STANFORD UNIVERSITY BULLETINS

[Entered, January 22, 1920, at Palo Alto, California, as second-class matter, under Act of Congress of August 24, 1912. Acceptance for mailing at special rate of postage provided for in Section 1103, Act of October 3, 1917. Authorized on August 23, 1918. Issued once a month in March, April, August, October, and November; twice a month in January, May, June, July, and December; three times in February.]

Published in

INFORMATION ..................................................... January
SUMMER QUARTER .............................................. February
HOPKINS MARINE STATION ........................................ February
SCHOOL OF LAW (Summer Quarter Announcement) ................... February
GRADUATE SCHOOL OF BUSINESS ................................ March
SCHOOL OF LAW ................................................. May
ANNOUNCEMENT OF COURSES .................................. May
SCHOOL OF EDUCATION ......................................... June
SCHOOL OF ENGINEERING ....................................... June
SCHOOL OF MEDICINE .......................................... July
THE UNIVERSITY REGISTER ................................. August
ABSTRACTS OF DISSERTATIONS .......................... November
SUMMER QUARTER (Preliminary Announcement) ................. December
REPORT OF THE PRESIDENT ................................. December

Address:
THE REGISTRAR
STANFORD UNIVERSITY, CALIFORNIA

DIRECTORY OF OFFICERS AND STUDENTS. Published in October, January, April, and July. [On sale at the Comptroller's Office. 15c.]

TIME SCHEDULE OF LECTURES AND LABORATORY WORK. Printed in June (for autumn quarter), December, March, and May, for the next succeeding quarter. [On sale at the Comptroller's Office. 10c.]

UNIVERSITY TRAINING AND VOCATIONAL OUTLETS. Issued in July, 1935. [On sale at the Registrar's Office. 15c.]

OTHER UNIVERSITY PUBLICATIONS
University Series

Monographs and other papers embodying the results of original research in the various departments of University activity.

CONTRIBUTIONS TO BIOLOGY FROM THE HOPKINS SEASIDE LABORATORY (Reprinted from the Proceedings of the California Academy of Sciences.)

BOOKS AND PERIODICALS
For books and periodicals published by the Stanford University Press a catalogue will be furnished on request.

Address:
STANFORD UNIVERSITY PRESS
STANFORD UNIVERSITY, CALIFORNIA
UNIVERSITY CALENDAR

1940

SUMMER QUARTER

June 18 Tuesday .......... College Aptitude Test
June 20 Thursday .......... Registration for Summer Quarter
June 21 Friday .......... Instruction begins
July 1 Monday .......... Last day for Registration in School of Education
July 4 Thursday .......... Independence Day (Holiday)
July 5 Friday .......... Last day for Registration in all other Schools
Aug. 17 Saturday .......... School of Education classes close
Aug. 29-31 Thursday-Saturday .......... End-Quarter Examinations

AUTUMN QUARTER

Sept. 20 Friday .......... College Aptitude Test (Lower Division)
Sept. 21 Saturday .......... College Aptitude Test (Upper Division)
Sept. 23 Monday .......... Registration of New Students
Sept. 24 Tuesday .......... Registration for Autumn Quarter
Sept. 25 Wednesday .......... Instruction begins
Dec. 10-13 Tuesday-Friday .......... End-Quarter Examinations

| 1940 |
|-----------------|-----------------|-----------------|
| **JUNE** | **JULY** | **AUGUST** |
| S M T W T F S | S M T W T F S | S M T W T F S |
| . . . . . . . . | . 1 2 3 4 5 6 | . . . . . 1 2 3 |
| 1 2 3 4 5 6 7 8 | 8 9 10 11 12 13 14 15 | 4 5 6 7 8 9 10 |
| 9 10 11 12 13 14 15 | 14 15 16 17 18 19 20 | 11 12 13 14 15 16 17 |
| 16 17 18 19 20 21 22 | 21 22 23 24 25 26 27 | 18 19 20 21 22 23 24 |
| 23 24 25 26 27 28 29 | 28 29 30 31 . . . . | 25 26 27 28 29 30 31 |
| 30 . . . . . . . . | . . . . . . . . | . . . . . . . . |

