must present evidence of satisfactory preparation for the work proposed.

## ORIENTAL LANGUAGES

RICHARD C. RUDOLPH, Ph.D., Associate Professor of Oriental Languages  
 (Chairman of the Department).  
 ENSHO ASHIKAGA, M.Litt., Assistant Professor of Oriental Languages.  
 KYOICHI ARIMITSU, M.A., Instructor in Oriental Languages.  
 Y. C. CHU, M.A., Associate in Chinese.

*Letters and Science List.*—All undergraduate courses in Oriental languages 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 or 21A-21B, 9A-9B or 29A-29B, 32 or 42, and 13A-13B. Recommended: Anthropology 1B.

*The Major.*—Required: Twenty-four upper division units of Oriental languages of which 16 units must be in language courses, and History 191A. Recommended: History 191B, Geography 124B, Art 161A-161B. A reading knowledge of French and German is highly desirable.

## LOWER DIVISION COURSES

- 1A-1B. Elementary Modern Chinese. (4-4) Yr. Mr. Chu  
 Introduction to the standard or "National Language" (Kuo Yü) of China.  
 Not open to students with previous training. Five hours a week.
- 9A-9B. Elementary Modern Japanese. (4-4) Yr. Mr. Ashikaga  
 Not open to students with previous training. Five hours a week.
- 13A-13B. Classical Chinese. (2-2) Yr. Mr. Rudolph  
 Prerequisite: course 1A or consent of the instructor.  
 Introduction to the development of Chinese writing and the Classical language in which the bulk of Chinese literature is written.
- 21A-21B. Chinese Oral and Written Composition. (3-3) Yr. Mr. Chu  
 An elementary course for those who have had previous training in Chinese.
- 29A-29B. Japanese Oral and Written Composition. (3-3) Yr. Mr. Arimitsu  
 An elementary course for those who have had previous training in Japanese.
32. History of Japanese Civilization. (2) II. Mr. Arimitsu  
 Prerequisite: sophomore standing.  
 A survey of the development of Japanese culture and its relationship to the Asiatic mainland.
42. History of Chinese Civilization. (2) I. Mr. Rudolph  
 Prerequisite: sophomore standing.  
 A survey of the development of the outstanding aspects of Chinese culture from prehistoric times to the eighteenth century, with emphasis on the archaeology of China.

UPPER DIVISION COURSES

- 101A-101B. **Intermediate Chinese.** (3-3) Yr. Mr. Chu  
A continuation of 1A-1B.
- 109A-109B. **Intermediate Modern Japanese.** (3-3) Yr. Mr. Ashikaga  
A continuation of 9A-9B.
112. **Chinese Literature in Translation.** (2) II. Mr. Rudolph  
Lectures and collateral reading of representative works—including classics, histories, belles-lettres, and fiction—in Western translations. Special emphasis will be given to the writings resulting from the literary revolution (1917).
- 113A-113B. **Intermediate Classical Chinese.** (2-2) Yr. Mr. Rudolph  
Further readings in the classics.
- 119A-119B. **Advanced Modern Japanese.** (3-3) Yr. Mr. Arimitsu  
A continuation of 29A-29B and 109A-109B.
- 121A-121B. **Advanced Chinese.** (3-3) Yr. Mr. Chu  
A continuation of 21A-21B and 101A-101B, with practice in newspaper style.
- 129A-129B. **Classical Japanese and Kambun.** (2-2) Yr. Mr. Ashikaga
132. **History of Japanese Literature.** (2) I. Mr. Arimitsu  
History of Japanese literature in translation from the beginning to modern times, emphasizing Chinese, Buddhist, and Western influences.
163. **Readings in Chinese.** (3) I. Mr. Rudolph  
Selections from masters in the *Ku wen* style.
173. **Chinese Historical Texts.** (2) II. Mr. Rudolph
195. **Methods and Bibliography in Chinese Research.** (2) II. Mr. Rudolph
199. **Special Individual Study.** (1-4) I, II. The Staff

## PHILOSOPHY

HUGH MILLER, Ph.D., Professor of Philosophy.

DONALD A. PIATT, Ph.D., Professor of Philosophy (Chairman of the Department).

HANS REICHENBACH, Ph.D., Professor of Philosophy.

JOHN ELOF BOODIN, Ph.D., Professor of Philosophy, Emeritus.

ERNEST C. MOORE, Ph.D., LL.D., Professor of Philosophy and Education, Emeritus.

J. WESLEY ROBSON, Ph.D., Associate Professor of Philosophy.

ABRAHAM KAPLAN, Ph.D., Associate Professor of Philosophy.

HANS MEYERHOFF, Ph.D., Assistant Professor of Philosophy.

ROBERT M. YOST, JR., Ph.D., Assistant Professor of Philosophy.

DONALD KALISH, Ph.D., Instructor in Philosophy.

*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 courses 20A, 20B. Course 30 must be taken either as part of the preparation for the major or in the upper division.

*The Major.*—Twenty-four units in upper division courses, including:

1. Course 148 (unless course 31 has been taken).
2. Six units from among courses 152, 153, 162, 163, 166.
3. Six units from among courses 104A-104B, 121, 147, 183.

Three units of the upper division requirement may be from courses in other departments, provided they are relevant to the major and approved by the departmental adviser.

*Requirements for Regular Graduate Standing.*—In addition to the general University requirements and those for an undergraduate major in this department, the following courses (or their equivalents) are prerequisite to regular graduate standing: course 31, 104A-104B, 152 or 153, 162 or 163, 166, and three units from the Systematic Studies group numbered 180 to 189.

*Requirements for the Master's Degree.*—For the general requirements, see page 120. The Department of Philosophy requires:

1. A reading knowledge of one foreign language. The languages which the department will accept are Greek, Latin, French, and German.
2. At least 20 semester units, 8 or more of which must be in strictly graduate courses and the remainder in undergraduate courses numbered over 150.
3. A thesis supervised and approved by the department.
4. An oral examination designed to test the student's general knowledge of the history of philosophy, ethics and social philosophy, and logic and scientific method.

*Requirements for the Doctor's Degree.*—For general regulations concerning this degree, see page 123. In the Department of Philosophy, the preliminary requirements are as follows:

1. A reading knowledge of two foreign languages. The acceptable languages are Greek, Latin, French, and German.
2. Satisfaction of all the courses for a bachelor's or master's degree in a department or field of concentration other than Philosophy.\*
3. Qualifying examinations for advancement to candidacy consisting of (a) written examinations in the following fields: logic, history of philosophy, either philosophy of science or contemporary philosophy, and either ethics, social philosophy, or metaphysics\* and (b) an oral examination in the field of the student's special interest.

#### LOWER DIVISION COURSES

All lower division courses are introductory and without prerequisite, except as otherwise stated.

#### 3. Logic in Practice. (2) I.

Mr. Kaplan

(Former number, 6.)

Language and its analysis as an instrument of sound thinking in morals, politics, and everyday life.

#### 4. Short Introduction to Philosophy. (2) I, II.

Not open for credit to students who have completed 6A.

#### 5. Problems of Ethics and Religion. (2) I, II.

Mr. Meyerhoff

Human conduct, its rules and natural law; the moral basis of institutions; religion and the moral order.

#### 6A-6B. Introduction to Philosophy. (3-3) Yr. Beginning either semester.

Mr. Yost, Mr. Meyerhoff, Mr. Kalish

(Former number, 2A-2B.)

A philosophical analysis of the basic ideas and methods in political theory, morals, art, science, and religion; and of the interrelations of these fields. An attempt is made to provide the student with a critical technique for developing

\* Not applicable to those who filed applications for candidacy before March 15, 1950.



a well-considered philosophy of his own. Recommended as a course to satisfy requirement (G) (2) in the College of Letters and Science.

Course 6A is a prerequisite to course 6B, and is not open for credit to students who have completed course 4.

**20A. History of Greek Philosophy. (3) I, II.**

(Former number, 20.)

Mr. Miller, Mr. Yost, Mr. Robson

The beginnings of Western science and philosophy; Socrates, Plato, and Aristotle; Greek philosophies in the Roman world and in the Christian era.

**20B. History of Modern Philosophy. (3) I, II.**

(Former number, 21.)

Mr. Miller, Mr. Yost, Mr. Robson

The Renaissance and the rise of modern science; rationalism in Descartes, Spinoza, Leibniz; empiricism in Locke, Berkeley, Hume; Kant and his successors; recent movements.

**30. Inductive Logic and Scientific Method. (3) I, II.**

Mr. Reichenbach, Mr. Kalish

The use of logic in science and practical life; fallacies; theory of indirect evidence; construction of scientific hypotheses; probability and statistical method.

**31. Deductive Logic. (3) I, II.**

Mr. Kalish, Mr. Reichenbach

The elements of formal logic; Aristotle's logic; modern symbolic logic. The forms of reasoning and the structure of language.

UPPER DIVISION COURSES

Upper division courses in philosophy include: (a) *General Studies* (numbered 104A to 148), dealing with the principles of wide fields of inquiry such as the natural sciences, the social sciences, and the humanities, or surveying the chief tendencies in the thought of a period. (b) *Historical Studies* (numbered 152 to 176), dealing more intensively with special periods or with individual thinkers. (c) *Systematic Studies* (numbered 180 to 188), pursuing a more rigorous analysis of the logical foundations of mathematics, science, and philosophy. Course 199A-199B is an individual problem course, available to exceptional students whose special studies are not included in the above curriculum.

*General Studies*

Prerequisite for all courses in this group: 6 units in philosophy or upper division standing, except as otherwise stated.

**104A. Ethics. (3) I.**

Mr. Piatt

Prerequisite: 9 units from Anthropology 1B, Sociology 1A-1B, Sociology 142, Economics 1A-1B, Political Science 1, 2, Psychology 1A, Psychology 147. Recommended: Psychology 147.

Morality in theory and practice: the history and development of ethical theory.

**104B. Ethics. (3) II.**

Mr. Piatt

Prerequisite: course 104A.

Morality in theory and practice: the critical application of ethical theory to contemporary civilization, with special reference to economic and political life.

**\*112. Philosophy of Religion. (3) I.**

Mr. Meyerhoff

The existence and nature of God, human free will, the problem of evil, the relation of church and state, the rivalry of living religions.

**\*114. History of American Thought. (3) II.**

Philosophies which have influenced American history, from colonial times to the present.

\* Not to be given, 1950-1951.

- 121. Political Philosophy. (2) II.** Mr. Miller  
Prerequisite: 6 units of philosophy, or adequate preparation in the social sciences and history.  
A study of the evolution of government, showing its causal relation to the development of science and philosophy, and its issue in democracy.
- 123. Romanticism and Evolution. (2) I.** Mr. Kaplan  
The impact of romanticist and evolutionary philosophies on ethics, politics, and literature, with special reference to Schopenhauer, Nietzsche, and Bergson.
- 124. Oriental Philosophy. (2) II.** Mr. Kaplan  
Prerequisite: course 20A-20B. Recommended: course 30.  
A survey of the major philosophical systems of China and India: Hindu, Buddhist, Confucian, and Taoist. Attention will be paid to differences and similarities between these and dominant western conceptions of methodology, ethics, and social philosophy.
- 136. Philosophy of Art. (3) I.** Mr. Kaplan  
Relation of the philosophy of art to the artist's activity, to aesthetic experience, and to the criticism of art. The principal theories of the nature of art; of aesthetic contemplation; and of beauty, sublimity, and other categories of aesthetic value. Nature and validity of standards of criticism.
- 146. Philosophy in Literature. (3) I.** Mr. Robson  
A study of philosophical ideas expressed in the literary masterpieces of Plato, Lucretius, Dante, Shakespeare, Goethe, Tolstoy, Lewis Carroll, Thomas Mann, and others.
- \*147. Philosophy of History. (3) II.** Mr. Miller  
Prerequisite: 6 units of philosophy, or adequate preparation in history and the social sciences.  
A study of historical progress, relating human progress to the natural evolution described by modern science.
- \*148. Philosophy of Nature. (3) I.** Mr. Reichenbach  
The physical universe and man's place in it in the light of modern discoveries.

#### *Historical Studies*

Prerequisite for all courses in this group: upper division standing in addition to the specific requirements stated.

- \*152. Plato and His Predecessors. (3) I.** Mr. Meyerhoff  
Prerequisite: course 20A or consent of the instructor.
- 153. Aristotle and Later Greek Philosophy. (3) I.** Mr. Meyerhoff  
Prerequisite: course 20A or consent of the instructor.
- \*157. Medieval Philosophy. (3) II.** \_\_\_\_\_  
Prerequisite: course 20A or the equivalent.  
Philosophy in Christendom from the fourth to the fourteenth century, with particular reference to St. Augustine and St. Thomas Aquinas.
- 162. Continental Rationalism. (3) II.** Mr. Yost  
Prerequisite: course 20B.  
The philosophies of Descartes, Spinoza, and Leibniz.
- 163. British Empiricism. (3) I.** Mr. Robson  
Prerequisite: course 20B.  
The philosophies of Locke, Berkeley, and Hume.
- 166. Kant. (3) II.** Mr. Kaplan  
Prerequisite: course 162 or 163, or consent of the instructor.

- \*167. **Post-Kantian Idealism.** (2) II. \_\_\_\_\_  
 Prerequisite: course 166.
168. **Development of Scientific Empiricism.** (2) I. \_\_\_\_\_  
 Prerequisite: course 20B or consent of the instructor.  
 Positivism, materialism, and the philosophies of science in the nineteenth and early twentieth centuries, with special reference to Comte, Spencer, Mach, and Russell.
- \*172. **Contemporary Philosophy: Idealism.** (2) I. \_\_\_\_\_  
 Prerequisite: course 20B.  
 Idealism in Europe and America, with special reference to Bradley, Royce, Bergson, Croce.
174. **Contemporary Philosophy: Realism.** (3) II. Mr. Kalish  
 Prerequisite: course 20B.  
 Theories of knowledge and nature in Moore, Russell, Santayana, Whitehead, and others.
- \*175. **Contemporary Philosophy: Pragmatism.** (2) II. Mr. Piatt  
 Prerequisite: consent of the instructor, based on the student's knowledge of the history of philosophy.  
 A systematic and critical analysis of American pragmatism, with special reference to James, Dewey, and Mead.
- \*176. **Naturalism.** (2) I. Mr. Kalish  
 Prerequisite: consent of the instructor, based on the student's knowledge of the history of philosophy.  
 A systematic and critical study of the development of naturalism.

*Systematic Studies*

Prerequisite for all courses in this group: upper division standing in addition to the specific requirements stated.

180. **Philosophy of Space and Time.** (3) I. Mr. Reichenbach  
 Prerequisite: course 30 or the equivalent.  
 Euclidean and non-Euclidean geometry; problem of physical space; visualization of geometrical systems; structure of time; philosophical elements of Einstein's theory of relativity; gravitation, matter, geometry.
181. **Theory of Knowledge.** (3) I. Mr. Yost  
 Prerequisite: course 30 or the equivalent.  
 Not open for credit to students who have had course 149.  
 Theories of language, truth, probability, and meaning. The foundations of empiricism: the problem of impressions and the existence of external objects; the construction of our knowledge of the physical world on the basis of observation; the nature of psychology.
- \*182. **Empirical Rationalism.** (2) II. Mr. Miller  
 Prerequisite: 3 units from courses listed under Historical Studies.  
 A systematic exposition of epistemology and metaphysics, showing how the diverse traditions and movements of philosophy find their synthesis today as the result of recent advances in logic and the sciences.
183. **Social Philosophy.** (3) II. Mr. Meyerhoff  
 Prerequisite: consent of the instructor, based on preparation in philosophy, psychology, and social science.  
 Problems of social policy and the logic of the social sciences, with special reference to recent developments in the conception of human nature and interpersonal relations.

\* Not to be given, 1950-1951.

184. **Advanced Logic.** (3) II. Mr. Reichenbach  
Prerequisite: course 31 or the equivalent.  
Methods of symbolic logic; foundations of mathematics; concept of the infinite; paradoxes of logic; logic and language; multivalued logics.
- \*185. **Foundations of Probability and Statistics.** (3) II. Mr. Reichenbach  
Prerequisite: courses 30 and 31, or the equivalent.  
Logical and mathematical theories of probability; development of the mathematical calculus of probability in a logistic form; outlines of a general mathematical theory of probability and statistics; different interpretations of probability; problem of induction; probability logic.
186. **Philosophy of Evolution.** (2) I. Mr. Miller  
Prerequisite: consent of the instructor.  
A study of the basic concepts of evolution now used in the several sciences, looking to the expansion of these concepts in an adequate philosophy of nature and society.
187. **Semantics.** (3) I. Mr. Kalish  
Prerequisite: course 31.  
Philosophy of language and meaning, with special reference to its implications for logic, theory of knowledge, and theory of value. A study will be made of the contributions of Frege, Russell, Tarski, Carnap, Morris, Quine, and others.
- 199A-199B. **Selected Problems in Philosophy.** (2-3; 2-3) Yr.  
Admission by special arrangement. Mr. Piatt in charge

## GRADUATE COURSES

251. **Seminar: Metaphysics.** (3) I. Mr. Miller
252. **Seminar: Naturalism.** (3) I. Mr. Piatt
- \*253. **Seminar: Pragmatism.** (3) I. Mr. Piatt
254. **Seminar: Ethics and Theory of Value.** (3) II. Mr. Piatt
- \*255. **Seminar: Political Philosophy.** (3) II. Mr. Miller
256. **Seminar: Philosophy of Art.** (3) II. Mr. Kaplan
257. **Seminar: Philosophy of History.** (3) II. Mr. Miller
258. **Seminar: Hume.** (3) II. Mr. Robson
- \*260. **Seminar: Philosophy of Mathematics.** (3) I. Mr. Reichenbach
- \*262. **Seminar: Philosophy of Physics.** (3) II. Mr. Reichenbach
263. **Seminar: Epistemology.** (3) I. Mr. Reichenbach
264. **Seminar: Logic.** (3) II. Mr. Reichenbach
- 298A-298B. **Special Study: Selected Problems in Philosophy.** (2-4; 2-4) Yr.  
Mr. Piatt in charge

## RELATED COURSE IN ANOTHER DEPARTMENT

- \*Sociology 169. **Ethical Problems of Social Organization.** (3) I.  
Mr. Selznick, Mr. Kaplan

**PHYSICAL EDUCATION**

ROSALIND CASSIDY, Ed.D., Professor of Physical Education.

CARL HAVEN YOUNG, Ed.D., Professor of Physical Education (Chairman of the Department).

\_\_\_\_\_, Professor of Physical Education.

\* Not to be given, 1950-1951.

- JOHN F. BOVARD, Ph.D., Professor of Physical Education, Emeritus.  
 MARTHA B. DEANE, B.S., Professor of Physical Education and Director of the Women's Division.  
 RUTH ABERNATHY, Ph.D., Associate Professor of Physical Education.  
 EDWARD B. JOHNS, Ed.D., Associate Professor of Physical Education.  
 WAYNE W. MASSEY, Ph.D., Visiting Associate Professor of Physical Education.  
 DUANE ROBINSON, Ph.D., Visiting Associate Professor of Physical Education.  
 RUTH E. FULTON, Ph.D., Assistant Professor of Physical Education.  
 VALERIE HUNT, Ed.D., Assistant Professor of Physical Education.  
 NORMAN P. MILLER, Ed.D., Assistant Professor of Physical Education.  
 WILLIAM H. SPAULDING, A.B., Director of Athletics, Emeritus.  
 NORMAN D. DUNCAN, M.A., Associate Supervisor of Physical Education and Director of the Men's Division.  
 PAUL FRAMPTON, M.A., Associate Supervisor of Physical Education.  
 DONALD T. HANDY, M.A., Associate Supervisor of Physical Education.  
 CECIL B. HOLLINGSWORTH, Ed.D., Associate Supervisor of Physical Education.  
 EDITH I. HYDE, M.A., Associate Supervisor of Physical Education.  
 DONALD K. PARK, B.S., Associate Supervisor of Physical Education.  
 \*ORSIE THOMSON, M.A., Associate Supervisor of Physical Education.  
 MARJORY ALLEN, Ed.B., Assistant Supervisor of Physical Education.  
 DIANA W. ANDERSON, M.A., Assistant Supervisor of Physical Education and Supervisor of Training, Physical Education.  
 \*JUNE BRECK, M.A., Assistant Supervisor of Physical Education.  
 WALTER CROWE, B.S., Assistant Supervisor of Physical Education.  
 M. BRIGGS HUNT, Ed.B., Assistant Supervisor of Physical Education.  
 RUTH JACOBS, B.S., Assistant Supervisor of Physical Education.  
 PATRICIA LAFLER, M.S., Assistant Supervisor of Physical Education.  
 JACK E. MONTGOMERY, Ed.D., Assistant Supervisor of Physical Education.  
 CARL MICHAEL O'GARA, B.S., Assistant Supervisor of Physical Education.  
 WILLIAM PATTERSON, M.A., Assistant Supervisor of Physical Education.  
 WAYNE ROSENOFF, B.S., Assistant Supervisor of Physical Education.  
 JOHN SELLWOOD, M.S., Assistant Supervisor of Physical Education.  
 C. ROBERT STICHTER, M.S., Assistant Supervisor of Physical Education.  
 WILFRED SUTTON, M.A., Assistant Supervisor of Physical Education.  
 \*HELEN JEAN SWENSON, M.S., Assistant Supervisor of Physical Education.  
 MILDRED ANDERSON, M.A., Junior Supervisor of Physical Education.  
 RUTH BAXTER, M.S., Junior Supervisor of Physical Education.  
 DEBORAH CHOATE, M.S., Junior Supervisor of Physical Education.  
 CAROL CLARK, M.S., Junior Supervisor of Physical Education.  
 HELEN COLEMAN, M.A., Junior Supervisor of Physical Education.  
 FRANCIS COLVILLE, M.S., Junior Supervisor of Physical Education.  
 JOHN Z. FALLON, M.A., Junior Supervisor of Physical Education.  
 WILLIAM M. FOWLER, JR., M.S., Junior Supervisor of Physical Education.  
 STANLEY GABRIELSON, M.A., Junior Supervisor of Physical Education.  
 ANN GROTHAUS, M.S., Junior Supervisor of Physical Education.  
 ASAHEL E. HAYES, M.S., Junior Supervisor of Physical Education.  
 JOE HOUSE, M.A., Junior Supervisor of Physical Education.  
 THAYER R. JORRIS, M.A., Junior Supervisor of Physical Education.  
 BARBARA MACK, M.A., Junior Supervisor of Physical Education.  
 ETHEL TOBIN, M.S., Junior Supervisor of Physical Education.  
 MARY LOU BECK, M.S., Visiting Lecturer in Physical Education.  
 EVELYN DAVIES, Ed.D., Lecturer in Physical Education.  
 PIA GILBERT, Lecturer in Physical Education.

\* Absent on leave, 1950-1951.

LEAH GREGG, M.S., Visiting Lecturer in Physical Education.  
 ELIZABETH HARTSHORN, M.A., Lecturer in Physical Education.  
 DONALD MCKINNON, M.D., Director, Student Health Service.

Physical Education 1 (men) or 26 (women) is prescribed for all first-year and second-year undergraduate students who are under twenty-four years of age until four consecutive semesters of work have been completed. 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. Complete uniform will be furnished by the Physical Education Department, except for gym shoes and swimming caps which will be furnished by the student.