Stanford University Press
# CONTENTS

<table>
<thead>
<tr>
<th>University Calendar</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>THE UNIVERSITY BOARD OF TRUSTEES</td>
<td>4</td>
</tr>
<tr>
<td>EXECUTIVE OFFICERS</td>
<td>5</td>
</tr>
<tr>
<td>Officers of Instruction and Administration</td>
<td>7</td>
</tr>
<tr>
<td>General Information</td>
<td>39</td>
</tr>
</tbody>
</table>

## Courses of Instruction:

- **School of Biological Sciences**
  - Biology ........................................... 69
  - General and Experimental Biology ........ 71
  - Natural History Museum ...................... 71
  - Hopkins Marine Station ...................... 72
- Anatomy .......................................... 75
- Bacteriology and Experimental Pathology 76
- Physiology ....................................... 76

- **Graduate School of Business** ............ 78
- **School of Education** ....................... 83
- **School of Engineering** ................. 105
- **Hoover Library on War, Revolution, and Peace** 107
- **School of Hygiene and Physical Education** 109
- **Hygiene and Physical Education for Women** 116
- **School of Law** ............................... 118
- **School of Letters** .......................... 122
  - Classics ....................................... 126
  - English ........................................ 126
  - Germanic Languages ........................... 127
  - Romanic Languages ............................. 128
  - Slavic Languages .............................. 132
- **Libraries** ................................. 133
- **School of Medicine** ...................... 135
- **Memorial Church** ............................ 137
- **School of Physical Sciences** ............ 138
  - Chemistry ...................................... 138
  - Geology ........................................ 139
  - Mathematics .................................. 140
  - Physics ........................................ 141
- **School of Social Sciences** .............. 142
  - Economics ...................................... 144
  - Food Research Institute ..................... 147
  - History ........................................ 148
  - Journalism .................................... 149
  - Philosophy .................................... 150
  - Political Science ............................. 151
  - Psychology ..................................... 152
- **Graphic Art** ................................ 154
- **Music** ......................................... 157
- **Speech and Drama** ........................... 159

## Index ........................................... 163
THE UNIVERSITY BOARD OF TRUSTEES

[The figures in parentheses indicate year of beginning of service.]

HARRY CHANDLER (1923) .................. Times Office, Los Angeles
LELAND WHITMAN CUTLER (1920) . Financial Center Bldg., San Francisco
WILLIAM PARMER FULLER, JR. (1933) ...... 301 Mission St., San Francisco
JOSEPH DONOHoe GRANT (1891) .......... 114 Sansome St., San Francisco
HERBERT CLARK HOOVER (1912) ............ Stanford University
IRA SHELL LILlick (1923) ............. 826 Robert Dollar Bldg., San Francisco
CHRISTIAN OTTO GERBERDING MILLER (1923)

433 California St., San Francisco

JOHN THOMAS NOURSE (1920) ............. 2 State Bldg., San Francisco
FRANCIS Price (1935) .................... 21 East Cañon Perdido, Santa Barbara
STUART LAMAR RAWLINGS (1936) ......... 315 Montgomery St., San Francisco
PAUL SHOUP (1923) ...................... 411 West Fifth St., Los Angeles
MARCUS CAUFFMAN SLOSS (1920) .......... 111 Sutter St., San Francisco
DONALD BERTRAND TRESIDDER (1939) ........ Yosemite National Park
FRANK FISH WALKER (1939) ........... 1840 Brookvale, Burlingame

OFFICERS OF THE BOARD

President: LELAND WHITMAN CUTLER
Vice-Presidents: MARCUS CAUFFMAN SLOSS, JOSEPH DONOHoe GRANT
Secretary-Treasurer: IRA SHELL LILlick
Assistant Secretaries: WILLIAM PARMER FULLER, JR., CHRISTIAN OTTO
GERBERDING MILLER, JOHN THOMAS NOURSE, STUART LAMAR RAW-
LINGS
Assistant Treasurers: WILLIAM PARMER FULLER, JR., JOHN THOMAS
NOURSE