Assignment to men's activities in physical education is elective in that freshmen may choose activity courses from *a-h*, and sophomores may choose activity courses from *a-o*. Swimming is the only required activity for all lower division men. A student may take only one prescribed physical education activity course for credit during any given semester. Exemption from swimming is allowed upon passing a competence test. An activity course may be taken for credit once only:

- a. Apparatus and tumbling
- b. Basic fundamentals
- c. Boxing
- d. Developmental physical education
- e. Swimming (elementary)
- f. Swimming (advanced)
- g. Track and field
- h. Wrestling
- i. Games, fall (touch football, soccer, volleyball)
- j. Games, spring (speedball, softball)
- k. Tennis
- l. Golf
- m. Archery
- n. Basketball
- o. Handball
- p. Social Dancing

In the women's division, any Physical Education 26 class may be selected by the student to meet the lower division requirement unless she is restricted in choice by the Student Health Service. Students may not repeat an activity course for credit.

Lower division students may enroll in an additional Physical Education 26 class or the equivalent as an elective for credit. However, this does not reduce the requirement of four consecutive semesters of physical education. Any upper division student may elect Physical Education 26 or the equivalent for credit, but the total units in physical education activity courses presented for graduation may not exceed four units.

Archery	Fencing	Social Dancing
†Badminton	Folk Dancing	Swimming
Basketball	†Golf	Senior Lifesaving
Body Mechanics	Lacrosse	Water Composition
*Bowling	Recreational Sports	†Tennis
Dance Fundamentals	†Dry Skiing	Volleyball
Deck Sports		

\* Fee.

† Playing equipment provided by student.

**Medical Examination.**—(a) Students entering the University for the first time and (b) reëntering students are required to obtain a clearance of their health records from the Student Health Service prior to registration. The examiner may exempt the student from required military training; he may assign the student to a restricted exercise section of physical education.

### College of Applied Arts

The Department of Physical Education offers the following majors:

#### 1. Major in Physical Education.

##### WOMEN

**Preparation for the Major.**—Courses 29, 30, 31, 32, 35, 44; Chemistry 2; Zoölogy 15, 25.

**The Major.**—Thirty-six units of upper division courses in physical education and related fields, including courses 101, 102, 105, 130, 132, 145A–145B, 152, 326A–326B, 327A–327B; and electives chosen from courses 131, 135, 139, 140, 140C, 141, 142, 143, 144, 150, 151, 153A–153B, 154, 155, 160, 183, 185, 199A–199B.

##### MEN

**Preparation for the Major.**—Courses 5, 6, 7, 8, 9, 24, 44; Chemistry 2; Zoölogy 15, 25.

**The Major.**—Thirty-six units of upper division courses in physical education, including courses 101, 102, 105, 130, 131, 133, 145A–145B, 171, 354, 355A–355B, 356A–356B, 357A.

#### 2. Major in Health Education (Men and Women).

(a) *Plan I.* School Health Education and Physical Education.

**Preparation for the Major.**—Chemistry 2; Bacteriology 1; Zoölogy 15, 25; Psychology 1A–1B or 33; English 1A–1B, or English 1A–Speech 1A, or Speech 1A–1B; Physical Education 5, 44, and 6, 7, 8, 9 (men), or 29, 30, 31, 32 (women).

**The Major.**—Thirty-six units of upper division courses, including Home Economics 138 or Sociology 142; Sociology 101; Psychology 145A–145B; Education 112; Public Health 100A, 145; Physical Education 101, 102, 105, 132 or 133, 145A–145B, 160.

(b) *Plan II.* School Health Education and Public Health Education.

**Preparation for the Major.**—Chemistry 2; Bacteriology 1; Zoölogy 15, 25; Psychology 1A–1B or 33; English 1A–1B, or English 1A–Speech 1A, or Speech 1A–1B; Physical Education 1 or 26, 5, 44.

**The Major.**—Thirty-six units of upper division courses, including Home Economics 138 or Sociology 142; Sociology 101; Psychology 145A–145B; Public Health 100A, 106, 110, 125, 145; Physical Education 102, 105, 145A–145B, 160.

#### 3. Major in Physical Therapy (Men and Women).

(a) *Affiliation Plan* (leading to degree and certificate). This program includes three years of University work (90 units) and a fourteen-month course at the Children's Hospital School of Physical Therapy,\* which is affiliated with the University. The hospital work which is completed in the senior year is accepted in fulfillment of the residence requirement. Students completing the combined program will receive the degree of Bachelor of Science and the Certificate in Physical Therapy.

\* Students completing the three-year University program cannot be assured of admission to the Children's Hospital School of Physical Therapy. When the number of qualified applicants exceeds the available facilities, selection of students will be made on the basis of scholarship as determined from the transcript of record, examination, and by personal interview.

*Preparation for the Major.*—Courses 20, 44; Chemistry 2; Physics 10; Zoölogy 15, 25; Psychology 1A–1B.

*The Major.*—Courses 101, 102, 105; and the fourteen-month course at the Children's Hospital School of Physical Therapy. The Hospital program includes courses in anatomy, pathology, psychology, electrotherapy, hydrotherapy, massage, therapeutic exercise, physical therapy (as applied to medicine, neurology, orthopaedics, surgery), ethics and administration, elective courses recommended by the American Medical Association and the American Physical Therapy Association, and clinical practice. A maximum of 30 units will be allowed for completion of the Hospital program.

(b) *Four-year Plan* (leading to degree only). This curriculum is designed to prepare students to enter schools of physical therapy other than the Children's Hospital.

*Preparation for the Major.*—Courses 5, 20, 43, 44; Chemistry 2; Physics 10 or 2A; Zoölogy 15, 25. Recommended: Art 27A; Psychology 1A, 1B; Speech 1A, 1B; Sociology 3.

*The Major.*—Thirty-six units of upper division courses, including courses 101, 102, 105, 145A–145B, 183, 184, 185, and electives selected from courses 130, 140, 141, 142, 155, 160; Education 110, 111, 112, 160, 180; Psychology 108, 112, 113, 168, 169.

#### 4. *Major in Recreation* (Men and Women).

This major is designed to develop leaders in recreation with a sound general education, an insight into the social responsibilities of community agencies, and an understanding of the nature and significance of the group work method in recreation.

*Preparation for the Major.*—Courses 1 or 26, 5, 6 (men), 23, 27, 28, 43, 44; Art 27A–27B; Botany 1; English 1A; Geology 2; Life Sciences 1A–1B; Music 30A–30B; Psychology 1A, 33; Speech 1A; Sociology 3; Theater Arts 28A–28B.

*The Major.*—Thirty-six units of upper division courses, including Physical Education 132, 139, 140, 140C, 140D, 141, 142, 143, 144, 152, 155; Education 117A; Psychology 147; Sociology 189; Speech 106.

#### *Teaching Minor in Physical Education.*

Not less than twenty units of coördinated courses, at least 6 of which are in the upper division. All courses must be approved by an adviser in the Department of Physical Education.

#### *Curriculum in Dance.*

For details concerning this curriculum, students should consult the Director of the women's division, Department of Physical Education.

#### *Requirements for the Special Secondary Credential.*

Students may complete a teaching major in physical education for a Special Secondary Credential. For the general requirements, consult the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES

#### *Requirements for the General Secondary Credential.*

Students may complete requirements for the general secondary credential with a major either in physical education or in health education. For the general requirements, consult the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES. For more specific information, consult the Department of Physical Education.

#### *Requirements for the Master's Degree.*

The degree of Master of Science is awarded with a major in either physical education or health education. For the general requirements, consult the ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION.



## College of Letters and Science†

*Letters and Science List.*—Courses 1, 26, 44, 130, 139, 150, 151, 155 are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

## LOWER DIVISION COURSES

- †1. **Physical Education Activities (Men).** (½) I, II. The Staff  
Classes meet three times weekly. Section assignments are made by the department. Physical Education 1 is prescribed for freshmen and sophomores and may be elected by students in the junior and senior years. Students whose physical condition indicates the need of modified activity are assigned to individual physical education classes.
2. **Hygiene and Sanitation.** (2) I, II. Mr. McKinnon  
A broad elementary course emphasizing the strictly practical aspects of hygiene.
5. **Safety Education and First Aid.** (2) I, II. Mr. Crowe, Mr. Frampton  
Prevention and care of common accidents and emergencies in the home and school. American Red Cross instructor's certificate granted upon satisfactory completion of the course.
- \*6. **Professional Activities (Men).** (1½) II. Mr. Sutton  
Designed for major and minor students in physical education. Fundamental knowledges and skills in baseball, softball, and volleyball.
- \*7. **Professional Activities (Men).** (1½) I. Mr. Hollingsworth  
Designed for major and minor students in physical education. Fundamental knowledges and skills in football and soccer.
- \*8. **Professional Activities (Men).** (1½) I. Mr. Montgomery  
Designed for major and minor students in physical education. Fundamental knowledges and skills in basketball and speedball.
- §9. **Professional Activities (Men).** (1½) II. Mr. Hollingsworth  
Designed for major and minor students in physical education. Fundamental knowledges and skills in track and field, and tumbling and apparatus.
- \*15. **Fundamentals of Scouting (Men).** (2) Mr. Frampton  
Lectures; three field trips required.  
Need of organization for youth; history and growth of the Boy Scouts of America; the Boy Scout program; organization of a troop and techniques of troop management; fundamentals involved in troop activities.
20. **Introduction to Physical Education.** (1) I. Miss Hunt  
Open to physical therapy majors only.
23. **Recreational Activities.** (1) I, II. Mr. Gabrielson  
An introduction to a variety of recreational activities in music, dramatics, sports, camping, social recreation, arts and crafts, and hobbies.

\* Not to be given, 1950-1951.

† The University requirements in physical education referred to in this section cover Physical Education 1 (men) and 26 (women), one-half unit courses which are required of students in the freshman and sophomore years.

‡ The University of California, 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, DEPARTMENTS AT BERKELEY.

§ Students may substitute this course for the required course, Physical Education 1 or 26, for the semester in which they are enrolled.

\* This course may be accepted in lieu of the required course, Physical Education 1, with the consent of the adviser.

§24. **Advanced Swimming and Lifesaving.** (2) Men: I, II. Women: II.

Mr. Park, \_\_\_\_\_

*Men:* The Senior Red Cross Life Saving and Instructor's Certificate will be issued to those students who meet the requirements. Qualifying test required.

*Women:* Instructor's Certificate will be issued to those students who meet the requirements.

†26. **Physical Education Activities (Women).** (½) I, II. The Staff

Classes meet three times weekly. Section assignments are made only by the department. This course is prescribed for freshmen and sophomores and may be elected for credit by juniors and seniors.

Students whose physical condition indicates the need of modified activity are assigned to individual physical education classes.

Special equipment and course fee are required for certain activities. Information regarding these activities may be obtained from the department at the time of registration.

§27. **Games for the Elementary School.** (1) I, II. Miss Coleman, Miss Tobin

Open only to students who are to be candidates for the elementary school credentials and students majoring in recreation. Not open to freshmen.

§28. **Rhythms for the Elementary School.** (1) I, II. Miss Jacobs, Mrs. Mack

Fundamentals and creative rhythmic activities, percussion and musical accompaniment, and folk dancing.

Open only to students who are to be candidates for the elementary school credential, and students majoring in recreation. Not open to freshmen.

°°29. **Professional Activities (Women).** (3) I. The Staff

Open only to students with a major or minor in physical education.

°°30. **Professional Activities (Women).** (3) II. The Staff

Open only to students with a major or minor in physical education.

°°31. **Professional Activities (Women).** (3) I. The Staff

Open only to students with a major or minor in physical education.

°°32. **Professional Activities (Women).** (3) II. The Staff

Open only to students with a major or minor in physical education.

°°34. **Stage Movement.** (2) II. \_\_\_\_\_

Four hours, lecture and laboratory.

Study of the principles of physical timing, rhythm, and control in the acting situation.

35. **Music Analysis for Dance Accompaniment.** (2) I, II. Mrs. Gilbert

Analysis of musical forms and structure in relation to their use in dance forms. A workshop class in study of rhythms, using piano and percussion instruments.

43. **Recreation for the Handicapped.** (1) II. Miss Hunt

Play as therapy through provision of normal experiences for the disabled. Includes group organization, teaching techniques, and modification of activities. Designed for social workers, nurses, therapists, recreation leaders, and teachers.

† See dagger (†) footnote, page 295.

§ Students may substitute this course for the required course, Physical Education 1 or 26, for the semester in which they are enrolled.

\* Theater arts majors may substitute this course for the required courses, Physical Education 26 and 1, for the semester in which they are enrolled.

\*\* Students may substitute this course for the required course, Physical Education 26, for the semester in which they are enrolled.

**44. Principles of Healthful Living. (3) I, II.**

Mr. Fallon, Miss Gregg, Mr. Sutton, Miss Tobin, Mr. Johns

Fundamentals of healthful living designed to provide scientific health information, promote desirable attitudes and practices.

## UPPER DIVISION COURSES

**101. Kinesiology. (3) I, II.**

Miss Hunt, Mr. Sellwood

Prerequisite: Zoölogy 25.

A study of the structure, function, and mechanical principles relating to human motion, and application in the analysis of specific activities.

**102. Developmental Physical Education. (3) I, II.** Miss Hunt, Mr. Sellwood

Prerequisite: course 101 or consent of the instructor.

Analysis and evaluation of aims, techniques, and procedures in developmental, preventive, and corrective measures. Special problems, such as survey of the situation, recognition of divergencies, selecting and assigning of students, instructional problems, motivation, follow-up, teacher limitations, and public relations, are considered.

**105. Physiology of Exercise. (3) I, II.**

Miss Fulton, Mr. Massey

Prerequisite: Zoölogy 15.

Study of the physiological aspects of exercise and training with the purpose of planning and evaluating programs of physical activity.

**\*120. Professional Orientation in Health, Physical Education, and Recreation. (Women). (2) I.**

Miss Hyde

The scope and significance of health, physical education, and recreation in the modern school program. Open only to students with a major or minor in physical education. Required of all upper division transfers and those not having taken Physical Education 29, 30, 31, and 32. Prerequisite for course 130 for all transfer students.

**130. Principles of Physical Education. (2) I, II.** Miss Deane, Mr. Massey

A critical analysis of the assumptions underlying the physical education program.

**131. Organization and Administration of Physical Education. (3) I, II.**

Mr. Duncan

Prerequisite: senior standing. Open to women, spring semester only.

**132. Conduct of the Program of Sports (Women). (2) I.**

Miss Hyde, Mr. Miller

Prerequisite: courses 130, 326A, and 326B or consent of the instructor.

A study of the principles and policies underlying the program of sports in the secondary schools and community centers; class management, organization of clubs, tournaments, care of equipment and facilities, program planning, and sports days.

**133. Organization of the Class (Men). (2) I, II.**

Mr. Handy

One lecture and two laboratory periods.

Prerequisite: upper division standing.

Teacher responsibilities in class organization and management on the secondary school level.

**135. Evaluation Procedure. (2) I.**

Miss Fulton

The study and application of methods of evaluating the physiological, sociological, and psychological aspects of the program.

**139. Principles of Recreation. (3) I.**

Mr. Gabrielson

The nature and function of recreation; the contemporary philosophical basis for program development.

\* Not to be given, 1950-1951.

- 140. Organization of Community Recreation.** (3) II. \_\_\_\_\_  
Prerequisite: course 139.
- 140C. Recreation Field Work—Private Agency.** (2) I, II. Mr. Gabrielson  
Prerequisite: course 140 or consent of the instructor.  
Each student, acting as the leader, through observation and practical experience will plan, organize, and administer a recreation program for a group in the community.
- 140D. Recreation Field Work—Public Agency.** (2) I, II. Mr. Gabrielson  
Prerequisite: course 140C or consent of the instructor.  
A continuation of course 140C to embody different content, work with new material, or a different age group.
- 141. Club Activities.** (2) I. Mr. Miller  
An analysis of the activities of clubs of various types, with emphasis upon leadership requirements and program planning to meet needs and interests of groups.
- 142. Camp Leadership.** (2) II. \_\_\_\_\_  
Prerequisite: upper division standing and consent of instructor.  
A study of camping and outdoor education, including the philosophy of camping, camp areas and facilities, camping programs of public and private agencies, youth problems in camp, counseling techniques, staff problems, and other related information.
- 143. Problems in Group Work.** (2) II. \_\_\_\_\_  
Principles and procedures of group work in recreation with emphasis on group structure, community relations, and program planning.
- 144. Recreation Survey.** (2) I. Mr. Robinson  
Opportunities and needs in recreation with an introduction to techniques of conducting a recreation survey for program development.
- 145A. School Health Education.** (3) I, II. Miss Gregg, Mr. Johns  
Prerequisite: course 44 and senior standing, or consent of the instructor.  
A study of the school health program as an integral part of the school curriculum; the underlying principles and functions of health instruction, health service, healthful school living; and the contributing community health agencies.
- 145B. School Health Education.** (3) I, II. Mr. Johns, Mr. Sutton, \_\_\_\_\_  
Prerequisite: courses 44, 145A and senior standing, or consent of the instructor.  
A synthesis of the major areas of health education in the elementary and secondary school program.
- 146. Social Aspects of Health.** (2) I, II. Miss Gregg  
Not open to majors in physical education or to students who have credit for 145A, 145B.
- 147. Health Education in the Elementary School.** (3) I, II. Miss Tobin  
A course for general elementary credential candidates designed to develop an understanding of the functional school and community health program; the responsibility of the teacher in meeting student health needs.
- 150. History of Dance and the Related Arts.** (2) II. Miss Hartshorn  
A survey of the historic development of various media of expression, interrelating these arts: dance, music, painting, sculpture, architecture, literature, and poetry.
- 151. History of Dance in America.** (2) I. Mrs. Mack
- 152. Organization of Public Performances.** (2) II. \_\_\_\_\_  
Consideration of purpose, sources of materials, production procedure for folk festivals, dance recitals, and other special events.

**153A-153B. Dance Composition Workshop. (2-2) Yr.**

Prerequisite: consent of the instructor.

Analysis of the elements and process of dance composition, and practice in individual and group composition and evaluation.

**154. Advanced Music Analysis for Dance. (2) II.**

Mrs. Gilbert

Prerequisite: course 35 or consent of instructor.

Piano and percussion improvisation; analysis of music for the dance; the historical development of musical forms used in dance; building an accompanist's repertoire.

**155. Folk Festivals. (2) I.**

Study of folklore in relation to festivals and pageants. The preparation of an original festival.

**160. Counseling in the Physical Education Program. (2) I.** Miss Cassidy

A study of present-day principles and procedures used in guiding students through physical education experiences in secondary school and college.

**171. Conditioning of Athletes and Care of Injuries (Men). (2) I, II.**

Lecture, one hour; laboratory, two hours.

Mr. Montgomery

Prerequisite: Zoölogy 25 and senior standing. For physical education majors only.

Anatomical and physiological approach to conditioning as it relates to athletic teams and the prevention of athletic injuries.

**183. Massage. (2) II.**

Massage and techniques of relaxation for athletic injuries, muscle soreness, and tension.

**184. Muscle Reëducation. (3) I.**

Lectures, demonstrations, and clinical practice. For students in the fields of physical, recreational, and occupational therapy.

Muscle reëducation techniques in paralysis, orthopaedic and surgical cases; muscle analyses and techniques of testing.

**185. Physical Activities for Rehabilitation. (2) I.**

Lectures and field trips to rehabilitative centers.

A survey of rehabilitative methods used as therapy in the field of physical and mental disabilities.

**199. Physical Education Problems (Individual). (1-4) I, II.**

Beginning either semester.

Miss Deane, Mr. Young

Prerequisite: consent of the instructor.

**GRADUATE COURSES**

**201. Secondary School Curriculum in Physical Education. (3) II.**

Seminar and laboratory assignments.

Miss Cassidy

A study of physical education programs based on the needs of boys and girls in American secondary schools. (Required of fifth-year students preparing for the General Secondary Credential.)

**227. Comparative Study of Materials and Methods in Dance. (3) II.**

Miss Deane

A study of educational ideas and practices as they relate to the various forms of dance, primarily designed for students in the fifth-year preparing for the general secondary credential.

**235. Evaluation Procedures. (2) II.**

Miss Fulton

Prerequisite: course 135 or consent of the instructor.

Study of, and experimentation with, methods of developing and using instruments and techniques of evaluation which are related to the fields of health education, physical education and recreation.

- 245. Curriculum Development in Health Education. (3) I.** Mr. Johns  
Prerequisite: course 145A-145B or consent of the instructor.  
The development of the health instruction program based on the health needs of school-age children. The formulation of objectives, scope and sequence of instruction, the examination of teaching methods, source materials, community resources, and evaluation procedures.
- 250. Changing Perspectives in the Profession. Seminar. (3) II.** The Staff Seminar and group conferences.  
Prerequisite: consent of the instructor.  
A student-staff examination of changing perspective in the field directed toward the formulation of a working professional philosophy in the fields of health education, physical education, and recreation.
- 255. Administrative Interrelationships in Health Education. Seminar. (3) II.** Mr. Johns  
Prerequisite: consent of the instructor.  
A consideration of the principles, policies, and practices involved in the interrelationships of the school curriculum, the public and private health agencies in the community.
- 256. Administrative Problems in Physical Education. Seminar. (3) I.** Miss Abernathy  
A consideration of policies, problems, and practices in school and college physical education administration; interrelationships with the general curriculum, and among the local, state and federal levels.
- 257. Administrative Problems in Recreation. Seminar. (3) I.** Mr. Miller  
A consideration of policies, problems, and current administrative practices and interrelationships in public and private recreation agencies at the local, state, and national levels.
- 265. Foundations of the Curriculum. Seminar. (3) I.** Miss Cassidy  
A study of the process of present-day curriculum making in physical education based on a critical analysis of the areas of individual and group needs in contemporary society. Students may center their individual studies at elementary, secondary, or college level.
- 266. Social Bases of the Profession. Seminar. (3) I.** Mr. Robinson  
Analysis of the social forces and relationships bearing on the fields of health education, physical education, and recreation, and the significant role of the professional person in these areas.
- 267. Physiological Bases of the Profession. Seminar. (3) II.** Mr. Massey  
Critical analysis of the physiological bases of health education, physical education, and recreation, with special attention to concepts from which principles and criteria of the profession are derived.
- 276. Fundamentals of Research. Seminar. (3) I, II.** Mr. Young  
The application of scientific methods and techniques to aid in the selection and solution of research studies, thesis, and dissertation problems.
- 277. Applied Research. (2) II.** Mr. Massey  
Prerequisite: course 276 and consent of the instructor.  
Application of research methods and techniques in health education, physical education, and recreation.
- 285. Developmental Physical Education. (3) I.** Mr. Young  
An intensive survey in all aspects of developmental (corrective) physical education, with special emphasis on growth and developmental factors, postural divergencies, debilitating conditions, exercises, class procedures, ethical practices, and limitations.

- 299. Independent Study. (2-4) I, II.** The Staff  
Prerequisite: course 276 and consent of the instructor.  
Independent study in a number of special sub-areas: health education, physical education, and recreation.