STANDING COMMITTEES OF THE BOARD

Finance: MILLER, CUTLER, FULLER, GRANT, HOOVER, LILICK, PRICE,
RAWLINGS, SHOUP, WALKER
University: NOURSE, CHANDLER, CUTLER, HOOVER, LILICK, PRICE, SLOSS,
TRESIDDER, WALKER
Rules: LILlick, NOURSE, SLOSS
Campus: CUTLER, LILICK, NOURSE
EXECUTIVE OFFICERS


President: RAY LYMAN WILBUR (Adm. 163, 10-12, 2-4, S 10-12)
Acting Comptroller: JACOB HUGH JACKSON (Adm. 162, 10-12, 2-5, S 10-12)
Registrar: JOHN PEARCE MITCHELL (Adm. 164, 8-12, 1-4, S 8-12)
Dean of Women: MARY YOST (Adm. 160, 10-12, 2-4)
Dean of Men: JOHN WILLIAM BUNN (Adm. 161, 9-12, 1:30-4)
Chaplain: DAVID ELTON TRUEBLOOD (Vestry, 10-11)

Director of Summer Quarter: ELIOT GRINNELL MEARNS (Adm. 172, 8:30-12, 2-5, S 8:30-12)

Academic Secretary: KARL MONTAGUE COWDERY (Adm. 164)
Anatomy: CHARLES HASKELL DANFORTH (a2)
Bacteriology and Experimental Pathology: EDWIN WILLIAM SCHULTZ (b1)
Biological Sciences, School of: CHARLES VINCENT TAYLOR, Dean (422)
Business, Graduate School of: JACOB HUGH JACKSON, Dean (131)
Chemistry: ROBERT ECKLES SWAIN (c10)
Classics: RAYMOND DAVIS HARRIMAN (255)
Economics: BERNARD FRANCIS HALEY (223)
Education, School of: GRAYSON NEIKIRK KEFAUVER, Dean (e18)
Engineering, Civil: SAMUEL BROOKS MORRIS (531)
Engineering, Electrical: FREDERICK EMMONS TERMAN (509A)
Engineering, Mechanical: ARTHUR BOQUER DOMOOSKE (260)
Engineering, Mining: FREDERICK GEORGE TICKELL (555)
Engineering, School of: SAMUEL BROOKS MORRIS, Dean (531)
English: WILLIAM DINSMORE BRIGGS (46)
Food Research: MERRILL KELLEY BENNETT (34B)
Geology: ELIOT BLACKWELDER (340)
Germanic Languages: BAYARD QUINCY MORGAN (116)
Graduate Study: RALPH HASWELL LUTZ, Dean (235)
Graphic Art: EDWARD MCNEILL FARMER† (313)
History: EDGAR EUGENE ROBINSON (215)
Hoover Library: RALPH HASWELL LUTZ (235)

† Acting for academic year, 1939-40.
SUMMER QUARTER

Hopkins Marine Station: Walter Kenrick Fisher
Hygiene and Physical Education (Men): Thomas Andrew Storey (pe15)
Hygiene and Physical Education (Women): Helen Brenton Pryor (w3)
Journalism: Chilton Rowlette Bush (p1)
Law, School of: Marion Rice Kirkwood, Dean (1)
Letters, School of: Hardin Craig (52)
Libraries, University: Nathan Van Patten, Director
Mathematics: Gabor Szegő (63)
Medical Adviser of Men: Thomas Andrew Storey (pe15)
Medical Adviser to Women: Helen Brenton Pryor (w3)
Medicine, Department of: Arthur Leonard Bloomfield (San Francisco)
Medicine, School of: Loren Roscoe Chandler, Dean (San Francisco)
Memorial Church: David Elton Trueblood, Chaplain
Military Science and Tactics: Harry Bernard Allen (538)
Museum: Pedro J. deLemos, Director
Music: Warren D. Allen (Choir Room)
Natural History Museum: Leroy Abrams
Obstetrics and Gynecology: Ludwig Augustus Emge (San Francisco)
Pathology: William Dock (San Francisco)
Pediatrics: Harold Kniest Faber (San Francisco)
Pharmacology: Paul John Hanzlik (San Francisco)
Philosophy: Harold Chapman Brown (93)
Physical Sciences, School of: Robert Eckles Swain (c10)
Physics: David Locke Webster (385)
Physiology: Frank Walter Weymouth (482)
Political Science: Edwin Angell Cottrell (24)
Psychology: Lewis Madison Terman (399)
Public Health and Preventive Medicine: Charles Edward Smith (San Francisco)
Romanic Languages: Aurelio Macedonio Espinosa (243A)
Slavic Languages: Henry Lanz (91A)
Social Sciences, School of: Edwin Angell Cottrell (24)
Speech and Drama: Hubert Crouse Heffner (m203)
Statistics: Holbrook Working (30B)
Surgery: Emile Frederic Holman (San Francisco)
OFFICERS OF INSTRUCTION AND ADMINISTRATION