PROFESSIONAL COURSES IN METHOD

- 326A-326B. Principles of Teaching Athletics (Women). (2-2) Yr.** The Staff  
Analysis of problems in teaching athletic activities, including techniques and game forms, with special reference to their use in planning teaching units and lesson plans. Advanced practice is provided in team activities, with emphasis on the interpretation of rules and the technique of officiating. Officiating in local schools and recreation centers is required.
- 327A-327B. Principles of Teaching Dance (Women). (2-2) Yr.** The Staff  
Prerequisite or concurrent: course 35 or 154. Must be taken concurrently with course 326A-326B.
- 330. Physical Education in the Elementary School. (3) I, II.** Miss Anderson  
Prerequisite: upper division standing, courses 27, 28, and 44, or the equivalent, and Education 111. A study of the principles of teaching physical education in the elementary schools. Each student must plan a program with two consecutive hours a week for observation, between the hours of 9 A.M. and 3 P.M.
- 354. Teaching Fundamentals (Men). (3) I, II.** Mr. Handy  
Lectures, two hours; laboratory, three hours. (Laboratory assignment to be made by the instructor.)  
Prerequisite: senior standing.  
A study of the principles involved in the teaching of physical education, together with functional application through observation and laboratory experiences. This course may be taken only during the semester directly preceding student teaching.
- 355A. Technique of Teaching Activities (Men). (2) I.** Mr. Montgomery  
Prerequisite: junior standing, course 8.  
A critical analysis of the methods of teaching and coaching, including strategy, selection of players, rules, and team play.  
Basketball, speedball.
- 355B. Technique of Teaching Activities (Men). (2) II.** Mr. Sutton  
Prerequisite: junior standing, course 6.  
A critical analysis of the methods of teaching and coaching, including strategy, selection of players, rules, and team play.  
Baseball, softball, volleyball.
- 356A. Technique of Teaching Activities (Men). (2) II.** Mr. Duncan  
Prerequisite: junior standing, course 7.  
A critical analysis of the methods of teaching and coaching, including strategy, selection of players, rules, and team play.  
Football, touch football, and soccer.
- 356B. Technique of Teaching Activities (Men). (2) II.** Mr. Hollingsworth  
Prerequisite: junior standing, course 9.  
A critical analysis of the methods of teaching and coaching, including strategy, selection of players, rules, and team play.  
Track and field, tumbling, and apparatus.
- 357A. Technique of Teaching Activities. (2) II.** The Staff  
Prerequisite: senior standing.  
A critical analysis of the methods of teaching, planning, and organizing coeducational activities in the secondary schools.

## PHYSICS

- ALFREDO BAÑOS, JR., Dr. Eng., Ph.D., Professor of Physics.  
 JOSEPH W. ELLIS, Ph.D., Professor of Physics.  
 JOSEPH KAPLAN, Ph.D., Professor of Physics.  
 E. LEE KINSEY, Ph.D., Professor of Physics (Chairman of the Department).  
 VERN O. KNUDSEN, Ph.D., Professor of Physics.  
 \* EDWARD TELLER, Ph.D., Professor of Physics.  
 SAMUEL J. BARNETT, Ph.D., Professor of Physics, Emeritus.  
 LEO P. DELSASSO, Ph.D., Associate Professor of Physics.  
 LAURENCE E. DODD, Ph.D., Associate Professor of Physics.  
 \* ROBERT W. LEONARD, Ph.D., Associate Professor of Physics.  
 KENNETH R. MACKENZIE, Ph.D., Associate Professor of Physics.  
 J. REGINALD RICHARDSON, Ph.D., Associate Professor of Physics.  
 NORMAN A. WATSON, Ph.D., Associate Professor of Physics.  
 ROBERT J. FINKELSTEIN, Ph.D., Assistant Professor of Physics.  
 ISADORE RUDNICK, Ph.D., Assistant Professor of Physics.  
 DAVID S. SAXON, Ph.D., Assistant Professor of Physics.  
 HAROLD K. TICHO, Ph.D., Assistant Professor of Physics.  
 BYRON T. WRIGHT, Ph.D., Assistant Professor of Physics.  
 \_\_\_\_\_, Instructor in Physics.  
 DONALD S. WEBBER, M.S., M.A., Associate in Physics.  
 \_\_\_\_\_, Associate in Physics.

◇

JØRGEN HOLMBOE, M.Sc., Professor of Meteorology.  
 ROBERT E. HOLZER, Ph.D., Professor of Geophysics.  
 LOUIS B. SLICHTER, Ph.D., Professor of Geophysics.

*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 in Physics.*—Required: Physics 1A, 1B, 1C, 1D, or, with the consent of a departmental adviser, Physics 2A, 1C, 1D or Physics 2A, 2B; Chemistry 1A, 1B; Mathematics 5A, 5B, 6A, 6B; or 1-3A, 3B, 4A, 4B; or their equivalents.

*The Major in Physics.*—The following upper division courses in physics, representing at least one course in each of the main subjects in physics, are required: 105, 107, 107C, 108B, 108C, 110 or 116A, 112 or 119, 114A, 121, 113 or 124. An average grade of C or higher must be maintained in the above courses. Required: Mathematics 110A-110B or 110C or 119A. Strongly recommended: Mathematics 122A-122B. Recommended: a reading knowledge of German and French. This major leads to the degree of Bachelor of Arts in the College of Letters and Science.

*Preparation for the Major in Applied Physics.*—Required: Physics 1A, 1B, 1C, 1D, or, with the consent of a departmental adviser, Physics 2A, 1C, 1D, or Physics 2A, 2B; Chemistry 1A, 1B; Mathematics 5A, 5B, 6A, 6B, or Mathematics 1-3A, 3B, 4A, 4B, or their equivalents; mechanical drawing. The last-named course may be taken in high school, University Extension, the Department of Engineering, or elsewhere.

*The Major in Applied Physics.*—Required: Mathematics 110AB or 110C and one of the following groups of courses prescribed to give a specialization in some particular field of physics or chemistry: (a) Physics 105, 107, 107C, 108B, 108C, 110, 114A, 116A, 116B, 116C, 116D, 119, 121, 124 or 112, designed for specialization in electronics; (b) Physics 105, 107, 107C, 108A, 108B, 108C, 109, 112, 113, 113C, 114A, 116A, 116C, 121, designed for specialization in

\* Absent on leave, 1950-1951.



optics and spectroscopy; (c) Physics 105, 107, 107C, 108B, 108C, 114A, 114B, 114C, 116A, 116B, 116C, 116D, 119, 121, designed for specialization in acoustics and electronics; (d) Physics 105, 107, 107C, 108B, 108C, 112, 113, 113C, 116A, 121, 124; Chemistry 8, 110A, 110B, 111B, designed for specialization in chemistry; (e) Physics 105, 107, 107C, 108B, 108C, 113, 113C, 114A, 116A, 116B, 116C, 116D, 119, 121, 124, designed for specialization in modern physics.

An average grade of C or higher must be maintained in the above courses. Recommended: a reading knowledge of German and French. This major leads to a degree of Bachelor of Science in the College of Letters and Science.

#### LOWER DIVISION COURSES

Physics 1A, 1B, 1C, and 1D constitute a four-course sequence in general physics which is required of prechemistry and preengineering students. It is recommended as a first choice for major students in physics and astronomy, and, with the exception of 1B, for major students in chemistry. Alternative sequences in general physics, acceptable under certain circumstances to the departments of physics, astronomy, and chemistry for their major students are: 2A, 1C and 1D; and 2A, 2B. Before choosing either of these alternative sequences students must have the consent of their departmental advisers.

Students in departments other than those listed in the preceding paragraph may elect any part of the 1A, 1B, 1C, 1D sequence; however, 1A is prerequisite to any of the other courses in the sequence. At least two parts are required to meet the laboratory requirement for the degree of Associate in Arts or upper division standing.

Physics 2A and 2B constitute a year sequence in general physics which is required of students specializing in the following fields: bacteriology, geology, medical technology, pre dentistry, premedicine, and preoptometry. Students in other departments may elect either or both of these courses. However, 2A or 1A is prerequisite to 2B.

Physics 10 is a one-semester, nonlaboratory course which surveys the whole field of general elementary physics. It is intended for the liberal arts student.

Certain combinations of lower division courses involve limitations of total credit as follows: 2A and 1A or 1B, 5 units; 2A and 1A and 1B, 6 units; 2B and 1C or 1D, 6 units; 2B and 1C and 1D, 7 units. Six units are allowed for 10 and 1A or 1B or 1C or 1D. Seven units are allowed for 10 and 2A or 2B. In general, not more than 12 units of credit will be given for any amount of lower division work. Credit in excess of 12 units will be given only in exceptional cases, when approved by the department.

#### †1A. General Physics: Mechanics of Solids. (3) I, II.

Mr. Baños, Mr. Delsasso, Mr. Ellis

Lecture and demonstration, three hours; laboratory, two hours.

Prerequisite: high school physics or chemistry; Mathematics 5A, or 1-3A with Mathematics 3B taken concurrently with Physics 1A.

#### 1B. General Physics: Mechanics of Fluids, and Heat. (3) I, II. Mr. Dodd

Lecture and demonstration, three hours; laboratory, two hours.

Prerequisite: course 1A; Mathematics 5B, or Mathematics 4A taken previously or concurrently.

#### 1C. General Physics: Electricity and Magnetism. (3) I, II.

\_\_\_\_\_, Mr. Baños

Lecture and demonstration, three hours; laboratory, two hours.

Prerequisite: course 1A or 2A; Mathematics 5B, or 4A taken concurrently.

#### 1D. General Physics: Light and Sound. (3) I, II.

\_\_\_\_\_, Mr. Webber

Lecture and demonstration, three hours; laboratory, two hours.

Prerequisite: course 1A or 2A; Mathematics 5B, or 4A taken concurrently.

† One section each semester restricted to students who have completed Mathematics 5A.

**2A. General Physics: Mechanics, Heat, and Sound. (4) I, II.**

Mr. Rudnick, Mr. MacKenzie, Mr. Saxon

Lectures and demonstrations, four hours; laboratory, two hours.

Prerequisite: three years of high school mathematics, or two years of high school mathematics and one 3-unit college course in algebra or trigonometry.

**2B. General Physics: Electricity, Magnetism, and Light. (4) I, II.**

Mr. Kinsey, Mr. Budnick

Lectures and demonstrations, four hours; laboratory, two hours.

Prerequisite: course 2A or 1A.

**10. General Physics. (3) I, II.**

Mr. Kaplan, Mr. Saxon

Prerequisite: high school algebra and plane geometry.

An introductory survey course in classical and modern physics designed primarily for liberal arts students.

Students enrolled in this course who desire laboratory work in lower division physics are referred to courses 21 (2A) and 21 (2B).

**21. Supplementary Laboratory Courses in General Physics. (1)**

Lower Division Staff (Mr. Webber in charge)

These courses are intended primarily for students entering the University with partial credit in general physics and are part of the regular work of courses 1A, 1B, 1C, 1D, 2A, and 2B. Students should enroll under one or more of the following numbers:

21 (1A). Mechanics of Solids. I, II.

21 (1B). Mechanics of Fluids, and Heat. I, II.

21 (1C). Electricity and Magnetism. I, II.

21 (1D). Light and Sound. I, II.

21 (2A). Mechanics, Heat, and Sound. I, II.

21 (2B). Electricity, Magnetism, and Light. I, II.

**UPPER DIVISION COURSES**

Prerequisite for all upper division courses: Physics 1A, 1B, 1C, 1D, or 2A, 1C, 1D, or 2A-2B; Mathematics 5A, 5B, 6A, 6B; or 1-3A, 3B, 4A, 4B; or the equivalents. Upper division standing is required for all courses except 105, 107, 107C, 108A, 109, 121.

**105. Analytic Mechanics. (3) I, II.**

Mr. Watson, Mr. Delsasso

The statics and dynamics of particles and rigid bodies.

**107. Electrical Theory and Measurements. (3) I, II.** Mr. Ticho, Mr. Wright

Lectures in direct and alternating current quantities and in introductory electronics.

Prerequisite: course 1C or 2B, or the equivalent.

**107C. Electrical Measurements Laboratory. (2) I, II.**

Laboratory to accompany 107. Mr. Ticho, Mr. Wright, Mr. Richardson

**108A. Geometrical Optics. (3) I.**

Mr. Dodd

Lecture, demonstrations, and problems, two hours; laboratory, three hours.

Prerequisite: course 1D or 2B, or equivalent; Mathematics C.

Geometrical methods applied to the ray-optics of mirrors, prisms, and lenses. This course is basic to an understanding of the performance of optical instruments.

**108B. Physical Optics. (3) I.**

Mr. Ellis

Wave motion, interference, diffraction, dispersion, polarization, and crystal optics.

**108C. Physical Optics Laboratory. (1) I.**

Mr. Webber

Laboratory to accompany 108B.

- 109. Modern Optical Instruments.** (3) II. Mr. Dodd  
Lecture, two hours; laboratory, three hours.  
Prerequisite: course 108A. (Waiving of the prerequisite may be considered only when a particular student's background of knowledge already acquired in this general field justifies it.)  
Detailed studies of visual and photographic systems used in research, industry, defense, and medicine, such as cameras, microscopes, telescopes, refractometers, laryngoscopes, cystoscopes, range finders, periscopes, etc. Attention will be given to the electron microscope and the new phase-microscope. Conducted on a semi-seminar basis.
- 110. Electricity and Magnetism.** (3) II. Mr. MacKenzie  
Prerequisite: courses 105 and 107, or consent of the instructor. A survey of field theory, to include systems of charged conductors and of linear circuits, simple dielectric and magnetic media, and the formulation of Maxwell's equations.
- 112. Heat.** (3) I. Mr. Finkelstein  
The thermal properties of matter with an introduction to thermodynamics.
- 113. Introduction to Spectroscopy and Quantum Theory.** (3) II. Mr. Ellis  
Atomic spectra and atomic structure; black body radiation; old and new quantum theories.
- 113C. Spectroscopy Laboratory.** (1) II. Mr. Webber  
Prerequisite or concurrent: course 113.
- 114A. Mechanics of Wave Motion and Sound.** (3) I, II. Mr. Watson  
Prerequisite: course 105.  
Vibration of particles and elastic bodies; sound sources; propagation in elastic media.
- 114B. Mechanics of Wave Motion and Sound.** (3) II. Mr. Delsasso  
Prerequisite: course 114A or the equivalent.  
Propagation of sound in gases; reflection, refraction, interference, and diffraction of sound; acoustic impedance; applications.
- 114C. Mechanics of Wave Motion and Sound Laboratory.** (2) I. Mr. Rudnick  
Prerequisite: courses 107, 107C, and 114B, or consent of the instructor.
- 116A. Electronics.** (3) II. Mr. Ticho  
Prerequisite: course 107 or the equivalent.  
The properties of electronics: thermionic and photoelectric emission; conduction of electricity in gases; vacuum tubes, gas tubes, and associated circuits.
- 116B. Electronics.** (3) I. Mr. MacKenzie  
Prerequisite: course 116A or the equivalent.  
Wave filters, lines, and wave guides; ultrahigh frequency generators and measuring equipment.
- 116C. Electronics Laboratory.** (2) II. Mr. Ticho  
Laboratory to accompany 116A.
- 116D. Electronics Laboratory.** (2) I. Mr. MacKenzie  
Laboratory to accompany 116B.
- 117. Hydrodynamics.** (3) II. Mr. Holmboe
- 119. Kinetic Theory.** (3) II. Mr. Richardson  
The classical kinetic theory of gases, with applications.

**121. Atomic Physics. (3) II.**

Mr. Finkelstein

A comprehensive survey course on the physics of the atom, dealing extensively with the nature of its nuclear and extranuclear structures, stressing certain topics as the photoelectric effect, the Compton effect, and the nature of X rays, and ending with an introduction to radioactivity and nuclear physics.

**124. Radioactivity and Nuclear Structure. (3) I.**

Mr. Wright

Detecting equipment; high-energy accelerators; alpha rays; beta rays; gamma rays; nuclear disintegration; cosmic radiation; nuclear fission.

**124C. Atomic and Nuclear Physics Laboratory. (1) I.**

Mr. Wright

Prerequisite: course 121. Laboratory to accompany course 124.

**199. Special Problems in Physics. (1-3) I, II.**

The Staff (Mr. Kinsey in charge)

## GRADUATE COURSES

**\*208. Classical Optics. (3) I.**

Mr. Saxon

Propagation of light waves in isotropic and anisotropic media, interference, diffraction, dispersion, scattering, and polarization on the basis of the electromagnetic theory of light. Recommended: course 210A or its equivalent.

**210A. Electromagnetic Theory. (3) II.**

Mr. Baños

An advanced course on electromagnetic theory based on the vector treatment of Maxwell's equations. The vector and scalar potentials, the Hertz polarization potentials, energy considerations, the electrostatic and magnetostatic fields, and a general discussion of plane homogenous waves in unbounded, isotropic media. Boundary value problems.

**210B. Electromagnetic Theory. (3) I.**

Mr. Baños

Theory of wave propagation in cylindrical structures with particular applications to wave guides and coaxial lines. The general theory of electromagnetic cavity resonators from the point of view of the Lagrangian formulation. Spherical waves and applications to the general problem of radiation. Introduction to relativistic electrodynamics.

**212. Thermodynamics. (3) I.**

Mr. Kaplan

**213. Spectra and Structures of Diatomic and Polyatomic Molecules. (4) I.**

Mr. Ellis

**214. Advanced Acoustics. (3) I.**

Mr. Delsasso

**215. Statistical Mechanics. (3) II.**

Mr. Kaplan

**217. Hydrodynamics. (3) II.**

Mr. Holmboe

Not open for credit to students who have credit for Meteorology 217.

**220A. Theoretical Mechanics. (3) I.**

Mr. Kinsey

**220B. Theoretical Mechanics. (3) II.**

Mr. Watson

**220C. Quantum Mechanics. (3) II.**

Mr. Finkelstein

**220D. Quantum Mechanics. (3) I.**

Mr. Saxon

**224A. Nuclear Physics. (3) I.**

Mr. Richardson

A summary of the present knowledge and descriptive theory of nuclear forces, nuclear reactions, and radioactivity; with emphasis on a critical evaluation of the experimental evidence, and a discussion of possible future experimental lines of attack on problems in nuclear physics.

**224B. Nuclear Physics. (3) II.**

Mr. Saxon

An advanced course in the theory of nuclear forces and nuclear radiation with particular emphasis on the mesotron theory of nuclear forces and the general application of quantum mechanics to the theory of nuclei.

\* Not to be given, 1950-1951.

- \*231. Methods of Theoretical Physics.** (3) I. Mr. Baños  
 An advanced course in which the general mathematical methods employed in the solution of boundary value problems arising in all chapters of theoretical physics are systematically developed and coordinated. A detailed discussion is given of the use of Green's functions, characteristic functions, variational methods, conformal mapping, and of integral equations the solution of which is based on the theory of the Fourier and Laplace transforms.
- 261. Seminar in Quantum Mechanics.** (3) I. Mr. Finkelstein
- 264. Seminar in Advanced Acoustics.** (3) II. Mr. Knudsen
- \*266A-266B. Seminar in Propagation of Waves in Fluids.** (2-2) Yr.  
 Mr. Rudnick
- \*269. Seminar in Nuclear Physics.** (3) I. Mr. Teller
- 281. Experimental Techniques in Modern Physics.** (2) II. Mr. Richardson  
 Essentially a laboratory course with some lectures on the theory of the techniques used. An effort is made to develop a critical research attitude on the part of the student and considerable freedom is allowed in the choice of problems to be attacked. High-vacuum technique, atomic magnetic resonance, magnetic spectograph, electron diffraction, cloud chamber, electrical counting of particles, conduction of electricity through gases, etc.
- 290A-290B. Research.** (1-6; 1-6) Yr. The Staff (Mr. Kinsey in charge)

RELATED COURSES AND CURRICULUM

GEOPHYSICS

See page 69 for an interdepartmental curriculum in geophysics involving physics and geology. For undergraduate courses, see Department of Geology, page 228.

- 250. Seminar in Geophysics.** (3) I, II. Mr. Slichter  
 Fundamental problems in physics of the solid earth. The content will vary from year to year.
- 255. Seminar in Atmospheric Physics.** (3) I. Mr. Holzer  
 Fundamental problems in physics of the atmosphere. The content will vary from year to year.

**PLANT PATHOLOGY**

A Division of the Department of Agriculture

KENNETH F. BAKER, Ph.D., Professor of Plant Pathology.  
 PIERRE A. MILLER, M.S., Professor of Plant Pathology.  
 JOHN G. BALD, Ph.D., Associate Professor of Plant Pathology.  
 \_\_\_\_\_, Instructor in Plant Pathology.

*The Major.*—The major is offered only on the Berkeley campus. See the PROSPECTUS OF THE COLLEGE OF AGRICULTURE and consult the appropriate adviser for students in agriculture.

UPPER DIVISION COURSES

- 120. Plant Diseases.** (4) I. Mr. Baker, \_\_\_\_\_  
 Lectures, two hours; laboratory, six hours.  
 Prerequisite: Botany 1, or the equivalent. Bacteriology 1 recommended.  
 A general fundamental course treating of the nature, cause, and control of plant diseases.

\* Not to be given, 1950-1951.

- 130. Diseases of Subtropical Fruit Plants.** (4) I. Mr. Miller  
Lectures, three hours; laboratory, three hours.  
Prerequisite: Botany 1, or the equivalent. Bacteriology 1 and Plant Pathology 120 recommended.  
The pathology of citrus and other subtropical fruit plants. The distribution, economic importance, nature, cause, and control of the principal diseases.
- \***140. Diseases of Floricultural Plants.** (3) I. Mr. Baker, Mr. Bald  
Laboratory, lecture, and discussion, nine hours. Several field trips.  
Prerequisite: Plant Pathology 120 or equivalent.  
The pathology of floricultural plants in relation to cultural practices. Recognition, environmental relations, etiology, and control of important types of diseases.
- 199A-199B. Special Study for Advanced Undergraduates.** (2-4; 2-4) Yr.  
Prerequisite: senior standing and consent of the instructor. The Staff

## GRADUATE COURSE

- 282A-282B. Research in Plant Pathology.** (2-6; 2-6) Yr. The Staff

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**POLITICAL SCIENCE**

- <sup>1</sup> RUSSELL H. FITZGIBBON, Ph.D., Professor of Political Science.  
MALBONE W. GRAHAM, Ph.D., Professor of Political Science.  
J. A. C. GRANT, Ph.D., Professor of Political Science.  
DEAN E. MCHENRY, Ph.D., Professor of Political Science (Chairman of the Department).  
H. ARTHUR STEINER, Ph.D., Professor of Political Science.  
FRANK M. STEWART, Ph.D., Professor of Political Science.
- \* CHARLES H. TITUS, Ph.D., Professor of Political Science.  
WINSTON W. CROUCH, Ph.D., Associate Professor of Political Science and Director of the Bureau of Governmental Research.  
FOSTER H. SHERWOOD, Ph.D., Associate Professor of Political Science.  
JOHN C. BOLLENS, Ph.D., Assistant Professor of Political Science.  
ERNEST A. ENGELBERT, Ph.D., Assistant Professor of Political Science.  
DAVID G. FARRELLY, Ph.D., Assistant Professor of Political Science.  
IVAN H. HINDERAKER, Ph.D., Assistant Professor of Political Science.  
THOMAS P. JENKIN, Ph.D., Assistant Professor of Political Science.  
JAMES C. LIEN, Ph.D., Assistant Professor of Political Science.
- † ROBERT G. NEUMANN, Ph.D., Assistant Professor of Political Science.  
CHARLES R. NIXON, Ph.D., Assistant Professor of Political Science.  
CURRIN V. SHIELDS, Ph.D., Assistant Professor of Political Science.  
WESLEY R. FISHEL, Ph.D., Instructor in Political Science.  
GORDON K. LEWIS, 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.*—Courses 1 and 2 (or 3A-3B), or 103, or the equivalent, and 3 units selected from the following: Economics 1A-1B, Geography 1A-1B, History 4A-4B, 5A-5B, 7A-7B, 8A-8B, Anthropology 1A-1B, or Philosophy 2A-2B.

*The Major.*—Twenty-four units in upper division political science courses. The work in political science must be so distributed that at least three courses

\* Not to be given, 1950-1951.

† Absent on leave, 1950-1951.

<sup>1</sup> In residence first semester only, 1950-1951.