[Name; residence; postoffice; title; residence telephone in parentheses. The capital letter following residence address indicates location of street (P = Palo Alto, MP = Menlo Park, RC = Redwood City, SJ = San Jose, SF = San Francisco, etc.); where capital letter is omitted the residence in all cases is Stanford University. The mailing address is the same as residence address, except as follows: the numbers (or letters) in italics after the residence address are Stanford University postoffice box numbers (or box letters); the section mark ($) following the residence address indicates General Delivery, Stanford University; the asterisk (*) indicates that mail should be addressed to the School, Department, or Office concerned. The dagger (†) marks the names of men who are married.]

†ADDIS, THOMAS 2160 Pacific, SF
Professor of Medicine
(M.B., Ch.B., Edinburgh, 1905, M.D., and M.R.C.P., 1908. Clinical Assistant, Medical Out-Patient Department, Royal Infirmary of Edinburgh, 1908, 1911; Medical Registrar, Leith Hospital, 1911; Carnegie Research Scholar and Fellow, 1908–11. At Stanford since 1911.)

†ALDERSON, HARRY EVERETT 2649 Green, SF
Clinical Professor of Medicine (Dermatology and Syphilology), and Attending Consultant, Men Students' Health Service
(M.D., California, 1900. Graduate Student, Vanderbilt Clinic, New York, 1906, Johns Hopkins, 1907, Berlin, Paris, and London, 1912; Assistant in Skin Diseases, Medical Department, University of California, 1906–12; Professor of Art Anatomy, California School of Design, 1906–12; Chief of Dermatological Clinic, San Francisco Fruit and Flower Mission; Dermatologist, U.S. Veterans' Administration Facility; Member, American Dermatological Association. At Stanford since 1912.)

†ALLEN, WARREN D. 675 Alvarado*
Organist, and Associate Professor of Music and Education (PA 4924)
(A.B., Stanford, 1934; A.M., California, 1935; Ph.D., Columbia, 1939. Associate, American Guild of Organists, 1909; Dean of Conservatory of Music, College of the Pacific, 1913–19; Visiting Organist and Assistant Professor of Music, Cornell University, 1932. At Stanford since 1918.)

†ALMACK, JOHN CONRAD 683 Alvarado
Professor of Education
(A.B., Oregon, 1918, A.M., 1920; Ph.D., Stanford, 1923. Principal and Superintendent of Schools, Rockford (Wash.), 1905–15; Editor, Colfax (Wash.), 1915–16; Superintendent of Schools, Coquille (Ore.), 1916–17; Assistant in Education, University of Oregon, 1917–18, Professor of Education and Director of Extension Education, 1918–21; Teaching Fellow, Stanford, 1921–22. At Stanford since 1921.)

ALMOND, NINA 532 Lasuen-1077
Librarian and Consultant in Research, Hoover Library

ANDREWS, GLADYS MARIE 541 Salvatierra-21
Assistant Document Librarian
(A.B., California, 1923. At Stanford since 1930.)
ANIBAL, FRED
Assistant Professor of Education
(346 Madrono, PA 3671)
B.S., Central College, 1913; B.S. (in Education), Missouri, 1921; A.M. (in Education), Chicago, 1924; S.M. (in Chemistry), 1932. Instructor in General Science and Physiography, Westport High School, Kansas City (Mo.), 1919-20; Instructor in Chemistry, Central High School, Kansas City (Mo.), 1921-27; Head, Department of Science, Laboratory Schools, University of Chicago, and Instructor in Methods, School of Education, University of Chicago, 1927-32; Instructor in Methods of Science, School of Education, Johns Hopkins University, Summer, 1933; Instructor and Supervisor of Science, Palo Alto Schools, 1933-36; Acting Assistant Professor of Education, Teachers College, Columbia University, 1936; Director of Science Curriculum, Menlo School and Junior College, since 1936. At Stanford since 1933.