<sup>2</sup> In residence second semester only, 1950-1951.

are taken in one of the groups and at least one course in each of three other groups in which the upper division courses of the department are divided: Group I (Courses 110-118), Group II (Courses 120-138), Group III (Courses 141-148), Group IV (Courses 150-159), Group V (Courses 161-168, 117, 133, 187) and Group VI (Courses 138, 171-187). A copy of the detailed regulations may be obtained from the departmental adviser. The student must maintain an average grade of C or higher in all upper division courses in political science.

*Related Curricula.*—For the curriculum in public service and the curriculum in international relations, students are referred to pages 75 and 69.

#### LOWER DIVISION COURSES

##### 1. Introduction to Government. (3) I, II.

Mr. Farrelly, Mr. Fishel, Mr. Hinderaker, Mr. Lien, Mr. McHenry, Mr. Neumann, Mr. Nixon

An introduction to the principles and problems of government with particular emphasis on national government in the United States. This course is designed to fulfill in part the requirement of American History and Institutions. Students who have credit for American Institutions 101 will receive only one unit of credit for Political Science 1.

##### 2. Introduction to Government. (3) I, II.

Mr. Farrelly, Mr. Fishel, Mr. Hinderaker, Mr. Lewis, Mr. Lien, Mr. McHenry, Mr. Neumann, Mr. Nixon

A comparative study of constitutional principles, governmental institutions, and political problems of selected governments abroad. Not open to students who have had Political Science 31.

#### UPPER DIVISION COURSES

Prerequisite for all upper division courses: course 1 and 2, or 103, or the equivalent, except as indicated below, and upper division standing.

Majors in political science must distribute their upper division work so that they have at least three courses in one of the following groups, and at least one course in each of three other groups.

##### 103. Principles of Political Science. (2) I, II. Mr. Hinderaker, Mr. Titus

Prerequisite: any one of the lower division courses, or its equivalent, and consent of the instructor.

Principles of political organization; the major institutions and practices of government, such as political parties, legislatures, constitutions, etc., or the functions they perform.

#### *Group I.—Political Theory*

Prerequisite for all courses in *Group I*: upper division standing only.

##### 110. History of Political Ideas. (3) I, II.

Mr. Jenkin, Mr. Lewis, Mr. Nixon, Mr. Shields

An exposition and critical analysis of the ideas of the major political philosophers and schools from Plato to the eighteenth century.

##### 112. Modern Political Theory. (3) I, II.

Mr. Jenkin, Mr. Lewis, Mr. Nixon, Mr. Shields

An exposition and critical analysis of the ideas of the major political philosophers from the eighteenth century to the present.

##### 113. American Political Thought. (3) I, II.

Mr. Jenkin, Mr. Nixon, Mr. Shields

A survey of the development of American ideas concerning political authority from Cotton and Williams to the present.

**117. Jurisprudence. (3) II.**

Mr. Sherwood

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. This course may be counted in either *Group I* or *Group V*.

**118. Nature of the State. (3) I.**

Mr. Jenkin

Prerequisite: course 110, 112, or 113.

An attempt to develop by critical dialectic a coherent theory of the state. Concepts such as sovereignty, law, liberty, rights, equality will be especially emphasized.

**Group II.—International Relations**

Prerequisite for all courses in *Group II* (except 120, 133): upper division standing.

**120. Colonies in World Politics. (2) II.**

Mr. Fishel, Mr. Fitzgibbon

A brief survey of the more important historical imperial systems, followed by a study of colonial governments and the problems of imperialism in the world today.

**125. Foreign Relations of the United States. (3) I, II.**

Mr. Graham, Mr. Neumann

A survey of the factors and forces entering into the formation and carrying out of American foreign policy, with special emphasis on contemporary problems.

**126. Latin-American International Relations. (3) I.**

Mr. Fitzgibbon

The major problems of Latin-American international relations and organization in recent decades.

**127. International Relations. (3) I, II.**

Mr. Graham, Mr. Neumann, Mr. Steiner

A general survey of the institutions and agencies of international government, including the United Nations, with major stress on outstanding issues in contemporary diplomacy.

**130A-130B. The Foundations of National Power. (3-3) Yr.**

Mr. Fishel, Mr. Steiner

A study of the principal elements of power in world politics, of national interests and policies, and of the power potential of the major countries of the world.

**133A-133B. International Law. (3-3) Yr.**

Mr. Neumann, Mr. Sherwood

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. This course may be counted in either *Group II* or *Group V*.

**136. Problems of the Pacific Area. (3) I.**

Mr. Steiner

A survey of contemporary problems of special international interest. This course may be counted in either *Group II* or *Group IV*.

**138. International Relations of the Far East. (3) II.**

Mr. Fishel, Mr. Steiner

A survey of the relations of China and Japan with the Western world and with each other, and of the policies of the powers in southeast Asia.

**Group III.—Politics****141. Politics. (3) I, II.**

Mr. Hinderaker, Mr. Nixon, Mr. Titus

An analysis of political activities, with emphasis on methods of operating, capturing, and creating organizations.



142. **Elections.** (2) I. Mr. Titus  
An analysis of the history, rules, procedures, techniques, and politics of the American system of elections.
143. **Legislatures and Legislation.** (3) II. Mr. Hinderaker, Mr. Titus  
The functions of legislatures, the organization and procedure of typical legislative bodies, and the problems and principles of law making.
145. **Political Parties.** (2) I. Mr. Titus  
Organization, functions, and practices of political parties primarily in the United States.
146. **Public Opinion and Propaganda.** (2) I, II. Mr. Nixon, Mr. Titus  
Prerequisite: upper division standing only.  
A study of the nature and the means of formation of public opinion. Public opinion as a factor in popular government and as a control device in the modern state, with special reference to current conditions in American democracy.
148. **Public Relations.** (2) I, II. Mr. Hinderaker  
An analysis of principles, activities, problems, and distinctive types of organizations in the field of public relations.
- Group IV.—Comparative Government*
- \*150A–150B. **The Governments of Latin America.** (3–3) Yr. Mr. Fitzgibbon  
A study of the constitutional development, governmental organization and operation, and political practices and attitudes in Latin-American states. 150B may not be taken by those who have credit for Political Science 151.
152. **British Government.** (3) I. Mr. McHenry  
The government and politics of the United Kingdom; the British constitution, parliament, parties and elections, foreign policies, administrative problems, and local governments.
153. **The British Commonwealth of Nations.** (2) II. Mr. McHenry  
The constitutional and political relations of the United Kingdom and dominion governments; the governments of Canada, Australia, New Zealand, Union of South Africa.
154. **The Governments of Central Europe.** (3) I. Mr. Neumann  
An intensive study of the political and constitutional organization of Germany and Danubian Europe, with special attention to contemporary political issues, parties, elections, and foreign relations.
155. **The Governments of Eastern Europe.** (3) II. Mr. Graham  
An intensive study of the political and constitutional organization of the Soviet Union and its component parts, with special attention to contemporary political issues, parties, elections, and foreign relations.
157. **Governments of Western Europe.** (3) I. Mr. Neumann  
The constitutional and political structure and development of the countries of western continental Europe with special attention to contemporary problems.
159. **Chinese Government and Politics.** (3) I. Mr. Steiner  
Organization and structure of the Chinese government; Chinese political parties, particularly the Kuomintang and the Chinese Communists; political problems of contemporary China.

\* This course replaces courses formerly numbered 150 and 151.

*Group V.—Public Law*

- 161. The Anglo-American Legal System. (3) II.** Mr. Grant  
(Former number, 10.)  
Evolution of the English common law courts and their legal system, with special emphasis on the contributions made by canon law, the law merchant and equity; the theory of *stare decisis* as illustrated by the evolution of modern rules of negligence. May not be taken by those who have credit for Political Science 10.
- 166. Administrative Law. (3) I.** Mr. Sherwood  
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.
- 167A-167B. Constitutional Law. (3-3) Beginning either semester.**  
Mr. Farrelly, Mr. Grant, Mr. Lien  
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.
- 168. Government and Business. (3) I.** Mr. Grant, Mr. Lien  
Governmental activities in the preservation and regulation of competition, with special emphasis upon problems of administration and intergovernmental cooperation; regulation of trades and professions.

*Group VI.—Public Administration and Local Government*

- 171. State and Local Government. (3) I, II.** Mr. Crouch, Mr. Stewart  
(Former number, 34.)  
Development of state constitutions; the political, administrative, and judicial systems of state and county government; and relations between the state and local rural government, with special reference to California. May not be taken by those who have credit for Political Science 34.
- 172. Municipal Government. (3) I, II.** Mr. Crouch, Mr. Stewart  
A study of the modern municipality in the United States; legal aspects of city government; local election problems; types of municipal government; problems of metropolitan areas; relationship of the cities to other units; problems bearing on city government today.
- 181. Principles of Public Administration. (3) I, II.**  
Mr. Crouch, Mr. Stewart  
Development of public administration and its relation to other branches of government; the process of centralization; the process of integration; re-organization of administration; budgets; purchasing; problems of personnel; and types of control of the administration.
- 183. Problems in Public Administration. (3) I.** Mr. Stewart  
Problems of policy, organization, and procedure in selected fields of public administration, with emphasis on administrative functions. The problems selected may vary each semester.
- 184. Municipal Administration. (3) I, II.** Mr. Crouch, Mr. Stewart  
A study of governmental functions performed at the municipal level, such as planning, zoning, water supply, housing, recreation and parks, public health, traffic, law enforcement, public works, and municipal finance; development of modern concepts of administration in local areas.

- 185. Public Personnel Administration. (3) I.** Mr. Crouch  
Evolution of public employment policies; a study of the principles and practices of public service personnel, including recruitment, promotion, morale and discipline, retirement, classification, compensation, unions of employees, organization of the personnel agency, and training for public employment.
- 186. American National Administration. (3) II.** Mr. Crouch  
Functions, organization, practices, and relationships of the principal administrative agencies of the Federal government.
- 187. The Administrative Process. (3) II.** Mr. Sherwood  
An analysis of (1) judicial control of the way in which administrative agencies operate, and (2) within these limits, the most effective procedures as demonstrated by experience. This course may be counted in either *Group V* or *Group VI*.

*Ungrouped*

- 199A-199B. Special Problems in Political Science. (1-3; 1-3) Yr.**  
Prerequisite: credit for 6 units of upper division courses in political science, and the special requirements necessary for the field selected for special study. Permission to register for this course is required.
- Section 1. Techniques of Legal Research. Mr. Grant, Mr. Sherwood  
Section 2. Problems in International Relations. Mr. Graham  
Section 3. Readings in Political Theory. Mr. Jenkin, Mr. Nixon  
Section 4. Methods of Administrative Management. Mr. Stewart  
Section 6. Problems in Politics and Legislation. Mr. Titus  
Section 7. Problems in Latin-American Political Institutions. Mr. Fitzgibbon  
Section 8. Problems of the Pacific Area. Mr. Steiner  
Section 9. Problems of the British Empire. Mr. McHenry  
Section 10. Problems in Public Administration. Mr. Crouch

## GRADUATE COURSES

- 203. Scope and Methods. (3) I, II.** Mr. Lien  
The scope, methods, techniques, interrelationships, and literature of political science as a whole. The course includes an examination of the historical development of political science, of its relation to other social sciences, of methods of dealing with problems of political science, and of techniques of research. Required of all candidates for a graduate degree.
- 211. Political Theory. (3) II.**  
An analysis of the central problems of political theory and their relation to allied disciplines.
- 212. International Relations. (3) I.** Mr. Steiner  
An intensive analysis of the principles and practices of international organization, chiefly as illustrated in the operation of the United Nations and its specialized agencies.
- 214. Politics. (3) I, II.**  
An analysis of political leaderships, with emphasis on the American presidency and its relation to various aspects of American politics, including Congress, political parties, elections, and public opinion.
- 215. Comparative Government. (3) II.** Mr. McHenry  
An intensive and systematic analysis, employing the comparative approach, of the basic principles and problems of government of the major states and areas.

**218. Public Administration and Local Government. (3) I, II. Mr. Stewart**

The nature and scope of public administration and its role in a democratic society; basic problems in the execution of public policies on all levels of government, such as organization, personnel, finance, internal management, administrative powers and responsibilities, inter-government relationships, and the impact of public opinion, pressure groups, and political parties on administration.

**GRADUATE SEMINARS**

- \*250. Seminar in Governments and International Relations of Latin America. (3) I. Mr. Fitzgibbon
252. Seminar in Public Law. (3) II. Mr. Grant
253. Seminar in International Relations. (3) I, II. Mr. Graham, Mr. Steiner
254. Seminar in Public Administration. (3) II. Mr. Stewart
- \*255. Seminar in Comparative Constitutional Law. (3) I. Mr. Grant
256. Seminar in Comparative Government. (3) I, II.  
Mr. Graham, Mr. Neumann, Mr. Steiner
257. Seminar in Political Theory. (3) I, II. Mr. Jenkin, Mr. Nixon
258. Seminar in Administrative Law. (3) I. Mr. Sherwood
259. Seminar in Political and Electoral Problems. (3) II. Mr. Titus
282. Seminar in Municipal Government. (3) I. Mr. Crouch
298. Special Study and Research for M.A. Candidates. (1-3) I, II.  
The Staff
299. Special Study and Research for Ph.D. Candidates. (2-6) I, II.  
The Staff

**AMERICAN INSTITUTIONS****101. American Institutions. (2) I, II. Mr. Farrelly, Mr. Fishel, Mr. Lien**

This course counts toward satisfaction of the "Requirement of American History and Institutions." (See page 36.) It may not be applied toward the political science major, and is not open to students who have credit for Political Science 1 or Political Science 3A.

The fundamental nature of the American constitutional system and of the ideals upon which it is based.

**BUREAU OF GOVERNMENTAL RESEARCH**

The Bureau of Governmental Research was established in 1937 chiefly to perform the three functions of: (1) maintaining a collection of current pamphlets, periodicals, and documents relating to public administration and local governments; (2) providing facilities for upper division and graduate students and members of the faculty to pursue study and research in public administration, local government, and related fields; and (3) conducting studies of governmental functions of particular interest to southern California and cooperating with public officials in solving their administrative problems.

Further information may be obtained by consulting the Director, Mr. Winston W. Crouch, Room 42, Library.

**PORTUGUESE**

For courses in Portuguese, see under Department of Spanish and Portuguese.

\* Not to be given, 1950-1951.

## PSYCHOLOGY

- ROY M. DORCUS, Ph.D., Professor of Psychology and Professor of Psychology in the School of Medicine.
- FRANKLIN FEARING, Ph.D., Professor of Psychology.
- JOSEPH A. GINGERELLI, Ph.D., Professor of Psychology.
- MILTON E. HAHN, Ph.D., Professor of Psychology.
- <sup>1</sup> ELLEN B. SULLIVAN, Ph.D., Professor of Psychology.
- KATE GORDON MOORE, Ph.D., Professor of Psychology, Emeritus.
- S. CAROLYN FISHER, Ph.D., Associate Professor of Psychology.
- BRUNO KLOPPER, Ph.D., Associate Clinical Professor of Psychology.
- HOWARD C. GILHOUSEN, Ph.D., Associate Professor of Psychology.
- GEORGE F. J. LEHNER, Ph.D., Associate Professor of Psychology.
- JESSIE L. RHULMAN, Ed.D., Associate Professor of Psychology.
- JOHN P. SEWARD, Ph.D., Associate Professor of Psychology.
- MARION A. WENGER, Ph.D., Associate Professor of Psychology (Chairman of the Department.)
- JAMES F. T. BUGENTAL, Ph.D., Assistant Professor of Psychology.
- RICHARD CENTERS, Ph.D., Assistant Professor of Psychology.
- JAMES C. COLEMAN, Ph.D., Assistant Professor of Psychology.
- JOHN S. HELMICK, Ph.D., Assistant Professor of Psychology.
- GLEN V. HOLLAND, Ph.D., Assistant Professor of Psychology.
- F. NOWELL JONES, Ph.D., Assistant Professor of Psychology.
- GEORGE E. MOUNT, Ph.D., Assistant Professor of Psychology and Engineering.
- JAMES W. DEGAN, Ph.D., Instructor in Psychology and Business Administration, and Research Assistant, Institute of Industrial Relations.
- IRVING MALTMAN, Ph.D., Instructor in Psychology.
- JOSEPH SHEEAN, Ph.D., Instructor in Psychology and Staff Psychologist and Speech Pathologist, Student Health Service.

- ◇
- LAURENCE A. PETRAN, Mus.M., Ph.D., Professor of Music and University Organist.
- HARRY W. CASE, Ph.D., Associate Professor of Engineering and Psychology.
- THEODORE FORBES, Ph.D., Visiting Associate Professor of Engineering and Psychology
- HARRINGTON V. INGHAM, M.D., Neuropsychiatrist, Student Health Service.
- GLADYS M. JEWETT, M.A., Associate in the Clinic School.
- EVELYN GENTRY CALDWELL, Ph.D., Research Associate in Psychology.
- MARGARET HUBBARD JONES, Ph.D., Research Associate in Psychology.
- IRVING WESCHLER, Ph.D., Research Assistant, Institute of Industrial Relations, and Lecturer in Psychology.

*Letters and Science List.*—All undergraduate courses in psychology are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Required of all majors: Psychology 1A-1B. (Under certain conditions Psychology 101 may be substituted for courses 1A and 1B, or 108 for course 1B. If courses 101 or 108 are offered in preparation for the major they will not be counted toward upper division credit for the major.)

Recommended: Courses from the following areas according to the student's interests: (a) Natural science such as physics, chemistry, zoölogy, physiology; (b) Social science such as anthropology, sociology, economics, political science, history; (c) Mathematics, statistics; (d) Humanities such as philosophy, languages, literature, art, music, drama.

Recommended for students who expect to do graduate study in psychology, at least 18 units, distributed among the following: (a) 6 units of cultural or

<sup>1</sup> In residence first semester only, 1950-1951.

social anthropology and/or sociology; (b) not less than 3 units of college chemistry; (c) one year of college physics, including laboratory; (d) college algebra and analytic geometry or mathematics for the social and life sciences; (e) not less than one year of work chosen from the following: general zoölogy, elementary physiology, elementary zoölogy and physiology, applied human physiology, general physiological biology, endocrinology, genetics. These students should also plan to take such courses as will give them the reading knowledge of two foreign languages required for the Ph.D. degree.

*The Major.*—Courses 105A and 106A, and 18 additional units in upper division psychology.

*Requirements for the M.A. degree.*—The department follows Plan II (see page 120). The list of topics and alternatives for the Comprehensive Examination may be obtained from the department.

*Requirements for the Ph.D. degree.*—Permission to proceed to the written part of the qualifying examinations will be based on: (a) fulfillment of the general University requirements; (b) completion of specified upper division courses in addition to the undergraduate major; (c) departmental approval of the applicant's program, and of his probable qualifications for the making of a competent psychologist; and (d) consideration of the probability of the applicant's securing employment in his chosen field. The department will endorse petitions for candidacy, and request appointment of doctoral committees, only for applicants who have passed with credit the written examinations. Detailed statements of the requirements may be obtained from the department.

#### LOWER DIVISION COURSES

**1A. Introductory Psychology.** (3) I, II. Mr. Gilhausen in charge  
(Former number, 21.)

Consideration of facts and principles pertaining to the topics of perception, imagination, thought, feeling, and emotion, leading to the problems of experimental psychology, and the topics of intelligence and personality.

**1B. Elementary Physiological Psychology.** (3) I, II. Mr. Wenger in charge  
(Former number, 22.)

Prerequisite: 1A or course 21 taken in previous years.

Study of the integrative relations of psychological processes to nervous, muscular, and glandular features of the response mechanism; including the structure and functions of the sense organs.

**33. Personal and Social Adjustment.** (3) I, II. Mr. Lehner in charge  
(Former number, 23.)

Prerequisite: 1A or course 21 taken in previous years.

The principles of mental hygiene. Orientation in the practical use of psychological principles in problems and circumstances encountered in college and later life.

#### UPPER DIVISION COURSES

Except as otherwise indicated, courses 1A and 1B are normally prerequisite to all upper division courses. Exceptions to the requirement are made for students who are not majoring in psychology, for the following courses: 120, 126, 142, 143, 145A-145B, 147, 167A-167B, 175, 177, 180, 185, 186. For these courses, 1A and 33 or the equivalent will be accepted as meeting the prerequisite.

**101. Principles of Psychology.** (3) I, II. Mr. Gengerelli, Mr. Maltzman

Open to upper division students who do not have credit for courses 1A and 1B. May be offered in substitution for courses 1A and 1B as the prerequisite to further upper division courses.

A critical discussion of the basic topics in psychology. Elementary details, including essential information concerning nervous, muscular, and glandular mechanisms will be covered by examinations based on readings.

- 105A. Mental Measurements.** (3) I, II. Mr. Helmick  
A study of the construction, techniques of application, and interpretation of tests and scales. Practice in statistical procedures applicable to data derived from tests. Students who have credit for any other course in statistics will receive only one unit of credit for this course.
- 105B. Mental Measurements.** (2) I, II. Mr. Holland  
Prerequisite: course 105A.  
Further study of the principles of measurement, stressing basic concepts. Application to problems of test construction, administration, and interpretation.
- 105C. Mental Measurements.** (1) I, II. Mr. Holland  
Prerequisite: course 105B.  
Practice in individual intelligence testing. It is recommended that 105B precede this work, although the two courses may be taken concurrently.
- 106A. Experimental Psychology.** (3) I, II. Mr. Mount  
Lectures and demonstration, two hours; laboratory, two hours; assigned readings.  
Methods, techniques, and typical results in experimental research in psychology.
- 106B. Experimental Psychology.** (3) I, II. Mr. Mount  
Prerequisite: course 106A.  
Lectures, two hours; laboratory, two hours; assigned readings and reports. Continuation of the study of methods, techniques, and typical results in experimental research. Emphasis is placed on the conditions and requirements of representative laboratory experiments and evaluation of associated experimental literature.
- 107. Advanced Psychometric Methods.** (3) I, II. Mr. Gengerelli  
Prerequisite: course 105B; recommended, Mathematics 3B or 7. The application of higher statistical methods to psychological data.
- 108. Physiological Psychology.** (3) I, II. Mr. Gengerelli, Mr. Jones  
If not to be counted toward the major in psychology, this course may be substituted for course 1B as prerequisite to further upper division courses. Integrative activities, consciousness, intelligent behavior, receptor and effector processes in relation to neuromuscular structure and function. Facts, problems, and methods.
- 109. Research Methods in Human Dynamics.** (3) I. Mr. Seward  
Application of experimental techniques to problems in human adjustment. Group and individual projects will give experience in planning research, treating and interpreting data, and describing experiments.
- 110. Educational Psychology.** (3) I, II. Mr. Helmick  
A general survey of the basic principles of psychology that are pertinent to education. Includes a study of growth and development, abilities, intelligence, social and emotional factors, and principles of learning. Not open for credit to students with credit for Education 110.
- 112. Child Psychology.** (3) I, II. Mr. Holland  
An elaboration of the developmental aspects of physical, mental, social, and emotional growth from birth to adolescence. Not open for credit to students with credit for Education 111 or 123, or Home Economics 134.
- 113. Psychology of Adolescence.** (2) II. Mr. Holland  
Prerequisite: course 112.  
The physical, psychological, and social development of the adolescent. Essentially a continuation of child psychology, but with relatively greater emphasis on personality formation and problems of social adjustment. Not open for credit for students who have credit for Education 112.