ARNOLD, WILLIAM A.
Research Associate, Biology (Hopkins Marine Station)
(105A Fifteenth, Pacific Grove)
B.S., California Institute of Technology, 1931; Ph.D., Harvard, 1935. Sheldon Fellow, University of California, 1935-36; General Education Board Fellow, Hopkins Marine Station, 1936-37; Rockefeller Fellow, The University's Institute for Theoretical Physics, Copenhagen, 1938-39. At Stanford since 1939.

ARTIN, EMIL
Acting Professor of Mathematics
(Bloomington, Indiana)
Ph.D., Leipzig, 1921. Assistant, University of Hamburg, 1922-24, Privatdozent, 1924-26, Professor, 1926-37; Professor, University of Notre Dame, 1937-38; Professor, University of Indiana, since 1938.

BAILEY, MARGERY
Associate Professor of English
(559 Kingsley, PA 3256)
A.B., Stanford, 1914, A.M., 1916; Ph.D., Yale, 1922. Fellow in English, Yale University, 1921-22; Academic Director, Summer Drama Festivals, Stanford, 1935-37. At Stanford since 1914.

BANE, SUDA LORENA
Archivist of the Herbert Hoover Archives,
Hoover Library
(332 Forest, PA 22663)
Assistant, Public Library, Washington (D.C.), 1908-17; Assistant Librarian, U.S. Food Administration, 1917-19; Librarian, American Relief Administration, 1919-28. At Stanford since 1924.

BARKER, CHESTER WING
Secretary, Speech and Drama
(1333 Byron, PA 22629)
A.B., Stanford, 1918. Student, Columbia University, 1919-20; Secretary to Director of Men's Physical Education, Stanford, 1922-23; Executive Assistant to Appointment Secretary, Stanford, 1923-25; Teaching Assistant, Division of Speech and Drama, Stanford, Summer Quarter, 1937. At Stanford, 1922-25, and since 1937.

BAUMBERGER, JAMES PERCY
Professor of Physiology
(328 Churchill, PA 8140)

BECKER, HOWARD PAUL
Acting Professor of Economics (Sociology)
(Madison, Wisconsin)
B.S., Northwestern, 1925, A.M., 1926; Ph.D., Chicago, 1930. Fellow in Sociology, Northwestern University, 1925-26; Research Fellow, Institute for Social Science
OFFICERS

Research, Cologne (Germany), 1926–27; Graduate Teaching Assistant, University of Chicago, 1928; Instructor in Sociology, University of Pennsylvania, 1928–31; Associate Professor of Sociology, Smith College, 1931–37; Visiting Lecturer, Harvard University, 1934–35; Professor of Sociology, University of Wisconsin, since 1937.

BELL, DOROTHY OSBORNE (MRS.) 2450 Tasso, P
Director, Encina Commons

B.S., Iowa State, 1925. At Stanford since 1936.

†BELL, REGINALD
Associate Professor of Education


BENNETT, CASSIE E. (MRS.) 158 Kingsley, P
Secretary, Economics

At Stanford since 1924.

†BENNETT, MERRILL KELLEY 1103 Ramona, P
Economist, Professor of Economic Geography, and Executive Secretary, Food Research Institute


BERGSTROM, FRANCIS WILLIAM
Associate Professor of Chemistry


†BERREMAN, JOEL V.
Instructor in Economics (Sociology)


BETHE, HANS ALBRECHT
Acting Professor of Physics

Ph.D., Munich, 1928. Rockefeller Foundation Fellow, Cambridge and Rome, 1930–32; Privatdozent, Munich, 1930–33; Acting Assistant Professor, Tübingen, 1932–33; Lecturer, University of Manchester, 1933–34; Fellow, University of Bristol, 1934; Acting Assistant Professor of Physics, Cornell University, 1934, Assistant Professor, 1935–37, Professor, since 1937.