- 120. History of Psychology.** (3) I, II. Miss Fisher  
The development of psychological theories and research to the end of the nineteenth century.
- 126. Contemporary Psychology.** (2) I, II. Miss Fisher  
Recommended: course 120.  
The variant tendencies in current psychology, including a critical examination of the more important so-called "schools" of psychology.
- 131. Sensation and Perception.** (2) I. Miss Fisher  
Intensive study of sense perception, with reference to the structure and functions of sense mechanisms, and experimental findings.
- 134. Motivation.** (2) II. Mr. Gilhousen  
Theories and experimentally determined facts concerning drives, needs, preferences, and desires.
- 135. Imagination and Thought.** (2) I. Mr. Maltzman  
An analysis of experimental studies of problem solving, reasoning, insight, concept formation, and related topics.
- 137A. Human Learning.** (3) I. Mr. Seward  
Prerequisite: course 106A.  
A critical survey of the principal theories of learning, with the experimental findings on which they are based.
- 137B. Human Learning.** (3) II. Mr. Seward  
Prerequisite: course 137A.  
A more intensive study of experimental problems. Students will have an opportunity to carry out research projects in this field.
- 138. Feeling and Emotion.** (2) II. Mr. Wenger  
The nature and basis of the affective factor in life, with particular emphasis on the critical evaluation of affective theory. This is not a course in personality and emotional adjustment.
- 142. Human Communication.** (2) I. Mr. Fearing  
Prerequisite: courses 145A-145B or 147; or consent of the instructor.  
Role of communication in human social organization; psychological factors involved in the creation and manipulation of symbols; art, drama, and science as forms of communication. Particular attention will be given to the social and psychological aspects of the mass media of communication, radio, and motion pictures.
- \*143. Propaganda and Public Opinion.** (2) II. Mr. Fearing  
Prerequisite: courses 145A-145B or 147; or consent of the instructor.  
Propaganda as a form of communication. The detection, analysis and effects of propaganda. The creation, manipulation, and measurement of public opinion; the relation between public opinion and propaganda; the relation between the mass media of communication and public opinion and propaganda.
- 144. Psychological Interviewing and Case History Methods.** (3) I. Mr. Bugental  
Prerequisite: senior or graduate standing and permission of the instructor.  
Procedures, methods, and problems in the collection of personal data in the interview situation.
- 145A-145B. Social Psychology, General Course.** (2-2) Yr. Mr. Centers  
Interaction between the individual and the group; the individual in the group. Critical analysis of concepts of group mind, imitation and suggestion; rational and irrational motives in group living. Social motivation, attitudes,



values, opinions, and beliefs, in relation to group personality structure. Adjustments and maladjustments as conditioned by cultural and subcultural group pressures.

- 146. Attitude and Opinion Measurement. (3) I.** Mr. Centers  
Prerequisite: two semesters of social psychology, or consent of the instructor.  
The nature of attitudes and opinions, and their measurement by means of various types of attitude scales and public opinion surveys. Study design, formulation of questionnaires and interview schedules, sampling methods, techniques of interviewing, analysis of results, and applications to various psychological problems. Class projects and field work.
- 147. The Psychological Method in the Social Sciences. (3) II.** Mr. Fearing  
Psychological factors in major social problems, including social control, propaganda, group conflict, cultural determination, etc.
- 148. Personality Structure and Development. (2) I.** Mr. Bugental  
Consideration of the cultural and biological determinants of personality.
- 150A. Animal Psychology. (3) I.** Mr. Gilhousen  
General survey of the behavior of the higher forms of animal life.
- 150B. Animal Psychology. (3) II.** Mr. Gilhousen  
Prerequisite: course 150A, or consent of the instructor.  
A more intensive study of facts and theories concerning motivation, learning and problem solving. Lectures and laboratory demonstration.
- 160. Mental Deficiency. (2) I.** Miss Sullivan  
Prerequisite: course 112 or equivalent.  
A study of mental retardation and related abnormalities in children and adults, including a consideration of causes, classifications, special traits, and educational, vocational, and social problems and needs (lectures, readings, discussion, demonstration).
- 161. The Psychology of Exceptional Children. (3) II.** Mr. Sheean  
Prerequisite: course 112 or equivalent.  
A study of the nature, diagnosis, and treatment of exceptional disabilities and problem behavior in individual children or special groups.
- 162. Speech Pathology. (3) I.** Mr. Sheean  
Prerequisite: courses 108 and 168.  
A clinical introduction to the problem of speech handicaps, including principles and methods of speech correction and recognition and prevention of speech disorders. Not open for credit to students who have credit for Speech 140.
- 167A. Remedial Techniques in Basic School Subjects. (2) I, II.** Mr. Coleman  
The diagnosis and treatment of reading, spelling, and other school disabilities in children and adults. Clinical demonstration, testing, and training of typical cases.
- 167B. Laboratory in Remedial Techniques. (2) I, II.** Mr. Coleman  
Lecture, one hour; laboratory, three hours. Laboratory course for course 167A.
- 168. Abnormal Psychology. (3) I, II.** Mr. Bugental  
Prerequisite: recommended: course 108, or Zoölogy 35 or 106. Students may be required, early in the semester, to demonstrate an acquaintance with the elementary facts of structure and function of the nervous system.  
Disorders of sensation, perception, feeling, and thought; their nature, causation, effects on life, and amelioration.

**169. Psychology of the Physically Handicapped.** (2) I. Miss Sullivan  
A study of the basic facts, principles, and methods of understanding the personality and behavior of individuals who possess physical handicaps, with particular reference to methods of reëducation and adjustment; psychological disabilities resulting from sensory and motor disorders, illness and disease, and injury will be discussed.

**172A-172B. Psychology of Music.** (3-3) Yr. Mr. Petran  
A study of the psychological factors and problems in music from the points of view of the listener, performer, and composer.

**\*175. Psychology of Religion.** (3) II. Mr. Bugental  
The place of religion in personal and social life and its historical development in Western cultures. Specific beliefs are considered only in relation to their psychological conditions and effects.

**\*177. Psychology and Art.** (3) I.  
Problems of the appreciation of the materials and ideas of the fine arts, with special reference to the psychological processes of imagination, feeling, and emotion.

**180. Psychology of Advertising and Selling.** (2) I. Mr. Weschler  
The relative strength of the desires in buying; attention value of form, size, color, and typographical layout and methods of measuring the effectiveness of advertisements; characteristics of salesmen.

**185. Personnel Psychology.** (2) I. Mr. Case  
The methods of selection, classification, and training of employees.

**186. Occupational Counseling and Job Classification.** (2) II. Mr. Jones  
Prerequisite: courses 105A and 185.  
Principles of occupational counseling; nature and sources of occupational information; methods of job analysis and creation of job families.

**187. Industrial Psychology.** (2) II. Mr. Case  
Description of factors such as illumination, noise, temperature as they affect production.

**188A-188B. Psychological Bases of Counseling.** (2-2) Yr.  
Mr. Hahn, Miss Rhulman, and the Staff  
Prerequisite: open to senior and graduate students who have preparation in educational psychology, statistics, tests and measurements, mental hygiene, or abnormal psychology.

The logical and experimental approaches to human aptitudes, abilities, and interests as used in counseling. Mental organization, physiological and psychological traits, individual and group educational-vocational-personality characteristics, derivation of interest and ability patterns, pattern analysis and its counseling applications.

**199. Special Problems in Psychology.** (3) I, II. Mr. Wenger and the Staff  
Prerequisite: courses 105A, 106A, and 6 other units in upper division psychology. Specific permission to enroll is necessary.  
Training in the fundamentals of psychological research. Primarily for students who expect to do graduate work in psychology.

#### GRADUATE COURSES

**207. Advanced Psychometric Methods.** (2) II. Mr. Gengerelli

**213. Experimental Design in Psychology.** (2) I, II. Mr. Seward  
Prerequisite: courses 106B and 107, or the equivalent.  
The function of experiment in relation to theory, the requirements of a

\* Not to be given, 1950-1951.

good experiment, and the interdependence of experimental design and statistical evaluation of results. Students will evaluate typical designs and construct their own, in preparation for original research.

**215A-215B. Commercial and Industrial Psychology.** (2-2) Yr. Mr. Jones  
Selection and training of employees; factors influencing efficiency of work.

**216. Critical Problems in Psychology.** (2) I, II. Mr. Gengerelli, Miss Fisher  
Some critical problems in the field of psychology will be discussed, depending on the interests of the instructor and the class.

**217A-217B. Clinical Psychology.** (2-2) Yr. Mr. Lehner, Mr. Klopfer  
Prerequisite: course 161 or 168, or equivalent.  
Discussion and integration of basic concepts in clinical psychology.

**218. Communication, Propaganda, and Public Opinion.** (2) I. Mr. Fearing  
Problems, methods, and theories in communications research. Particular attention is given to the analysis of communications content, the theory and role of propaganda, and the dynamics of public opinion.

**219A-219B. Clinical Measurement Techniques.** (2-2) Yr. Miss Sullivan  
Prerequisite: course 105C or the equivalent.  
Advanced study of tests in clinical diagnostic study, including the special application of individual and group tests of intelligence, personality, diagnosis and projective techniques. Emphasis will be placed upon application in the clinical situation.

**220. Clinical Neurology.** (2) II. \_\_\_\_\_  
Prerequisite: courses 108 and 217A, or their equivalents.  
Presentation of selected neurological cases. This course is designed to integrate the student's knowledge of mental and motor dysfunction with the neurological bases of such dysfunction.

**221. Experimental Psychology.** (3) I, II. Mr. Mount  
Prerequisite: course 106B and consent of the instructor.  
Methods, techniques, and apparatus applicable to research problems of various types. Attention will be given to sources of error, difficulties in operation, and limitations on interpretations.

**222. Personality Dynamics.** (2) II. Mr. Lehner  
A survey of the theoretical views of Freud, Jung, Adler, Rank, and various modern writers including Allport, Lewin, Murray, and Murphy.

**224A-224B. Theory and Practice in Projective Methods.** (2-2) Yr. Mr. Klopfer  
Prerequisite: courses 217A, and 219A or 252A, or their equivalents.  
Survey of theories and fields of application of projective methods, and supervised practice in techniques.

**225. Advanced Rorschach Interpretation.** (3) I. Mr. Klopfer  
Prerequisite: course 224A-224B.

**251. Seminar in Problems of Learning in Psychology.** (3) II. Mr. Seward  
A consideration of the major theories of learning and related research with particular emphasis on human problems.

**\*252A-252B. Seminar in Mental Measurements.** (3-3) Yr. Miss Sullivan

**253A-253B. Seminar in Physiological Psychology.** (3-3) Yr. Mr. Wenger  
Prerequisite: course 108 or its equivalent.

\* Not to be given, 1950-1951.

- 254. Seminar in Genetic Psychology. (3) I.** Mr. Holland
- 255A-255B. Seminar in Social Psychology. (3-3) Yr.** Mr. Fearing
- 256. Seminar in Group Behavior. (3) II.** Mr. Fearing  
Prerequisite: a course in social psychology or consent of the instructor.  
Consideration of the psychological theories, methods of study, and dynamics of the various forms of collective behavior.
- 257A-257B. Seminar in Psychotherapeutic Techniques. (3-3) Yr.**  
Mr. Dorcus, Mr. Klopfer, Mr. Ingham  
Prerequisite: third-year graduate standing in the clinical training program.
- 258A-258B. Seminar in Abnormal Psychology. (3-3) Yr.** Mr. Dorcus
- 259. Seminar in Motivation. (3) I.** Mr. Gilhousen
- 260. Seminar in Comparative Psychology. (3) II.** Mr. Gilhousen
- 266. Seminar in Opinion and Attitude Research. (3) II.** Mr. Centers
- 267. Mass Communication as a Social Force. (3) I.** Mr. Fearing  
Prerequisite: open to graduate students in Journalism and Theater Arts; open to graduate students in Psychology with consent of the instructor.  
The social implications of motion pictures, newspaper, radio, theater, and television in the integration of human society.
- †268. Special Seminar in Psychology: Psychological Factors in Transportation. (3) I.** Mr. Forbes  
Prerequisite: graduate standing and consent of the instructor. Students desiring engineering credit should enroll in Engineering 298.  
Consideration of psychological factors in aviation, highway, and other transportation; abilities, habits, and attitudes as related to safety, efficient performance, and fatigue.
- 277A-277B. Field Work in Personnel Psychology. (3-6; 3-6) Yr.**  
Mr. Hahn, Miss Rhulman, and the Staff  
Prerequisite: regular graduate standing and upper division or graduate work in tests and measurements, statistics, mental hygiene or abnormal psychology, and counseling methods; recommendation of the adviser and consent of the instructor.  
Internship in the Student Counseling Center, which includes psychometrics, observation of counseling, preparation of case materials for counselors, record keeping, test scoring, case discussions, and participation in other service activities. Minimum of 10 hours per week, including 1-2 hours of staff meetings and conferences.
- 278A-278B. Research in Psychology. (3-6; 3-6) Yr.**  
Prerequisite: consent of the adviser. Mr. Wenger and the Staff
- 279A-279B. Field Work in Clinical Psychology. (3-6; 3-6) Yr.**  
Prerequisite: consent of the adviser. Mr. Lehner and the Clinical Staff  
Practical work in hospitals and clinics in clinical diagnostic testing and psychotherapy. Students in the Veterans Administration Clinical Training Program are required to register for this course each semester.
- 401A-401B. Internship in Clinical Psychology. (3-6; 3-6) Yr.**  
Prerequisite: consent of the adviser. Mr. Lehner and the Clinical Staff

## PUBLIC HEALTH

—, Professor of Public Health.

A. HARRY BLISS, B.S., M.S., M.P.H., Assistant Professor of Public Health  
(Chairman of the Department).

JOHN BEESTON, M.B., D.P.H., Assistant Professor of Public Health.

MARY ELVEBACK, M.A., Lecturer in Biostatistics.

CHARLES E. STEELE, A.B., Associate in Sanitation.

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WALTER S. MANGOLD, B.S., Associate Professor of Public Health (Berkeley).

JOHN M. CHAPMAN, A.B., M.D., M.P.H., Lecturer in Public Health.

SAM M. HOUSTON, M.A., Ph.D., Lecturer in Public Health Administration.

PAUL LEVAN, A.B., M.D., Lecturer in Venereal Disease Control.

HAROLD MAZUR, M.A., M.D., M.P.H., Lecturer in Public Health.

MELVIN ROBERT PLANCEY, A.B., M.D., M.P.H., Lecturer in Public Health.

CHARLES SENN, B.S. in C.E., Lecturer in Public Health.

THOMAS HUNTER STERNBERG, B.S., M.D., Lecturer in Venereal Disease Control.

RAYMOND V. STONE, D.V.M., Lecturer in Public Health Laboratory.

*Letters and Science List.*—Courses 5, 100A, 106, 110, 145, 147A are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

### School of Public Health

*Preparation for the Major.*—See prepublish health curriculum, College of Applied Arts, page 111.

*The Major.*—Students interested in pursuing work in public health leading toward the degree of Bachelor of Science in the School of Public Health should consult the chairman of the department. Options are available in the respective fields of sanitation, public health statistics, and preadministration. The requirements of the School of Public Health for the degree of Bachelor of Science include 120 units, at least the last 24 of which must have been completed as a student in the School of Public Health.

*Premedical Students.*—Premedical students who have met all of the requirements for the first three years in the College of Letters and Science may be admitted to the School of Public Health as candidates for the degree of Bachelor of Science in public health after the completion of Bacteriology 1 and Public Health 5.

*Graduate Work in Public Health.*—See the ANNOUNCEMENT OF THE SCHOOL OF PUBLIC HEALTH, and page 119 of this bulletin.

### LOWER DIVISION COURSES

#### 5. Introduction to Public Health. (3) I, II.

Mr. Beeston

A survey of the entire field of public health, including a consideration of the evolution of disease prevention and control; the social, medical, and economic aspects of sickness, disability, and death; and orientation in the administration of health programs by official agencies and by voluntary health organizations.

#### 15. Public Health Laboratory Procedures. (2) I.

Mr. Stone

Lecture, one hour; laboratory, three hours.

Prerequisite: consent of the instructor.

A study of public health laboratory procedures, methodology, significance, interpretation, and reliability. A descriptive course with laboratory practice and demonstrations, designed to develop an understanding of the procedures and their public health significance rather than proficiency in laboratory methods.

- 49. Field Training Course.** (Noncredit) I, II. Mr. Mangold, Mr. Bliss  
Field training course in health departments and/or military establishments for learning administrative methods and practical procedures in environmental sanitation.

#### UPPER DIVISION COURSES

The prerequisite to all upper division courses is course 5, or the equivalent, except that this requirement may be waived by the instructor in individual cases.

- 100A. Introduction to Health Administration.** (3) I, II. Mr. Houston  
Principles of public administration and fundamentals of organization and administration in public health.
- 100B. Introduction to Health Administration.** (3) II. \_\_\_\_\_  
Prerequisite: course 100A or consent of the instructor.  
Principles of hospital and medical care organization and administration.
- 106. Medical Problems in Relation to Society.** (2) I, II. Mr. Beeston  
A medical survey of certain diseases and defects which, by their chronic nature, produce social problems both for the sufferer and the community; including a survey of the medical care agencies and programs which exist and which may be required to meet the needs of the community.
- 110. Environmental Sanitation.** (3) I. Mr. Senn  
Fundamentals of housing, heating, ventilation, lighting, water supply, waste disposal, insect and rodent control, and control of milk and other food supplies.
- 113A. Principles and Practices in Sanitary Inspection.** (3) I. Mr. Bliss  
Prerequisite: course 110 and consent of the instructor.  
Lectures, two hours; laboratory or field trips, three hours.  
Objectives and special techniques in general sanitation covering communicable disease control, water and sewage, housing, ventilation, lighting and vector control.
- 113B. Principles and Practices in Sanitary Inspection.** (3) II. Mr. Bliss  
Prerequisite: course 110 and consent of the instructor.  
Lectures, two hours; laboratory or field trips, three hours.  
Objectives and special techniques in food sanitation covering milk, meat, markets, restaurants, and processing plants.
- 114. Advanced Study in Sanitation.** (1-5) I, II. Mr. Bliss  
Prerequisite: senior or graduate standing in the School of Public Health.
- 125. Maternal and Child Health.** (3) II. Mr. Beeston  
A consideration of conditions pertaining to the health of children from the time of conception to the end of puberty.
- 145. Community Control of Communicable Disease.** (3) I, II. Mr. Mazur  
The epidemiology and community control of communicable diseases, including tuberculosis and the venereal infections.
- 147A. Principles of Epidemiology.** (2) I. Mr. Chapman  
Prerequisite: Bacteriology 103, Public Health 145 and 162, or their equivalents, or consent of the instructor.  
Principles of epidemiology and the study of the infection chains of certain type diseases.
- 147B. Applied Epidemiology.** (2) II. Mr. Chapman  
Prerequisite: course 147A.  
Lecture, one hour; laboratory, three hours.  
Methods of investigating epidemics; collection and analysis of data.

**\*153A. Applied Biology of Sanitation. (2) II.**

Prerequisite: Bacteriology 103. Primarily for students in the public health sanitarian curriculum, but open to others by permission of the instructor.

Principles of life sciences relevant to control of environmental sanitation, and techniques of their application.

**\*153B. Applied Biology of Sanitation. (2).**

Laboratory, six hours.

Prerequisite: Bacteriology 103. Primarily for students in the public health sanitarian curriculum, but open to others by permission of the instructor.

Principles of life sciences relevant to control of environmental sanitation, and techniques of their application.

**160A. Biometry. (3) I.**

Miss Elveback

Lectures, two hours; laboratory, 3 hours.

Open only to students who have completed at least 8 units of laboratory courses in the biological sciences. Students who have completed courses in statistics may enroll only with the consent of the instructor.

Elements of statistical analysis; introduction to the methods of statistical analysis and their applications in the fields of the biological sciences.

**160B. Biometry. (3) II.**

Miss Elveback

Lectures, two hours; laboratory, 3 hours.

Prerequisite: course 160A or consent of the instructor.

Bivariate distributions, elementary methods of sampling, introduction to analysis of variance, special methods applicable to biological data.

**161A. Applied Biostatistics. (3) I.**

Miss Elveback

Lecture, two hours; laboratory, four hours.

Elements of vital statistics and demography. Includes consideration of problems of registration, enumeration, morbidity, and mortality statistics.

**161B. Applied Biostatistics. (4) II.**

Miss Elveback

Lecture, two hours; laboratory, six hours.

Prerequisite: course 161A.

Extension of methods introduced in 161A to more advanced problems. Methods of establishing record systems for health activities including case registers for chronic diseases; evaluation and analysis.

**162. Public Health Statistics. (3) I, II.**

Miss Elveback

Lecture, two hours; laboratory, three hours.

An applied course in public health statistics designed primarily for students not majoring in biostatistics.

**170. Industrial Health. (2) I, II.**

Mr. Plancey

The scope, organization, and operation of industrial health services.

**186. Control of Venereal Diseases. (2) II.**

Mr. Sternberg, Mr. LeVan

Prerequisite: consent of the instructor.

A consideration of the basic medical data; epidemiology; the prevention and administrative control of the venereal diseases; evaluation of methods used.

**198. Directed Group Study. (1-5) I, II.**

Mr. Bliss in charge

Field trips are often required. Students will furnish their own transportation.

**199. Special Study for Advanced Undergraduates. (1-5) I, II.**

The Staff (Mr. Bliss in charge)

**GRADUATE COURSE****299. Special Study for Graduate Students. (2 to 4) I, II.**

The Staff

\* Not to be given, 1950-1951.

## ROMANCE LANGUAGES AND LITERATURE

ROBERT V. MERRILL, Ph.D., Professor of French.

HARRY F. WILLIAMS, Ph.D., Assistant Professor of French.

### GRADUATE COURSES

201A-201B. French Historical Grammar and Methodology of Romance Linguistics. (2-2) Yr. Mr. Williams

A knowledge of Latin is indispensable.

\*203A-203B. Old Provençal: Reading of Texts. (2-2) Yr. Mr. Williams

## SCANDINAVIAN LANGUAGES

For courses in Scandinavian languages see under Department of Germanic Languages.

## SLAVIC LANGUAGES

DIMITRY M. KRASSOVSKY, Candidate of Law, Assistant Professor of Russian.

EUFROSINA DVOICHENKO-MARKOV, Ph.D., Instructor in Slavic Languages.

KENNETH E. HARPER, M.A., Lecturer in Slavic Languages.

PETER P. LAPIKEN, B.A., Lecturer in Slavic Languages.

ALEXANDER SOLOMON MORNELL, J.S.C., Associate in Russian.

*Letters and Science List.*—All courses in Slavic languages are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Courses 1, 2, 3A-3B, 18A-18B, and History 149A-149B (to be taken in the sophomore year).

*The Major.*—(1) Requirement in language: 103A-103B; 8 units chosen from courses 104A-104B, 119A-119B, 120A-120B, 122A-122B, 124A-124B. (2) Requirement in literature: 130; 9 units chosen from courses 132, 137, 143A-143B, 145.

### LOWER DIVISION COURSES

1. **Beginning Russian.** (4) I, II. The Staff  
The first course in the Russian language. To meet five times a week.
2. **Elementary Russian.** (4) I, II. The Staff  
Prerequisite: course 1.  
Continuation of course 1. To meet five times a week.
- 3A-3B. **Second-Year Russian.** (3-3) Yr. Mrs. Markov  
(Former number, 102A-102B.)  
Prerequisite: courses 1 and 2. Upper division students who are not majors in Slavic Languages may receive upper division credit for this course.
- 18A-18B. **Elementary Russian Conversation.** (1-1) Yr. The Staff  
A course in Russian conversation designed to accompany the lectures and recitations of courses 1 and 2. Open only to students who are taking 1 or 2.
- \*42A-42B. **Russian Civilization.** (2-2) Yr. Mrs. Markov  
Prerequisite: sophomore standing.  
Lectures and reading in English. A study of the growth and development of Russian culture.