BLOCH, FELIX
Professor of Physics

Dr. phil., Leipzig, 1928. Assistant in Theoretic Physics, Zurich, 1928–29; Fellow of the Lorentz-Fonds, Utrecht, 1929–30; Assistant in Theoretic Physics, Leipzig, 1930–31; Fellow in the Orsted-Fonds, Copenhagen, 1931; Privatdozent in Theoretic Physics, Leipzig, 1932–33; Fellow of the Rockefeller Foundation, Rome, 1933–34; Acting Associate Professor of Physics, Stanford, 1934–36. At Stanford since 1934.

†BODE, KARL FRANZ
Assistant Professor of Economics

Ph.D., Berne (Switzerland), 1935. Fellow, Studienstiftung des Deutschen Volkes, Bonn, 1933; Student, University of Vienna, 1933–34; Scholar, Zimmern School for

†Bodenstein, Dietrich
Research Associate, Biology
Research Assistant, Kaiser-Wilhelm Institut für Biologie, Berlin, 1928–33; Research Assistant, Deutsch-Italienisches Institut für Meeresbiologie, Rovigno (Italy), 1933–34; Research Assistant, Stanford, 1935–38. At Stanford since 1935.

†Bol, Cornelis
Research Associate, Physics

Boles, Virginia Stuart (Mrs.)
Secretary, Mathematics
A.B., Stanford, 1911. At Stanford since 1927.

†Bolin, Rolf L.
Assistant Professor of Marine Biology and Oceanography, and Assistant Director of Hopkins Marine Station

Boulware, Edna
Secretary, Chemistry
At Stanford since 1916.

Braddock, Doris
Assistant to the Director of Dining Halls
B.S., Nebraska, 1928. At Stanford since 1937.

†Brandt, Karl
Economist, and Professor of Agricultural Economics, Food Research Institute
Dipl. agr., Hohenheim, 1921; Dr. agr., Berlin, 1926. Chief Appraiser and Director of the Domänenbank, Berlin, 1925–27; Agricultural Economic Adviser, Preussische Central-Genossenschaftskasse, Berlin, 1928–39; Professor of Agricultural Economics and Director of Institut für Landwirtschaftliche Marktforschung, Landwirtschaftliche Hochschule, Berlin, 1929–33; Professor of Agricultural Economics, New School for Social Research, New York, 1933–38; Visiting Research Professor, Louisiana State University, Summer and Fall Terms, 1937–38. At Stanford since 1938.

Brashear, Edith A. (Mrs.)
Secretary, Registrar's Office
At Stanford since 1926.

Breed, Elizabeth Wolz
Librarian and Research Associate, Division of Industrial Relations (Graduate School of Business)

†Briggs, William Dinsmore
Professor of English
A.B., Stanford, 1896; A.M., Harvard, 1899, Ph.D., 1900. Student, Johns Hopkins University, 1896–97; Instructor in English and German, University of Vermont, 1900–1901; Instructor in English, Western Reserve University, 1901–06. At Stanford since 1906.
†Brown, Harold Chapman  
Professor of Philosophy  
Box 526, Roble Ridge, P*  

†Brown, Walter Henry  
Professor of Hygiene and Physical Education,  
Director of Division of Informational Hygiene, and  
Director of University Health Service  
360 Forest, P  
M.D., Jefferson Medical College, 1906. C.P.H., Harvard Technology School for Health Officers, 1914; Epidemiologist, Massachusetts State Department of Health, 1914–16; Health Officer, Bridgeport (Conn.), 1916–19; Instructor, Department of Hygiene, Yale University, 1916–19; Associate Director, Health Service, American Red Cross, Washington, 1919–30; Rockefeller Foundation Commission for Prevention of Tuberculosis in France, 1920–21; Director, Child Health Demonstration, Mansfield (Ohio), 1921–25; Director, Child Health Demonstration, Marion County (Oregon), 1925–27; Lecturer in Public Health, School of Social Work, University of Oregon, 1925–27. At Stanford since 1927.