\* Not to be given, 1950-1951.



## UPPER DIVISION COURSES

- 103A-103B. **Third-Year Russian.** (3-3) Yr. Mr. Lapiken  
Prerequisite: course 3A-3B.
- 104A-104B. **Fourth-Year Russian.** (3-3) Yr. Mr. Lapiken  
Prerequisite: course 103A-103B.
- 119A-119B. **Intermediate Russian Conversation.** (2-2) Yr. Mr. Lapiken  
Prerequisite: courses 1, 2, and 18A-18B, or the equivalent.
- 120A-120B. **Advanced Russian Conversation.** (2-2) Yr. Mrs. Markov  
Prerequisite: course 119A-119B.
- \*122A-122B. **The Russian Language.** (2-2) Yr. Mr. Lapiken  
Prerequisite: course 3A-3B.  
Phonetics, morphology, and syntax.
- 124A-124B. **Advanced Russian Composition.** (2-2) Yr. Mrs. Markov  
Prerequisite: course 103A-103B.
130. **Survey of Russian Literature to 1917.** (3) I. Mr. Harper  
Lectures and reading in English. Required of all majors. Open to all upper division students, and to sophomores with the permission of the instructor.
132. **Russian Literature since 1917.** (3) II. Mr. Harper  
A survey of Soviet literature. Lectures and reading in English. Open to all upper division students.
- \*137. **The Russian Drama.** (3) II. Mr. Harper  
A survey of Russian drama from the seventeenth century to the twentieth. Lectures and reading in English.
- 143A-143B. **Russian Novelists of the Nineteenth Century.** (2-2) Yr. Mr. Harper  
Lectures and reading in English. Open to all upper division students.
- \*145. **Tolstoy.** (3) II. Mr. Harper  
A study of Tolstoy's principal novels, short stories, plays, and essays, in English. Open to all upper division students.

## SOCIAL WELFARE

- KARL DESCHWEINITZ, A.B., L.H.D., Visiting Professor of Social Welfare.  
DONALD S. HOWARD, Ph.D., Professor of Social Welfare (Chairman of the Department).  
JUDD MARMOR, M.D., Visiting Professor of Social Welfare.  
HELEN WITMER, Ph.D., Professor of Social Welfare.  
MARY E. DUREN, Ph.D., Visiting Associate Professor of Social Welfare.  
MARJORIE DRURY, Ph.D., Associate Professor of Social Welfare.  
JEAN B. LIVERMORE, M.S.S., Visiting Associate Professor of Social Welfare.  
JOHN SKINNER, A.B., Social Work Certificate, Visiting Associate Professor of Social Welfare.  
OLIVE M. STONE, Ph.D., Associate Professor of Social Welfare.  
RUTH A. SPIEGEL, M.A., Visiting Assistant Professor of Social Welfare.  
LILLIAN McLEOD FOX, M.S.W., Lecturer in Social Welfare.  
WILLIAM H. RIBACK, M.A., Lecturer in Social Welfare.  
CHARLES SCHOTTLAND, A.B., Social Work Certificate, Lecturer in Social Welfare.  
\_\_\_\_\_, Lecturer in Social Welfare.

\* Not to be given, 1950-1951.

The School of Social Welfare offers a two-year program leading to a master's degree. The first-year program, which leads to a Certificate in Social Welfare, has now been fully accredited by the American Association of Schools of Social Work. Application for accreditation of the second-year program has been filed and the review of the program completed. If this results in favorable action, accreditation will be retroactive to the years 1949-1950 and 1950-1951. The Certificate in Social Welfare is granted after successful completion of a prescribed one-year course (2 semesters) of 24 units, including 15 hours per week of supervised field work. The master's degree is awarded to students who successfully complete two full years of academic study (4 semesters) including 20 hours per week of supervised field work throughout the second year, and who comply with additional specified requirements.

The program leading toward the certificate and the master's degree is an intensive one and students, except in very special circumstances, must give full time to it. Limited numbers of employed persons, however, may enroll for part-time work in certain courses.

New students and those beginning a second year of training are admitted to the school in the fall semester and are expected to continue in attendance throughout the academic year. Students who have completed their first year of training in another accredited school of social work may be admitted to the school for a second year of training if their previous work was satisfactory and if it was completed within the previous seven years. In a few instances, students with previous training in accredited schools of social work may be allowed to enter at mid-year provided that field-work placements are available and that they have already completed the equivalent of the courses offered by the department during the fall semester. Persons having experience in the social welfare field and desiring part-time courses may enter either in the fall or spring if they meet the academic requirements for full-time admission. Such students may take up to six units per semester, not including case-work methods or field-work practice courses. The department does not offer courses to its regular certificate and degree candidates during the summer session.

The Department of Social Welfare offers instruction on the graduate level only. Students planning to enter the social welfare field should secure a broad background in the social sciences and are referred particularly to the curriculum in presocial welfare (page 75). Applicants who have not completed this curriculum should possess a similar training, although not necessarily an identical one because other types of training may sometimes offer an equally good background inasmuch as a variety of skills are needed in social work. Only in special cases will students possessing inadequate background be admitted to the school for full-time study, and in those cases they will be expected to complete at least some of the prerequisite courses before the certificate will be granted.

Persons planning to enter upon social-work training must make application to the School of Social Welfare prior to May 1 of the year in which they hope to enter upon such training. They must file an application with the Graduate Division of the University and, in addition, must (1) fill out and file special application forms supplied by the School of Social Welfare; (2) be not over thirty-five years of age, although this requirement may be waived for persons who through experience in the field have demonstrated good capacity for social work; (3) be in good health; (4) have maintained a 1.75 average in undergraduate studies; (5) have completed at least 30 semester units selected from sociology, anthropology, psychology, and a course in elementary statistics; and (6) satisfy the Admissions Committee of the school that they are suitable in other respects for the profession of social work. In addition, a personal interview with the Admissions Committee or, in

special circumstances, with a designated social worker in the applicant's locality will be arranged.

Inasmuch as total enrollment is limited to the number for whom suitable field-work placements can be arranged, applicants must sometimes be denied admission even though they may have taken the required prerequisite courses and otherwise qualify for admission. Preference in the selection of students will be given to those applicants who appear to be best qualified as indicated by their preparation through good background courses, scholastic attainments, personal fitness and aptitude for the social-work profession.

#### GRADUATE COURSES

These courses are intended for students enrolled in the certificate or degree curriculum of the school and are not open to others except by permission of the department.

**201A. The Dynamics of Personal Well-Being. (1) I. Mr. Marmor**

Problems of normal growth of individuals as revealed in fundamental human experiences; behavior, growth, and change in the individual in contemporary society; requirements for individual and group well-being.

**201B. Cultural Patterns and Social Work. (2) I. Miss Drury**

The effect of various racial, religious, and other cultural factors upon social-work practice; the effect of community and environmental values and influences upon persons served by welfare agencies and upon the nature of the services rendered.

**202A. Social Aspects of Physical and Mental Health. (1) I, II.**

Mr. Marmor

Discussion of public health and medical care problems with special reference to the welfare worker's role in assisting the ill person to make constructive use of existing health and medical resources of the community and the worker's function in developing new ones.

**202B. Social Aspects of Physical and Mental Health. (1) II. Mr. Marmor**

Prerequisite: courses 201A and 202A.

An orientation course directed toward an understanding of contemporary theories and therapies in the control and treatment of mental and emotional disabilities and the social implications of medical and psychological factors.

**202C. Special Problems Affecting Physical and Mental Health. (1) I.**

Prerequisite: course 202B and second-year standing. Mr. Marmor

An advanced course to discuss modern concepts in diagnosis and treatment of psychopathologies. Emphasis on relation of constitutional, psychogenic factors and social complications in treatment. The respective roles of psychiatry, psychology, and social work.

**204A. The Social Welfare Worker and the Law. (1) II. Mr. Schottland**

Law as an expression of social purpose; responsibility of social welfare workers to operate within the law and to interpret legal limitations upon and resources available to persons served; analysis of substantive law most frequently encountered in social welfare work.

**\*204B. Legal Aspects of Social Welfare Administration. (1) II.**

Prerequisite: courses 204A and 226A.

Mr. Schottland

General principles of administrative law applicable to the administration of welfare agencies and programs.

**210A. Social Welfare Programs. (2) I.**

Mr. Howard

Brief survey of the historical development of social welfare programs with emphasis on the contemporary structure and operations of welfare agencies; with interrelationship and responsibilities of federal, state, and

\* Not to be given, 1950-1951.

local governments, relationships between governmental and voluntary services; critical analysis of various types of service and the bases upon which these are made available.

**\*210B. Criteria for Social Welfare Programs. (2) II.**

Prerequisite: course 210A.

Discussion of standards by which effectiveness and adequacy of social welfare programs may be evaluated. Effort will be made to help students become capable of judging the merits and weaknesses of various social welfare programs.

**\*211A. Public-Welfare Organization and Administration. (2) I.**

Intensive examination of public-welfare administration problems; implications of government in social work; various forms of organization and their suitability for different purposes.

**211F. Special Problems in the Organization and Administration of Social Security. (2) I.**

Mr. deSchweinitz

The problems which the individual faces in his efforts to maintain an income in unemployment, sickness, old age, disability and like contingencies, and the various measures such as social insurance and public assistance used to deal with this problem.

**221A-221B. Social Case Work. (3-3) Yr.**

Miss Stone

Introduction to the professional principles, methods and techniques which form the basis of social case-work practice. Emphasis is upon understanding the individual who presents the social problem, upon work with individuals in a group setting, and upon the use of agency services and community resources in the helping process. Concurrent field work is required.

**221C-221D. Advanced Social Case Work. (2-2) Yr.**

Prerequisite: course 221A-221B.

Mrs. Livermore, Miss Duren

Examination and discussion of increasingly difficult case material illustrating principles of case-work practice; critical analysis of the professional content of social case work and of the role of the professional case worker in the helping process. Diagnosis and case-work treatment with increased focus on the worker-client relationship and its manipulation in helping the client. Concurrent field work is required.

**\*222A-222B. Social Group Work. (2-2) Yr.**

Mr. Riback

Analysis of the principles, practices, content, and methods of professional group work, and of the function and role of the professional worker in the group process.

**\*222C. Advanced Social Group Work. (2) I.**

Mr. Riback

Prerequisite: courses 222A-222B.

Special areas of group-work practice and special problems in supervision and administration as applied to group work.

**223A. Social Welfare Planning. (2) I.**

Miss Drury

The interrelationship and significance of community forces in determining the character and extent of social-work programs; the methods and processes by which cooperative action is achieved in determining social needs and in developing resources to meet them.

**223B-223C. Advanced Social Welfare Planning. (2-2) Yr.**

Miss Drury

Prerequisite: course 223A.

Examination and discussion of case material illustrating principles of intergroup work and social welfare planning; critical analysis of the professional content of welfare planning and of the role of the professional worker in the intergroup (community organization) process. Concurrent field work is required.

\* Not to be given, 1950-1951.

**\*225A. Social-Work Supervision. (2) II.**

Miss Stone

Prerequisite: 1 year of case-work and field-work practice plus one year of supervisory experience or current supervisory work, and consent of the instructor.

An introduction to methods of supervision with emphasis upon teaching and learning through individual and group conferences, the supervisor-worker relationship, and the evaluation process. Recorded supervisory materials will be used.

**†226AB. Administration of Social Welfare Services. (2-2) Yr.**

Mr. Howard

General principles of administration applicable to both public and private agencies; determining (or ascertaining) an agency's purpose and role; methods of carrying out that role effectively.

**\*229GA-229GB. Work With Individuals in an Authoritarian Setting.**

(2-2) Yr.

Mr. Skinner

Prerequisite: consent of department.

Delinquency will be studied with emphasis on the emotional aspects of anti-social behavior. In addition, modern concepts of delinquency prevention will be contrasted with traditional methods of dealing with juvenile delinquency, criminality, and other forms of anti-social behavior.

**230A. History of Social Welfare. (2) I.**

Mr. deSchweinitz

An introduction to the history of social welfare with particular reference to movements, organizations, leaders, and literature in the United States and the United Kingdom.

**250A. Seminar: Philosophy of Professional Social Work. (2) II.**

Mr. Howard

Critical analysis of the role of social welfare in the life of today and its probable role in the future; the character and responsibilities of the professional welfare worker; aids to the integration of the student's total learning experience and to the formulation and reformulation of his own philosophy.

**252A. Social Case-Work Seminar. (2) II.**

Mrs. Livermore, ———

Prerequisite: 221C and consent of the instructor.

This seminar will be conducted in several sections (medical, psychiatric, child welfare, etc.). Students will be assigned to sections on the basis of the setting in which they are doing their field work. Implications of the team approach will be discussed in each with emphasis on the social worker's particular contribution to the team.

**252B. Seminar in Application of Psychoanalysis to Case Work. (2) II.**

Mr. Marmor

Prerequisite: course 202C, 252A, and consent of the department.

This will be a seminar utilizing a different student case for each session, the emphasis being on psycho-diagnosis as it relates to social case work, and is planned to correlate with 252A, where emphasis is more on case-work treatment. The instructor will be utilized here as much as students would use a psychiatric consultant.

**280A. Social Welfare Research and Statistical Data. (2) II.**

Miss Witmer

Sources and nature of social welfare statistical and research information and data, and of broader social data of concern to social welfare workers. Special attention will be given to the limitations of such information and data and to point out sources of current information and data.

\* Not to be given, 1950-1951.

† Course 226A will be offered second semester, 1950-1951; 226B first semester, 1951-1952.

**280CA-280CB. Advanced Social-Work Research.** (2-2) Yr. Miss Witmer  
Prerequisite: course 280A.

Intensive analysis of major methods used in research in the field of social work and in the social sciences; application of research techniques through participation in study projects individually or as a member of a group.

**401A-401B. Field Work.** (3-3) Yr.

Miss Stone and the Staff

Normally the student will be required to spend 20 hours a week in field practice under supervision.

**401C-401D. Field Work.** (4-4) Yr.

Mrs. Livermore and the Staff

Normally the student will be required to spend 20 hours a week in field practice under supervision.

**412A-412B. Group-Work Laboratory.** (1-1) Yr.

Mr. Riback

Laboratory experience to be taken concurrently with courses 222A and 222B, respectively.

## SOCIOLOGY

For courses in sociology, see under Department of Anthropology and Sociology.

## SPANISH AND PORTUGUESE

CÉSAR BARJA, Doctor en Derecho, Professor of Spanish.

MANUEL PEDRO GONZÁLEZ, Ph.D., Professor of Spanish-American Literature.

ERNEST H. TEMPLIN, Ph.D., Professor of Spanish.

MARION ALBERT ZEITLIN, Ph.D., Professor of Spanish.

HERMENEGILDO CORBATÓ, Ph.D., Associate Professor of Spanish.

JOHN A. CROW, Ph.D., Associate Professor of Spanish (Chairman of the Department).

ANNA KRAUSE, Ph.D., Associate Professor of Spanish.

JOSÉ R. BARCIA, Licenciado en Filosofía y Letras, Assistant Professor of Spanish.

WILLIAM E. BULL, Ph.D., Assistant Professor of Spanish.

DONALD F. FOGELQUIST, Ph.D., Assistant Professor of Spanish.

LEO KIRSCHENBAUM, Ph.D., Assistant Professor of Spanish.

MANUEL OLGUÍN, Ph.D., Assistant Professor of Spanish.

MARIA L. DE LOWTHER, M.A., Assistant Professor of Spanish, Emeritus.

STANLEY L. ROBE, Ph.D., Instructor in Spanish.

LEONOR MONTAU, A.B., Associate in Spanish.

SYLVIA N. RYAN, M.A., Associate in Spanish.



VIRGINIA G. BAÑOS, Ph.D., Lecturer in Spanish.

IRVING SPIEGEL, M.A., Lecturer in Spanish.

### SPANISH

*Letters and Science List.*—All undergraduate courses in Spanish and Portuguese are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—(1) Courses 1, 2, 3, 4, 20 or 25A-25B, and 42A-42B, or the equivalent to be tested by examination. 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 admission to the upper division. (2) English 1A-1B. (3) A minimum of two years of a second foreign language in high school, or of two semesters at the college level, or English 36A-36B, or History 8A-8B. This requirement must be met before entering upon the senior year.

*The Major.*—Required: courses 102A–102B, 116A–116B, and twelve units elected from courses 103, 104, 106, 110, 112, 114, 115, 124, 134, 140, and Portuguese 122, 123. Courses 108, 158, 171 may not be counted on the twelve elective units. With the permission of the department a maximum of four units of upper division work in literature in French, Italian, or Latin, in folklore, or in linguistics and general philology, may be included among the elective units. Students who do not have lower division credit for courses 20 or 25A–25B, or who failed to make a grade of A or B in them, are required to take course 101A–101B as juniors, but may omit 101B if 101A is passed with a grade of A or B.

Students desiring to specialize in the Spanish field should choose the elective units from courses 103, 106, 110, 112, and 115; those desiring to specialize in the Spanish-American field, from courses 104, 112, 114, 124, 134, and 140.

Students planning to take graduate work in the department are expected to take course 115 or offer an equivalent. Two years of high school Latin, or the equivalent, are prerequisite to candidacy for the master's degree in Spanish.

As electives the department recommends courses in (1) the history, anthropology, geography, political institutions, and international relations of the country or countries most intimately connected with the major; (2) English literature; (3) French, German, Greek, Italian, Latin, and Portuguese language and literature; (4) the history of philosophy.

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.

#### *Requirements for Admission to Graduate Courses.*

The requirement is ordinarily the undergraduate major in Spanish, or its equivalent, with a minimum grade-point average of 1.75. This requirement is prerequisite to the 24 units demanded for the M.A. degree. If the candidate is deficient in this prerequisite, he must fulfill it by undergraduate work which is not counted toward his graduate residence.

#### *Requirements for the General Secondary Credential.*

Consult the ANNOUNCEMENT OF THE SCHOOL OF EDUCATION, LOS ANGELES.

#### *Requirements for the Master's Degree.*

1. For the general requirements, see page 120. The department follows Plan II, as described on page 122. The Master's Comprehensive Examination consists of two three-hour written examinations, which are given in the next-to-the-last week preceding the final examination period of each semester and in the last week of the summer session. The student will be expected to show (1) a fair knowledge of the history of the Spanish language and a general acquaintance with the history of Spanish literature; (2) a more thorough acquaintance with the authors, works, and movements of either (a) Spanish literature or (b) Spanish-American literature. A list of suggested readings in the literature of the student's choice will be provided and will constitute the basis for part of the examination.

2. Departmental requirements: (a) All students must complete courses 115A–115B and 212A–212B. (b) Students specializing in Spanish literature must complete at least 8 units chosen from courses 201A–201B, 203A–203B, 206, 209A–209B, 210A–210B, 215A–215B, and 244. (c) Those specializing in Spanish-American literature must complete at least 8 units chosen from courses 204A–204B, 214A–214B, 224, 234, 240, 241, 242, and 244. (d) The remaining units of the required 24 may include, with the approval of the graduate adviser, a maximum of 6 units of upper division or graduate courses in the history, geography, anthropology, political institutions, or international relations of Spain or the Spanish-American countries, in Portuguese and Brazilian literature and language, in other literatures, or in philosophy.

Two years of high school Latin, or the equivalent, are prerequisite to candidacy for the master's degree in Spanish.

**Requirements for the Ph.D. Degree.**

For the general requirements, see page 123. Graduate work with concentration in Spanish is offered leading to the degrees of Ph.D. in Hispanic Languages and Literature and Ph.D. in Romance Languages and Literature. For specific requirements for these degrees, see the ANNOUNCEMENT OF THE GRADUATE DIVISION, SOUTHERN SECTION, or consult the departmental adviser.

**LOWER DIVISION COURSES**

The prerequisites for the various lower division courses are given in each case. Students who have had special advantages in preparation may upon examination or recommendation of the instructor be permitted to take a more advanced course than indicated.

- 1. Elementary Spanish—Beginning.** (4) I, II. The Staff  
This course corresponds to the first two years of high school Spanish. Sections meet five hours weekly, including one hour of oral drill.
- 1G. Elementary Spanish—Reading Course for Graduate Students.** (No credit) I, II. Mr. Spiegel  
Four hours a week.
- 2. Elementary Spanish—Continued.** (4) I, II. The Staff  
Prerequisite: course 1, two years of high school Spanish, or the equivalent. Sections meet five hours weekly, including one hour of oral drill.
- 3. Intermediate Spanish.** (4) I, II. The Staff  
Prerequisite: course 2, three years of high school Spanish, or the equivalent. Sections meet five hours weekly, including one hour of oral drill.
- 4. Intermediate Spanish—Continued.** (4) I, II. The Staff  
Prerequisite: course 3, four years of high school Spanish, or the equivalent.
- 8A-8B-8C-8D. Spanish Conversation.** (1 unit each semester) Beginning each semester.  
The Staff  
Classes meet two hours weekly. Open to students who have completed course 3 or its equivalent. Those with grade A or B in course 2 may be admitted.
- 20. Grammar Review.** (5) I, II. Miss Ryan  
Prerequisite: same as for course 25A-25B.
- 25A-25B. Advanced Spanish.** (3-3) Beginning either semester.  
The Staff

For lower division students who have had course 4 or the equivalent. Designed especially for freshmen and sophomores who propose to make Spanish their major subject.

- 42A-42B. Spanish Civilization.** (2-2) Yr. Mr. Barja  
Prerequisite: sophomore standing. Lectures are in English, reading in Spanish or English. Required of major students in Spanish.  
A study of the growth and development of Spanish culture in the various fields.
- 44A-44B. Latin-American Civilization.** (2-2) Yr. Mr. Crow  
Origins and main currents of Latin-American culture. Lectures in English, reading in Spanish or English.

**UPPER DIVISION COURSES**

Prerequisite: 16 units of lower division Spanish or the equivalent.

*Junior Courses:* Courses 101A-101B and 102A-102B.

*Junior and Senior Courses:* Courses 103A-103B, 104A-104B, 106, 108, 112, 140, 158, and 171.

*Senior Courses:* Courses 110A-110B, 114, 115A-115B, 116A-116B, 124, and 134.



- 101A-101B. Oral and Written Composition. (3-3) Yr. Beginning either semester. Miss Krause in charge  
May not be taken concurrently with or following 116A-116B.
- 102A-102B. Survey of Spanish Literature to 1700. (3-3) Beginning either semester. Miss Krause, Mr. Templin  
Prerequisite: course 42A-42B. Required of major students in Spanish.
- 103A-103B. Nineteenth-Century Spanish Literature. (3-3) Yr. Mr. Kirschenbaum
- 104A-104B. Survey of Spanish-American Literature. (3-3) Yr. Beginning either semester. Mr. Fogelquist, Mr. Olguín
- \*106. Eighteenth-Century Spanish Literature. (2) I. Mr. Corbató
108. The Folk Song in Spain and Spanish America. (1) I.  
Class meets two hours weekly. Mr. Corbató, Mr. Crow  
A study of the origins and development of Spanish folk music and of the different types of folk songs and folk poetry peculiar to the various regions of Spain and Spanish America.
- 110A-110B. Contemporary Literature. (2-2) Yr. Miss Krause  
Reading and discussion of Spanish writers of the twentieth century.
112. Literary Criticism in Spain and Spanish America. (3) I. Mr. Olguín
114. Mexican Literature. (3) II. Mr. González
- 115A-115B. Don Quijote. (2-2) Yr. Mr. Templin  
Students planning to take graduate work in Spanish are expected to take this course or offer an equivalent.
- 116A-116B. Advanced Composition. (3-3) Yr. Beginning either semester. Required of Spanish majors. Mr. Barcia, Miss Krause, Mr. Olguín
124. Argentine Literature. (3) I. Mr. González
- \*134. The Argentine Novel. (3) II. Mr. González
140. The Spanish-American Essay. (3) II. Mr. Olguín  
A study of the favorite themes of modern Spanish-American essayists. Intensive class reading; outside reading with written and oral reports; occasional lectures.
158. Oral Interpretation of Literature in Spanish. (2) I, II. Mr. Barcia  
Oral reading of selected scenes in verse and prose from Spanish dramatic works of the classical and modern periods. Literary appreciation, training in pronunciation and intonation, elements of acting and directing of plays. Designed particularly for future teachers of Spanish.
171. Contemporary Spanish Linguistics. (3) II. Mr. Bull
- 199A-199B. Special Studies in Spanish. (1-3; 1-3) Yr. The Staff  
Prerequisite: senior standing, at least ten units of upper division Spanish, the approval of the departmental adviser, and the consent of the instructor in the field selected for special study.

## GRADUATE COURSES†

- \*201A. Studies in Spanish Poetry. (2) I. Mr. Templin  
The *Cancioneros* and the *Romancero*.
- \*201B. Studies in Spanish Poetry. (2) II. Mr. Templin  
The *Siglo de Oro*, especially in relation to the Baroque.

\* Not to be given, 1950-1951.

† All candidates for the degree of Master of Arts must offer at least two years of high school Latin, or the equivalent.

- 203A-203B. **Realism and Naturalism in the Nineteenth Century.** (2-2) Yr. Mr. Barja
- 204A-204B. **Spanish-American Literature.** (2-2) Yr. Mr. González
206. **Eighteenth-Century Writers.** (2) I. Mr. Corbató
- 209A-209B. **The Drama of the Golden Age.** (2-2) Yr. Mr. Templin
- 210A-210B. **Contemporary Literature.** (2-2) Yr. Mr. Barja
- 212A-212B. **Historical Grammar and Old Spanish Readings.** (2-2) Yr. Mr. Zeitlin  
A knowledge of Latin is indispensable.
- 214A-214B. **The Modernista Movement in Spanish America.** (2-2) Yr. Mr. Zeitlin  
Prerequisite: course 104B or 114.
- 215A-215B. **Prose of the Golden Age.** (2-2) Yr. Mr. Barja
- \*224. **The Contemporary Mexican Novel.** (2) II. Mr. González  
Prerequisite: course 114.
- \*234. **The Gaucho Epic.** (2) I. Mr. González  
Prerequisite: course 124 or 134. Lectures, outside reading, reports, and intensive reading in class.
240. **The Contemporary Spanish-American Novel.** (2) I. Mr. Crow
241. **The Spanish-American Short Story.** (2) II. Mr. Crow
242. **Contemporary Spanish-American Poetry.** (2) I. \_\_\_\_\_  
Prerequisite: course 104B.  
Lectures, extensive reading, and seminar reports about the themes and technique of selected twentieth-century poets.
- \*244. **España en América.** (2) I. Mr. Corbató
- 290A-290B. **Special Study and Research.** (2-6; 2-6) Yr. The Staff

#### PROFESSIONAL COURSE IN METHOD

370. **The Teaching of Spanish.** (3) I. Mr. Bull  
Required of all candidates for the general secondary credential whose major subject is Spanish. To be taken concurrently with Education 370. (Note that Spanish 370 is given only in the fall semester).

#### PORTUGUESE

##### LOWER DIVISION COURSES

1. **Elementary Portuguese—Beginning.** (4) I. Mr. Zeitlin, Mr. Kirschenbaum  
This course corresponds to the first two years of high school Portuguese.
2. **Elementary Portuguese—Continued.** (4) II. Mr. Kirschenbaum, Mr. Zeitlin  
Prerequisite: course 1, or two years of high school Portuguese.

##### UPPER DIVISION COURSES

- 101A-101B. **Grammar, Composition, and Reading of Texts.** (3-3) Yr. Mr. Kirschenbaum  
Prerequisite: course 2, or the equivalent.
122. **Portuguese Literature.** (3) I. Mr. Kirschenbaum  
Prerequisite: course 101A-101B, or the equivalent.  
Survey of the literature of Portugal, with emphasis on the sixteenth and nineteenth centuries.

\* Not to be given, 1950-1951.

**123. Brazilian Literature. (3) II.**

Mr. Kirschenbaum

Prerequisite: course 101A-101B, or the equivalent. It is advisable that students also offer course 122 as a prerequisite.

Survey of the literature of Brazil, with emphasis on the nineteenth and twentieth centuries.

**199A-199B. Special Studies in Portuguese. (1-3; 1-3) Yr.**

Mr. Zeitlin

Prerequisite: 10 units of Portuguese, or the equivalent, and consent of the instructor.

RELATED COURSES (See page 326)

**Romance Languages and Literatures**

**201A-201B. French Historical Grammar and Methodology of Romance Linguistics. (2-2) Yr.**

Mr. Williams

**\*203A-203B. Old Provençal: Reading of Texts. (2-2) Yr.**

Mr. Williams

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**SUBJECT A: ENGLISH COMPOSITION**

\_\_\_\_\_, (Chairman, Committee on Subject A).

EVERETT L. JONES, M.A., Supervisor of Instruction in Subject A.

ELLA O. HUTCHINS, M.A., Associate in Subject A.

CHARLES S. NAUSS, B.A., Associate in Subject A.

HORTENSE H. WILLIAMS, M.A., Associate in Subject A.

**Subject A. (No credit) I, II.**

The Staff

Fee, \$20.

Three hours weekly for one semester. Although this course yields no credit, it displaces 2 units on the student's program. Every student who does not pass the examination in Subject A is required to take, in the semester immediately following this failure, the course in Subject A. Sections are limited to thirty students. For further details, see page 35.

Training in correct writing, including drill in sentence and paragraph construction, diction, punctuation, grammar, and spelling. Weekly compositions and written tests on the text.

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**SUBTROPICAL HORTICULTURE**

A Division of the Department of Agriculture

SIDNEY H. CAMERON, Ph.D., Professor of Subtropical Horticulture (Chairman of the Division).

WILLIAM H. CHANDLER, Ph.D., Professor of Horticulture, Emeritus.

FREDERICK F. HALMA, Ph.D., Professor of Subtropical Horticulture.

ROBERT W. HODGSON, M.S., Professor of Subtropical Horticulture.

JACOB B. BIALE, Ph.D., Associate Professor of Subtropical Horticulture.

CHARLES A. SCHROEDER, Ph.D., Assistant Professor of Subtropical Horticulture.

ARTHUR WALLACE, Ph.D., Instructor in Subtropical Horticulture.

\_\_\_\_\_, Instructor in Subtropical Horticulture.

*Preparation for the Major.*—Subtropical Horticulture 2 and 110 or the equivalent, and the requirements in the plant science curriculum (see pages 90-92, or the PROSPECTUS OF THE COLLEGE OF AGRICULTURE).

\* Not to be given, 1950-1951.

*The Major.*—Twelve units of upper division courses. Inclusion of Subtropical Horticulture 100, 101, and 102 is recommended.

#### LOWER DIVISION COURSE

##### 2. Introduction to Horticulture. (3) I.

Mr. Halma

Lectures, three hours. Prerequisite: Botany 1 or equivalent. This course is equivalent to Horticulture 2, given at Berkeley and at Davis.

The principles and practices of general horticulture.

#### UPPER DIVISION COURSES

##### \*100. Systematic Pomology. (4) I.

Mr. Schroeder

Lectures, two hours; laboratory, six hours. Prerequisite: course 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.

##### 101. Citriculture. (4) II.

Mr. Hodgson, Mr. Schroeder

Lectures, three hours; laboratory, three hours; four or five Saturday field trips. Prerequisite: course 2, or the equivalent.

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

##### 102. Subtropical Fruits Other Than Citrus. (4) I.

Mr. Schroeder

Lectures, three hours; laboratory, three hours; three or four Saturday field trips. Prerequisite: course 2 or the equivalent.

A survey of the knowledge concerning the requirements and responses of the subtropical fruit plants other than *Citrus*; the economics of their industries. The fruits considered will include the walnut, pecan, almond, fig, olive, avocado, date, oriental persimmon, and certain others of minor importance.

##### 110. Plant Propagation. (2) II.

Mr. Cameron

Laboratory and lecture, six hours; three field trips. Prerequisite: Botany 1 or equivalent. Recommended: Botany 6 and 107 (may be taken concurrently).

Principles and practices in plant propagation.

##### 111. Respiration and Respiratory Enzymes. (2) I.

Mr. Biale

Lecture-discussion, two hours.

Prerequisite: Chemistry 8 or equivalent.

Basic concepts of respiration; aerobic and anaerobic processes; the Pasteur effect; respiratory substrates; intermediates and end products; kinetics and mechanism of enzyme action; proteins and prosthetic groups of enzymes; oxidases, dehydrogenases, and carriers; phosphorylations; metabolic and enzyme cycles.

##### 113. Fruit Physiology and Storage Problems. (2) I.

Mr. Biale

Lectures and discussions, two hours. Prerequisite: Botany 107 or equivalent.

Anatomical, physiological, and chemical changes in developing fruits; composition of mature fruits; maturity standards; respiratory and fermentative processes; production of emanations; low temperature effects; ordinary and modified air storage; field, packing house, and transit practices; frozen fruit products; specific fruit problems.

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

Prerequisite: senior standing and consent of the instructor. The Staff

\* Not to be given, 1950-1951.

GRADUATE COURSES

- 204A-204B. **Advanced Horticulture.** (3-3) Yr. Mr. Cameron, Mr. Wallace  
Lectures and discussion, three hours.  
A critical review and discussion of horticultural research in selected fields.
- 255A-255B. **Seminar in Horticultural Science.** (2-2) The Staff
- 281A-281B. **Research in Subtropical Horticulture.** (2-6; 2-6) Yr.  
The Staff

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**THEATER ARTS**

- KENNETH MACGOWAN, B.S., Professor of Theater Arts (Chairman of the Department).
- RALPH FREUD, Associate Professor of Theater Arts (Head of the Theater Division).
- WALTER KINGSON, Ed.D., Associate Professor of Theater Arts (Head of the Radio Division).
- WALDEN PHILIP BOYLE, Ph.D., Assistant Professor of Theater Arts.
- G. EDWARD HEARN, M.A., Assistant Professor of Theater Arts.
- WILLIAM MELNITZ, Ph.D., Assistant Professor of Theater Arts.
- HENRY SOHNITZLER, Assistant Professor of Theater Arts.
- RUTH SWANSON, M.A., Instructor in Theater Arts.

- WILLIAM B. ADAMS, M.A., Lecturer in Theater Arts.
- NORMAN G. DYHRENFURTH, Lecturer in Cinematology (Head of the Motion Picture Division).
- ARTHUR FRIEDMAN, M.A., Lecturer in Theater Arts.
- STANLEY GLENN, M.A., Lecturer in Theater Arts.
- RICHARD GOGGIN, A.B., Lecturer in Theater Arts.
- MELVYN HELSTIEN, M.F.A., Lecturer in Theater Arts.
- PATRICIA HUNGERLAND, M.A., Lecturer in Theater Arts.
- WIARD IHNNEN, Lecturer in Theater Arts.
- JOHN JONES, B.Ed., Lecturer in Art.
- JOHN MAHON, A.B., Lecturer in Theater Arts.
- JACK MORRISON, A.B., Lecturer in Theater Arts.
- GENE OWEN, M.A., Lecturer in Theater Arts.
- ERNEST PASCAL, Lecturer in Theater Arts.
- WILLIAM SHULL, B.S., Lecturer in Animation.
- W. DAVID SIEVERS, M.A., Lecturer in Theater Arts.
- GEORGE TRAVELL, Lecturer in Theater Arts.
- RICHARD TUMIN, A.B., Lecturer in Theater Arts.
- CHARLES VAN ENGER, Lecturer in Film Editing.
- \_\_\_\_\_, Lecturer in Theater Arts.
- \_\_\_\_\_, Lecturer in Theater Arts.
- MARC SNEGGOFF, A.B., Associate in Theater Arts.
- \_\_\_\_\_, Associate in Theater Arts.

**College of Applied Arts**

**1. Major in Theater.**

*Preparation for the Major.*—Courses 1, 2A, 7, 8, 9, 24, 28A-B-C-D, English 1A-1B, Humanities 1A-1B.

*The Major.*—Forty units of coordinated upper division courses, including English 114A-B-C, 117J, Theater Arts 105, 156A, 149 or 159A or 159B, 159C-D-E, and electives approved by the departmental adviser.

## 2. Major in Motion Pictures.

*Preparation for the Major.*—Courses 1, 2A, 7, 8, 9, 24, 28A–B–C–D, English 1A–1B, Humanities 1A–1B.

*The Major.*—Forty units of coordinated upper division courses, including English 114A–B–C, Theater Arts 105, 161, 164A, 165A, 169, 179A–179B, 179C–D–E, 181A and electives approved by the departmental adviser.

## 3. Major in Radio.

*Preparation for the Major.*—Courses 1, 2A, 7, 8, 9, 24, 28A–B–C–D, English 1A–1B, Humanities 1A–1B.

*The Major.*—Forty units of coordinated upper division courses, including English 114A–B–C, 117J, Theater Arts 120, 125, 128, 129A, 129C–D–E, and electives approved by the departmental adviser.

## 4. Major in Theater Arts–English.

*Preparation for the Major.*—Courses 2A–2B, 24, 28A–B–C–D, 29A, English 1A–1B, 46A–46B.

*The Major.*—Thirty-six units of upper division courses, including English 106L, 114A–B–C, 117J, 130A–130B or 190A–190B, Theater Arts 103, 105, 123, 125, 156A, 159A, 180.

### College of Letters and Science

*Letters and Science List.*—Courses 7, 8, 9, 24, 103, 104, 105, and 169 are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

#### GRADUATE DIVISION

##### *Admission to Regular Graduate Status.*

In addition to the general requirements of the Graduate Division, the applicant must:

1. Have completed the theater arts major or its equivalent.
2. Provide the department with the results of certain diagnostic tests and letters of reference. Information regarding this requirement should be obtained from the chairman of the department at least three months prior to the beginning of the semester in which the student plans to enroll.
3. When the candidate submits his application to the Graduate Division, he should forward a duplicate to the Chairman of the Department of Theater Arts.

##### *Requirements for the Master's Degree.*

The Department of Theater Arts follows Plan I. (See page 121.)

The program requires at least one year (two semesters) of intensive study and laboratory exercises. In addition to the minimum courses for completion of the master's degree, the chairman of the department, in consultation with the other members of the student's advisory committee, may prescribe such additional courses as he believes are necessary to satisfy the educational needs of the student. All students are required to take an active part in the production program of the department as partial fulfillment of the degree requirements. In planning his course of study, the candidate will place his emphasis upon the theater, motion pictures, radio, theatrical and dramatic history and literature, or playwriting. Candidates who wish to place their major emphasis on playwriting must submit a long play or a number of short plays for admission to the program.

#### LOWER DIVISION COURSES

##### 1. Social Aspects of Mass Communication. (3) I, II.

Mr. Kingson

Lecture, two hours; laboratory, two hours.

An orientation course devoted to the study of the relation of man to society. Particular attention will be given to the theater, motion pictures, and

radio as media of communication and of integration in human society. The responsibilities of professional workers in these fields will be stressed.

**2A-2B. Acting Fundamentals. (3-3) Yr. Beginning either semester.**

Mr. Schnitzler in charge

The acting process. Exercises in characterization and interpretation. Normal and characterized speech and movement. Comparative study of acting periods and styles.

**7. Theater Survey. (1) I, II.**

Mr. Freud

A course of lectures designed to provide the beginning student with a general knowledge of theatrical methods and objectives and to provide him with a vocabulary of theatrical terms in common use.

**8. Motion Picture Survey. (1) I, II.**

Mr. Dyhrenfurth

A lecture course designed to provide the student with a general knowledge of current motion picture methods and practices and to provide him with a vocabulary of standard terms in common use in this field.

**9. Radio Survey. (1) I, II.**

Mr. Kingson

A lecture course designed to provide the student with a general knowledge of current radio practices and methods and to provide him with a vocabulary of standard terms in common use in this field.

**24. The History of Theater Arts. (3) I, II.**

Mr. Melnitz

The history of the development of the theater and its relationship to the arts, sciences, and disciplines of society from Aristotle to the motion picture and radio.

**28A. Theater Crafts. (2) I, II.**

Mr. Jones

Lecture, two hours; laboratory, three hours; theater practice, by assignment.

Study of and laboratory practice in the construction of scenery. The use of the materials and equipment of the modern educational theater.

**28B. Theater Crafts. (2) I, II.**

Mrs. Hungerland

Lecture, two hours; laboratory, three hours; theater practice, by assignment.

Study of the principles of theatrical costume construction. Laboratory practice in cutting, fitting, dyeing, and processes of decoration.

**28C. Theater Crafts. (3) I, II.**

Mr. Helstien

Lecture, three hours; laboratory, three hours; theater practice, by assignment.

Study of the principles of lighting, sound, and camera. Laboratory practice in the use of basic theater equipment.

**28D. Theater Crafts. (2) I, II.**

Mr. Morrison

Lecture, two hours; laboratory, three hours; theater practice, by assignment.

Practice in theater management.

**29A-29B. Elementary Theater Laboratory. (1-1) Yr.**

Mr. Glenn

Acting exercise under faculty instruction.

**UPPER DIVISION COURSES**

Theater arts major or minor or departmental consent is prerequisite to all upper division courses, except courses 103, 104, 105, 106, 112, 116A-116B, 123, 125, 135, 148A-148B, 154, 161, 166A-166B, 167, 169, 170, 171, and 180.

**103. Secondary School Dramatics. (3) II.**

Mrs. Owen

Techniques of teaching acting. Choosing, mounting, and presenting plays on the secondary school level.

- 104. History of the American Theater. (2) II.** Mr. Freud  
The history of the American theater from the Revolutionary War to the present.
- 105. Readings for the Contemporary Theater. (2) I, II.** Mr. Boyle, Mr. Schnitzler  
Study and discussion of modern theories and styles of production, direction, and acting, based on readings in definitive works on the modern theater.
- 106. Fundamentals of Writing for Motion Pictures and Radio. (3) I, II.** Prerequisite: English 1A-1B. Mr. Friedman, Mr. Pascal  
Theory and practice in the writing of dialogue scenes and the observation and presentation of character; study of the special techniques of film and radio through which characters and plot are developed in a series of dramatic scenes.
- 111. Acting for the Radio. (2) II.** Miss Swanson  
The study of special problems in interpretation, characterization, dialect, and microphone technique.
- 112. Radio Speech. (2) I.** Mr. Sievers  
Lecture, one hour; laboratory, two hours. Prerequisite: Speech 3A.  
Study and practice of microphone technique for announcing, news commentation, and public service programs.
- 116A. Dramatic Writing for the Radio. (3) I.** Mr. Friedman  
Prerequisite: English 106D or consent of the instructor.  
Theory and practice in the adaptation of plays, novels, and scenarios for presentation on the radio. The writing of original scripts for radio.
- 116B. Documentary Writing for the Radio. (3) II.** Mr. Friedman  
Prerequisite: consent of the instructor.  
Study and practice in the writing of original scripts in which the emphasis is on the use of documentary material and the reenactment of events, combined with special uses of music and sound effects.
- 120. Policies and Problems of Radio Broadcasting. (3) II.** Mr. Kingson  
Policies of the Federal Communications Commission. Comparative broadcasting, with special emphasis upon British, Canadian, French, and Australian systems. The impact of FM and television upon American radio.
- 123. Workshop in Educational Radio. (3) I, II.** Mr. Kingson  
Script and production problems of school broadcasting. The use of radio in the classroom to stimulate student creative self-expression. Transcription demonstrations and production practice under studio conditions.
- 125. Radio Production. (3) I, II.** Mr. Sievers, Mr. Tumin  
Prerequisite: course 9.  
A lecture course devoted to the study of the techniques and tools at the disposal of the radio director. Problems of music, sound effects, casting, studio acoustics, transcriptions, and timing.
- 126. Radio and Television News Writing. (3) II.** Mr. Friedman  
Prerequisite: consent of the instructor.  
The preparation of news for radio and television. Analysis of the news commentary. Practice in assembling and presentation of news from press wire. Field trips to local radio and television stations.
- 128. Radio Programming and Station Operation. (2) I, II.** Mr. Sievers  
Prerequisite: consent of the instructor.  
A study of the factors affecting programming for the standard broadcast station, the television station, the educational radio station, and the FM sta-



tion. Organization and the management of the radio and television station will be analyzed in relation to the broadcaster's role in the community.

- 129A. Elementary Radio Workshop.** (3) I, II. Miss Swanson  
Prerequisite: course 125.  
A basic laboratory course offering practice in the preparation of radio programs.
- 129B. Intermediate Radio Workshop.** (3) I, II. Miss Swanson  
Prerequisite: course 129A.  
Practical work in radio production, direction, acting, announcing, timing, engineering, and sound effects. Includes the transcription of original scripts.
- 129C-D-E. Summer Radio Workshop.** (2 units each) The Staff  
Prerequisite: departmental consent.  
A creative laboratory course in broadcasting, involving the preparation of programs for actual production and transmission at a local radio station.  
NOTE.—This course is offered in summer session only. The three parts must be taken concurrently and constitute a full academic load for one session.
- 135. Television Survey.** (2) I, II. Mr. Goggin  
A lecture course designed to provide the advanced student in theater arts with a general knowledge of current television practices, methods, and terms, and of the utilization in television of the techniques of theater, motion pictures, and radio.
- 140. Advanced Technical Practice.** (3) I, II. Mr. Hearn  
Lecture, two hours; laboratory, four hours.  
Practical study in the use of the materials and tools of theatrical production.
- 141. Theatrical Lighting.** (3) I. Mr. Hearn  
A study of the principles of light, color, illumination, and lighting control as applied to the stage.
- 142. Theater and Motion Picture Costume Construction.** (3) I, II. Mrs. Hungerland  
Lectures, demonstrations, and laboratory practice in the transformation of costume sketches into clothing for stage and screen.
- 148A-148B. Scenic Design.** (2-2) Yr. Mr. Jones  
Lecture, two hours; laboratory, two hours.  
Prerequisite: consent of the instructor.  
Study of the basic principles of design as applied to the theater. Execution of design projects in elevation, color, and mechanical drawing. Preparation of simple scale models. Preparation of designs for produced plays.
- 149. Training in the Technical Supervision of Theater, Motion Picture, or Radio Production.** (2) I, II. Mr. Hearn, Mr. Dyhrenfurth, Mr. Tumin  
Prerequisite: consent of the instructor.
- 154. Theater Administration.** (2) I, II. Mr. Morrison  
Prerequisite: course 28D.  
The administrative and organizational techniques of the professional community and educational theaters.
- 156A-156B. Dramatic Direction.** (3-3) Yr. Beginning either semester.  
Lecture, two hours; laboratory, four hours. Mr. Boyle, Mr. Schnitzler  
Prerequisite: course 105.  
Studies in analysis of dramatic materials and techniques of directorial restatement in theatrical terms.