†Buck, Philip Wallenstein  
Associate Professor of Political Science  
1129 Emerson, P-3004  
A.B., Idaho, 1923; B.A., Oxford, 1926; Ph.D., California, 1933. Idaho Rhodes Scholar, 1923–26; Assistant Professor of Government, Mills College, 1926–34; on Faculty, Portland Summer Sessions, 1938, 1939. At Stanford since 1934.

Buckholtz, Sheila Young (Mrs.)  
Secretary to Dean, School of Education  
565 Bowdoin, P*  
B.B.A., Minnesota, 1933. At Stanford since 1939.

Buckingham, Elisabeth Lee  
Associate Professor of Speech and Drama  
534 Lasuen-102  

†Bugg, Elwyn  
Assistant Director of Physical Education  
850 Guinda, P*  
A.B., Stanford, 1926. At Stanford since 1928.

†Bunn, John William  
Dean of Men, and Professor of Hygiene and Physical Education  
676 Alvarado*  

†Bush, Chilton Rowlette  
Professor of Journalism  
669 Cabrillo*  
A.B., Wisconsin, 1923, A.M., 1927, Ph.D., 1935. Instructor in Journalism, University of Wisconsin, 1925–26, Assistant Professor, 1926–29, Associate Professor, 1929–34; Visiting Associate Professor, University of Minnesota, Summer Quarter, 1929. At Stanford since 1934.
BUSH, ROBERT NELSON
Instructor in Education
402 Miramonte, P*
(PA 23349)

BLYER, OLIVIA BOEZINGER (MRS.)
Scholarship Secretary, Registrar's Office
668 Alvarado*
(PA 21482)

†BYRD, OLIVER ERASMUS
Assistant Professor of Hygiene and Physical Education
217 Madroño, P-3006
(PA 21206)

CAIN, LEO FRANCIS
Acting Instructor in Education
Stanford University*
441 Nevada, P*
(PA 21704)

CAIN, SYLVIA POTTER (MRS.)
Instructor in Physical Education (Women)
441 Nevada, P*
(PA 21704)
Teaching Assistant in Hygiene and Physical Education for Women, Stanford, 1931-35. At Stanford since 1931.

†CHAN, SHAU WING
Assistant Professor of Chinese and English
1220 Powell, SF*
(Sutter 0780)
A.B., Lingnan University, 1927; A.M., Stanford, 1932, Ph.D., 1937. Instructor in English, National Sun Yat-Sen University, Canton (China), 1927-30; Lecturer in Chinese, Kwangtung Provincial Normal School for Women, Canton (China), 1928-30; University Fellow in English, Stanford, 1932-34; Professor of English (appointed), National University of Shantung, Tsingtao (China), 1937. At Stanford since 1938.

†CHANDLER, LOREN ROSCOE
Professor of Surgery, and Dean of the School of Medicine
2010 Broadway, SF
(Fillmore 5313)
A.B., Stanford, 1920, M.D., 1923. Senior Interne in Surgery, Lane Hospital, 1923-24. Resident Surgeon, 1924-25; Diplomate, National Board of Medical Examiners, 1923; Clinical Instructor in Surgery, Stanford, 1925-33, Associate Professor of Surgery, 1933-38. At Stanford since 1923.

†CHAPIN, LELAND TAYLOR
Associate Professor of Speech and Drama, and Research Associate, Hoover Library
Kingscote*
(PA 22460)
A.B., Willamette, 1925; A.M., Oregon, 1935; Ph.D., Edinburgh, 1938. Visiting Student, University of London, Michaelmas Term, 1928; Instructor in English and Public Speaking, Lingnan University, Canton (China), 1923-28; Correspondent in China with Associated Press, 1927-28; Director of Forensics, Willamette University, Spring Term, 1929; Teaching Assistant in English (Public Speaking), Stanford, 1929-30. Acting Instructor, 1930-32, Instructor, 1932-35, Assistant Professor, 1935-38; Graduate Student, University of Edinburgh, 1936, 1937-38. At Stanford since 1929.
Church, Vivian
Secretary to Dean of Men
At Stanford since 1923.