- 159A. Intermediate Theater Workshop.** (3) I, II. Mr. Glenn  
Prerequisite: course 28A-B-C-D.  
Practice in theater production for actors, technical workers, designers, writers, dancers, and musicians.
- 159B. Advanced Theater Workshop.** (3) I, II.  
Mr. Boyle, Mr. Freud, Mr. Melnitz, Mr. Hearn, Mr. Schnitzler  
Prerequisite: consent of the instructor.  
Practice in theater production before a paying audience.
- 159C-D-E. Summer Theater Workshop.** (2 units each) The Staff  
Prerequisite: departmental consent.  
Practice in and observation of the complete operation of a summer theater on a semiprofessional level.  
NOTE. This course is offered in Summer Session only. The three parts must be taken concurrently and constitute a full academic load for one session.
- 161. Film Techniques.** (3) I, II. Mr. Adams  
Prerequisite: course 8.  
A survey of techniques and practices in photography, sound, editing, direction, animation, design, writing, management and budgeting for the motion picture. Not open for credit to students who have credit for course 185.
- 162. Acting for the Motion Picture.** (2) I, II. Mr. Travell  
Lecture, one hour; laboratory, two hours.  
Prerequisite: consent of the instructor.  
The training and development of acting style for the motion picture.
- 163. Theater and Motion Picture Make-up.** (1) I, II.  
Mr. Freud, Mr. Snegoff  
The art and use of make-up for the theater and for motion pictures.
- 164A-164B. Fundamentals of Motion Picture Direction.** (3-3) Yr.  
Lectures, two hours; laboratory, three hours. Mr. Travell  
Prerequisite: courses 105, 165A, and 181A.  
164A. Lectures in the theory and development of directorial style and comparative studies in theater and motion picture direction.  
164B. Studies in directorial style for the educational, documentary, and fictional film.
- 165A-165B. Motion Picture Editing.** (2-2) Yr. Mr. Van Enger  
Lecture, two hours; laboratory, four hours.  
Prerequisite or concurrent: course 161.  
Theory and application of the editorial process in relation to film making. Special emphasis on editorial techniques employed in the educational and documentary films.
- 166A. Writing for the Screen.** (3) II. Mr. Pascal  
Prerequisite: English 106D-106E or Theater Arts 106, or consent of the instructor.  
Theory and practice in the writing of fictional film script.
- 166B. Writing for the Screen.** (3) I, II. Mr. Travell  
Prerequisite: courses 165A, 181A.  
Theory and practice in the writing of educational and documentary film scripts.
- 167. Production Designing for the Motion Picture.** (3) I. Mr. Ihnen  
Prerequisite: courses 165A, 181A, or consent of the instructor.  
Theory and practice in the preproduction planning of setting, lighting, composition, and movement as a contribution to greater dramatic effective-

‡ For admission to this course candidates must submit to the instructor an original dramatic or motion picture script six weeks in advance of the semester opening.

ness; designed to aid students of direction and cinematography in making the most effective use of human and pictorial elements.

169. **History of Motion Pictures.** (2) I, II. Mr. Adams  
The history and development of the motion picture until today.
170. **Motion Picture Animation.** (3) I, II. Mr. Shull  
Lecture, three hours; laboratory, three hours.  
Theory and practice in the making of animated drawings, and the use of appropriate equipment.
171. **Advanced Motion Picture Animation.** (3) I. Mr. Shull  
Lecture, two hours; laboratory, four hours.  
Prerequisite: course 170.
172. **Motion Picture Animation Workshop.** (3) II. Mr. Shull  
Lecture, two hours; laboratory, four hours.  
Prerequisite: course 170.
- 179A. **Elementary Motion Picture Workshop.** (3) I, II.  
Prerequisite: course 165A and 181A. Mr. Mahon in charge  
Laboratory practice in the fundamentals of film-making, as applied to the documentary, educational, teaching, and experimental film.
- 179B. **Intermediate Motion Picture Workshop.** (3) I, II.  
Prerequisite: course 179A or 179C-D-E. Mr. Dyhrenfurth in charge  
Laboratory practice in the making of the fictional and documentary films, including direction, acting, photography, editing, and design.
- 179C-D-E. **Summer Motion Picture Workshop.** (2 units each) The Staff  
Prerequisite: course 179A or departmental consent.  
Intensive practice in and observation of the production of motion pictures.  
NOTE.—This course is offered in Summer Session only. The three parts must be taken concurrently and constitute a full academic load for one session.
180. **Educational and Documentary Film Techniques.** (2) I. \_\_\_\_\_  
A course of lectures surveying the basic techniques and practices employed in the documentary and educational fields and comparative study and analysis of existent films.
- 181A-181B. **Motion Picture Photography and Sound.** (3-3) Yr.  
Mr. Mahon, Mr. Dyhrenfurth  
Lecture, two hours; laboratory, four hours.  
Prerequisite or concurrent: course 161.  
181A. An elementary course in optics, photographic chemistry, sensitometry, lighting, and operation of all major 16mm cameras, with intensive practical work during laboratory hours.  
181B. An advanced course in exterior and interior lighting, composition, use of filters, creative camera movement, and photographic and magnetic sound recording.
182. **Color Cinematography.** (2) I, II. \_\_\_\_\_  
Prerequisite: course 181A.  
History and theories of color photography, with particular emphasis on present-day methods in motion picture production. A comparative study of additive and subtractive systems as employed by Dufay, Thomas, Gaspar, Anseo, Kodachrome, Technicolor, and others.

\* For admission to this course candidates must submit original designs six weeks in advance of the semester opening.

- 185. Photographic Aids to Instruction.** (3) II. Mr. Mahon  
Not open for credit to majors in Theater Arts or to students who have credit for course 161.

Theory and practice in the preparation of photographic aids to instruction and to research, including still photographs, slides, slidefilms, and 16mm motion pictures, emphasizing application to the student's own field of study.

- 199A-199B. Special Studies in Theater Arts.** (1-4; 1-4) I, II.

Mr. Macgowan and the Staff

Prerequisite: senior standing, an average grade of B or higher in the department, and consent of the instructor.

Advanced individual work upon specific problems connected with theater, motion pictures, or radio.

#### GRADUATE COURSES

- 200. Bibliography and Methods of Theatrical Research.** (1) I, II.

Mr. Melnitz

- 201. The Backgrounds of Theatrical Art.** (3) I.

Mr. Boyle

An analysis of the aesthetic principles and content of the theater.

- 206A-206B. Advanced Playwriting.** (3-3) Yr.

Mr. Macgowan

Guided completion of a full-length play.

- 231. The Teaching of Secondary School Dramatics.** (2) I.

Mrs. Owen

Study of current methods and problems of production as related to teaching on the secondary level. Restricted to candidates for teaching certificates and approved theater arts majors.

- 235. Advanced Motion Picture Editing.** (2) I.

Prerequisite: Motion Picture Graduate.

An advanced course in creative, dynamic cutting, emphasizing the close relationship between director and editor of dramatic documentaries. This course will also cover the techniques and uses of montage.

- 239. Motion Picture Visual Analysis.** (2) II.

Prerequisite: Motion Picture Graduate.

Theory of film making; the aesthetics of the screen as seen in selected silent and sound films.

- 240. Technical Methods and Practices in the Theater.** (3) II.

Mr. Hearn

Advanced studies in theatrical lighting, construction, and design.

- 270. Theory of the Educational Film.** (3) II.

Staff of Theater Arts and School of Education

Contributions from the two staffs to the analysis of existent educational films and the history of the theories and practices of visual education.

- 271. Nature and History of the Documentary Film.** (2) I.

Mr. Dyhrenfurth

History of theories and practices in the thesis film. Intensive study and analysis of existent documentary films.

- 272. Seminar in Theater History.** (3) II.

Mr. Melnitz, Mr. Freud

Exploration of a selected area of theatrical history. Guided reading in University, Clark, and Huntington libraries. Presentation of fully annotated written report of independent investigation.

- 299A-299B. Special Problems in Theater Arts.** (2-5; 2-5) I, II. The Staff

Practical creative work in the area of theater arts which the student has designated his area of emphasis. Work completed in this course may serve as a basis for the student's thesis. Study may be pursued in the following areas: theatrical production, motion picture production, audio-visual educational production, radio writing and production, and original research in theater arts.

## RELATED COURSES IN OTHER DEPARTMENTS

English 106D-106E. Playwriting. (3-3) Yr.	Mr. Macgowan
English 262A-262B. Shakespeare. (3-3)	Mr. Phillips, Mr. Smith
English 262D. Studies in Elizabethan Drama. (3)	Mr. Smith
English 263C. Studies in Drama, 1660-1790. (3)	Mr. Smith
Psychology 267. Mass Communications as a Social Force. (2) I.	Mr. Fearing

Implications of motion pictures, newspapers, radio, theater, and television in the integration of human society.

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**ZOOLOGY**

- GORDON H. BALL, Ph.D., Professor of Zoology.  
 ALBERT W. BELLAMY, Ph.D., Professor of Zoology.  
 RAYMOND B. COWLES, Ph.D., Professor of Zoology.  
 THEODORE L. JAHN, Ph.D., Professor of Zoology (Chairman of the Department).  
 BENNET M. ALLEN, Ph.D., Professor of Zoology, Emeritus.  
 LOYE HOLMES MILLER, Ph.D., Professor of Biology, Emeritus.  
 SARAH ROGERS ATSAFF, Ph.D., Associate Professor of Zoology.  
 \*THEODORE H. BULLOCK, Ph.D., Associate Professor of Zoology.  
 FREDERICK CRESITELLI, Ph.D., Associate Professor of Zoology.  
 WALDO H. FERGASON, Ph.D., Associate Professor of Zoology.  
 EDGAR L. LAZIER, Ph.D., Associate Professor of Zoology.  
 A. MANDEL SCHECHTMAN, Ph.D., Associate Professor of Zoology.  
 GEORGE A. BARTHOLOMEW, Ph.D., Assistant Professor of Zoology.  
 CLARA SZEGO ROBERTS, Ph.D., Assistant Professor of Zoology.  
 BOYD W. WALKER, Ph.D., Assistant Professor of Zoology.  
 BLAINE H. LEVEDAHL, Ph.D., Instructor in Zoology.  
 CLARK P. READ, Ph.D., Instructor in Zoology.  
 THOMAS R. HOWELL, M.A., Lecturer in Zoology.  
 GRETCHEN L. HUMASON, M.A., Lecturer in Microscopic Technique.
- ◇
- CRAIG L. TAYLOR, Ph.D., Associate Professor of Engineering.  
 EDITH CARLISLE, Ph.D., Research Associate in Zoology.  
 S. J. GLASS, M.D., Research Associate in Zoology.  
 MARIE NIEFT LIPSETT, Ph.D., Research Associate in Zoology.  
 ISAAC JONES, M.D., Research Associate in Zoology.  
 H. S. PENN, M.D., Research Associate in Zoology.

*Letters and Science List.*—All undergraduate courses in this department except 4, 136 and 136C are included in the Letters and Science List of Courses. For regulations governing this list, see page 62.

*Preparation for the Major.*—Required: courses 1A, 1B, Chemistry 1A, 1B, and after September 1951, Physics 2A, 2B, or 1A, 1B, 1C, 1D. Recommended: French, and English 1B or 101B.

*The Major.*—Eighteen units of upper division work in Zoology and 6 units of upper division work chosen from zoology or from approved *related* courses in anthropology, bacteriology, botany, chemistry, entomology, home economics, mathematics, paleontology, physics, or psychology. Of the 18 upper division units in zoology at least 4 units must be taken in each of the three following groups of courses:

Group 1: Courses 101A, 101B, 101C, 103, 103C, 118A-118B-118C, 119, 130, 131, 158.

\* Absent on leave, 1950-1951.

Group 2: Courses 100, 106, 107, 111C, 111H, 115.

Group 3: Courses 110, 112, 133, 133C, 134, 134C, 135, 136, 136C, 159.

*Curriculum for Medical Technicians.*—For details, see page 149.

- 1A. General Zoölogy. (4) I.** Mr. Read  
Lectures, two hours; laboratory, six hours; field trip. Prerequisite: Chemistry 1A or 2A.  
Principles of animal biology with emphasis on the invertebrates. Offered primarily for zoölogy majors and premedical students.
- 1B. General Zoölogy. (4) II.** Mr. Bartholomew  
Lectures, two hours; laboratory, six hours. Prerequisite: course 1A, and chemistry.  
Principles of animal biology with emphasis on comparative gross and microscopic anatomy and physiology of the vertebrates.
- 4. Microscopical Technique. (2) I, II.** Mrs. Humason  
Lectures and laboratory, six hours. Prerequisite: course 1B or the equivalent, or consent of the instructor.
- 15. Elementary Zoölogy and Physiology. (5) II.** Mr. Levedahl  
Lecture, three hours; laboratory, six hours. Prerequisite: one semester college chemistry (Chemistry 2A or 1A). Not open to premedical or zoölogy majors.
- 25. General Human Anatomy. (3) I.** Miss Atsatt  
(Former number, 35.)  
Lecture, two hours; laboratory, three hours. Prerequisite: course 15, and sophomore standing.
- 36. Applied Human Physiology. (2) I.** Miss Atsatt  
(Former number, 16.)  
Lectures, one hour; laboratory, three hours. Prerequisite: course 15.

#### UPPER DIVISION COURSES

- 100. Vertebrate Embryology. (4) I.** Mr. Schechtman  
Lectures, two hours; laboratory, six hours.  
Prerequisite: courses 1A, 1B, or the equivalent.  
Study of embryologic development of the vertebrates, including amphibia, chick, and mammal.
- 101A. Introduction to General Physiology. (3) I.** Mr. Crescitelli  
Special emphasis on the physical and chemical properties of protoplasm; osmotic relations and permeability of living cells; physiological action of ions and principles of enzyme action. Prerequisite: course 1A, 1B, or equivalent; Chemistry 1A, 1B, 6A, 8; Physics 2A, 2B, or equivalent is recommended.
- 101B. General Physiology. (3) II.** Mr. Crescitelli, Mr. Jahn  
Continuation of course 101A with emphasis on oxidation-reduction systems, excitation, inhibition, respiration, and muscle contraction. Prerequisite: course 101A.
- 101C. Laboratory in General Physiology. (2) II.** Mr. Crescitelli, Mr. Levedahl  
Prerequisite: course 101A, 101B. Course 101B may be taken concurrently.
- 103. Experimental Embryology. (3) II.** Mr. Schechtman  
Prerequisite: courses 1A, 1B, or equivalent; recommended: course 100.  
Principles governing histological and morphological differentiation; an analysis of the factors involved in normal and abnormal growth and differentiation of cells and tissues.

- 103C. Experimental Embryology Laboratory.** (2) II. Mr. Schechtman  
Prerequisite or concurrent: courses 4 and 103, and consent of the instructor.
- 106. Comparative Anatomy of the Vertebrates.** (4) II. Miss Atsatt  
Lectures, two hours; laboratory, six hours. Prerequisite: course 1B; recommended: course 100.
- 107. Microanatomy.** (4) I. Miss Atsatt  
Lectures, two hours; laboratory, six hours.  
Prerequisite: course 1B.  
The structure and activities of cells and tissues with emphasis on the mammals.
- 110. Protozoölogy.** (4) II. Mr. Ball  
Lectures, two hours; laboratory, six hours. Prerequisite: course 1A.
- 111. Parasitology.** (2) I. Mr. Ball  
Prerequisite: course 1A.
- 111C. Parasitology Laboratory.** (2) I. Mr. Ball  
Prerequisite or concurrent: course 111.
- 111H. Laboratory Aide Training in Parasitology.** (2) I. Mr. Ball  
Prerequisite or concurrent: course 111C.  
For persons intending to become laboratory technicians.
- 112. Invertebrate Zoölogy.** (4) II. \_\_\_\_\_  
Lectures, two hours; laboratory and field, six hours. Prerequisite: upper division standing and general zoölogy.
- 115. Helminthology.** (4) II. Mr. Read  
Prerequisite: course 1A.  
Lectures, two hours; laboratory, six hours.  
A general course in the helminth parasites of animals.
- 118A. Introductory Endocrinology.** (3) I. Mrs. Szego-Roberts  
Prerequisite: course 1B or equivalent. Chemistry 8 recommended.
- 118B. Advanced Endocrinology.** (2) II. Mrs. Szego-Roberts  
Prerequisite: course 118A and Chemistry 8.
- 118C. Endocrinology Laboratory.** (3) I. Mr. Levedahl, Mrs. Szego-Roberts  
Laboratory, six hours; discussion, one hour.  
Prerequisite or concurrent: course 118B and consent of the instructor.
- 119. Isotopic Tracers in Biology.** (3) I. Mr. Levedahl  
Lectures, two hours; discussion or demonstration, one hour.  
Prerequisite: one of the following: courses 101A, 118A, and 118B; Botany 160A; Bacteriology 106; or Chemistry 108A.  
The use of isotopic tracers in the study of biological processes, including methods, problems investigated, interpretation of data, and possible future developments. For majors in the biological sciences.
- 130. Genetics.** (2) I. Mr. Bellamy  
Lectures and discussions, two hours. Prerequisite: course 1A, or Botany 1A.
- 131. Genetics Laboratory.** (2) I. Mr. Bellamy  
Laboratory, six hours. Prerequisite or concurrent: course 130.

- 133. Biology of the Cold-Blooded Vertebrates. (2) II.** Mr. Cowles  
Lecture, two hours.  
Prerequisite: courses 1A and 1B, and upper division standing.  
The systematics, distribution, physiology, and ecology of amphibians and reptiles, with a brief account of the fishes.
- 133C. Laboratory in Cold-Blooded Vertebrates. (2) II.** Mr. Cowles  
Laboratory, six hours; field trips. Prerequisite or concurrent: course 133.
- 134. Biology of the Warm-Blooded Vertebrates. (3) I.** Mr. Bartholomew  
Lecture, three hours.  
Prerequisite: courses 1A and 1B.  
The ecology, physiology, distribution, behavior, and systematics of birds and mammals.
- 134C. Laboratory in Warm-Blooded Vertebrates. (2) I.** Mr. Bartholomew  
Prerequisite or concurrent: course 134, laboratory, six hours; field trips.
- 135. Ichthyology. (4) I.** Mr. Walker  
Lecture, two hours; laboratory, six hours; field trips.  
Prerequisite: course 1A, 1B, and upper division standing.  
The evolution, systematics, ecology, and biology of fishes, with special emphasis on local marine forms.
- 136. Fisheries Biology. (2) II.** Mr. Walker  
Lecture, two hours.  
Prerequisite: course 1B.  
Review of commercial and sport fisheries; methods of study and management.
- 136C. Laboratory in Fisheries Biology. (2) II.** Mr. Walker  
Laboratory, six hours; field trips.  
Prerequisite: course 135 and 136, or 136 concurrent.  
Designed for student planning further work in this field.
- 159. Physical Ecology. (2) II.** Mr. Bartholomew, Mr. Walker  
Prerequisite: course 1B.  
A survey of the physical and chemical factors of the environment as they affect the distribution and mode of life of animals.
- 195A-195B. Readings in Zoölogy. (2-2) Yr.** The Staff  
Prerequisite: senior standing.  
Library problems.
- 199A-199B. Problems in Zoölogy. (2-2) Yr.** The Staff  
Prerequisite: senior standing with such special preparation as the problem may demand.

## GRADUATE COURSES

- \*\*201A-\*\*201B. Advanced Cellular Physiology. (3) II.** Mr. Jahn  
Prerequisite or concurrent: course 101B.  
Permeability, salt accumulation, bioelectric phenomena, oxidation-reduction potentials, effects of temperature and cell metabolism.
- †202A-†202B-†202C. Advanced General Physiology. (2) II.**  
Prerequisite: course 101A and 101B. Mr. Crescitelli  
Among topics discussed are respiration, enzymes, nerve physiology, vitamins, tracer techniques, bioluminescence, and physiology of growth.

† Each course given every third year. 202B to be given, 1950-1951.

\*\* To be given in alternate years. 201A to be given, 1950-1951.



210. **Physiology of Protozoa.** (3) I. Mr. Jahn  
Lecture, two hours; laboratory, three hours.  
Prerequisite: course 110.  
Protoplasmic structure, locomotion, motor responses, respiration, excretion, metabolism, growth and nutrition of protozoa, especially as compared with other groups of organisms.
250. **Survey of Animal Biology.** (3) II. Mr. Furgason  
Prerequisite: graduate standing in zoölogy or consent of the instructor.  
A review of the basic concepts and theories of biological sciences as viewed with historical perspective and as related to contemporary viewpoints.
- 251A-251B. **Seminar in Ecology of Amphibia and Reptiles.** (2-2) Yr. Mr. Cowles  
251C-251D. **Seminar in Avian and Mammalian Ecology.** (2-2) Yr. Mr. Bartholomew
- 252A-252B. **Seminars in Endocrinology.** (2-2) Yr. Mrs. Szego-Roberts  
253A-253B. **Seminars in Genetics and Evolution.** (2-2) Yr. Mr. Bellamy  
254A-254B. **Seminars in Experimental Zoölogy.** (2-2) Yr. Mr. Schechtman  
255A-255B. **Seminars in Protozoölogy and Parasitology.** (2-2) Yr. Mr. Ball  
256A-256B. **Seminar in General Physiology.** (2-2) Yr. Mr. Crescitelli  
257A-257B. **Seminar in Comparative Physiology.** (2-2) Yr. ———
258. **Seminar in Physiology of Sense Organs.** (2) I. Mr. Jahn  
260A. **Seminar in Ichthyology.** (2) I. Mr. Walker  
260B. **Seminar in Fisheries Biology.** (2) II. Mr. Walker  
263. **Seminar in Physiology of Microorganisms.** (2) II. Mr. Jahn  
290A-290B. **Research in Zoölogy.** (2-6; 2-6) Yr. The Staff

#### PALEONTOLOGY

Courses in general and invertebrate paleontology are offered by the Department of Geology (see page 227).

#### LIFE SCIENCES

- 1A-1B. **Fundamentals of the Life Sciences.** (3-3) Yr. Mr. Furgason  
Lectures, demonstrations, discussions, three hours.  
In order to obtain biological science credit students must complete year course. Both semesters must be satisfactorily completed to fulfill the College of Letters and Science requirement of at least 5 units in biological science.

#### BIOLOGY

12. **General Biology.** (3) I. Mr. Cowles  
Lectures, three hours; demonstration, one hour; one required field trip in the semester. Prerequisite: Life Sciences 1A or the equivalent, or consent of the instructor.
370. **Methods and Materials for Teaching Life Science.** (3) II. Mr. Cowles, Mr. Herbst  
Lectures, demonstration, field trips.  
Prerequisite: major in biological sciences, senior or graduate status, one of the following courses: Botany 3, Zoölogy 112, 133, or 134. Required of all prospective life science teachers who wish to secure the general secondary or junior college credential. It must be taken prior to practice teaching courses, Education G377, G378 and G379.

\* To be given spring semester only, 1950-1951.

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## **Bulletins Referring Primarily to the Departments of the University at Los Angeles**

The General Catalogue, Departments at Los Angeles: containing general information about the University, requirements for admission, for the degree of Associate in Arts, and for the bachelor's degree in the colleges of Letters and Science, Business Administration, Applied Arts, Agriculture, and Engineering, and in the School of Education; for the master's and the doctor's degrees; students' fees and expenses; and announcements of courses of instruction in the departments at Los Angeles and La Jolla. Price, 25 cents.

The Circular of Information, Departments at Los Angeles.

The Announcement of the Graduate Division, Southern Section.

The Announcement of the School of Education, Los Angeles.

The Announcement of the School of Law, Los Angeles.

The Announcement of the Colleges of Engineering.

The Announcement of the College of Applied Arts.

The Announcement of the School of Business Administration.

The Schedule of Classes, University of California, Los Angeles: containing the time schedule of exercises and an office directory of officers of instruction and administration. Published in February and September of each year for the semester immediately following. Price, 10 cents.

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