Clark, Mabel E.
Secretary, Mining Engineering
A.B., Hastings, 1925. At Stanford since 1929.

Clarke, Rosamond
Director of Union Unit

Esther, Alfred
Professor of Spanish-American Literature
A.B., Harvard, 1896. A.M., 1906. Ph.D., 1906. Student, University of Berlin, 1894-95; Sorbonne, 1895, University of Seville, 1901-2; Secretary-Treasurer, American Association of Teachers of Spanish, 1917-26; Editor Hispania; Caballero de la real orden de Isabel la Católica; Member, Hispanic Society of America; Corresponding Member, Real Academia Hispano-Americana de Ciencias y Artes; Cádiz; Corresponding Member, Academia Nacional de Historia, Buenos Aires; Member, Pan American Society; Member, National Council of the Inter-American Institute of Intellectual Co-operation; Corresponding Member, Academia de Bellas Artes, Valladolid (Spain); Corresponding Member, Academia Colombiana, Bogotá; United States Delegate to the Fourth Centenary of Founding of City of Bogotá, Colombia, 1938. At Stanford, Summer Quarter, 1919, and since 1920.

Coman, Edwin Truman, Jr.
Librarian and Research Associate, Graduate School of Business
A.B., Yale, 1926; Certificate in Librarianship, California, 1933; A.M., Claremont, 1934. With Corn Exchange Bank, New York, 1926; American Trust Company, San Francisco, 1926-28; Dean Witter & Company, 1929-31; Assistant, California Academy of Sciences Library, 1932; Assistant, Biology Library, University of California, 1932-33; Assistant, Claremont Colleges Library, and Librarian, Claremont Colleges Child Guidance Library, 1933-34; Research Assistant, Claremont Colleges Library, and Executive Secretary, Society for Oriental Studies, 1935-36. At Stanford since 1936.

Conroy, Mary Katherine
Secretary to Dr. Storey
A.B., College of the Sacred Heart, 1928. At Stanford, 1933-36, and since 1937.

Coombs, Howard Abbott
Acting Assistant Professor of Geology

Coverley, Irene (Mrs.)
Executive Assistant, Appointment Service
A.B., Indiana, 1923. At Stanford since 1925.

Cowdery, Karl Montague
Associate Registrar, and Academic Secretary

Cox, Alvin Joseph, Jr.
Associate Professor of Pathology
CRAIG, IRENE MAY
Secretary, School of Education
At Stanford since 1933.

CRANDALL, ELIZABETH BOLARD
Director of Lagunita Court

†CRISMON, JEFFERSON MARTINEAU
Assistant Professor of Physiology

†CUNNINGHAM, JAMES VINCENT
Instructor in English

CURTIS, SUE
Secretary, Upper Division, Registrar's Office
A.B., Stanford, 1929. At Stanford, 1931-37, and since 1938.

†CUTTER, RICHARD DEIDRICH
Examining Physician, Men Students' Health Service, and Acting Assistant Professor of Hygiene and Physical Education

†DAVIES, BENJAMIN PAUL
Instructor and Examining Physician, School of Hygiene and Physical Education
B.S., and M.D., Kansas, 1931. Rotating Internes, St. Anthony Hospital, Oklahoma City (Okl.), 1931-32; Children's Hospital of the East Bay, Oakland, 1932-33; Teaching Fellow, Department of Pediatrics, University of Minnesota, 1933-35, Clinical and Research Assistant, 1935; Physician in Students' Health Service and Instructor in Department of Preventive Medicine and Public Health, University of Minnesota, 1936-38; Physician in charge of Students' Health Service Dispensary and Infirmary, University of Minnesota School and College of Agriculture, 1937-38; in charge of Pediatrics Diabetic Clinic, Minneapolis General Hospital, 1935-38. At Stanford since 1938.

†DAVIS, JOSEPH STANCLIFFE
Director, Food Research Institute, and Professor of Economic Research
†DAVIS, PAUL HERBERT
Director of Stanford Fund

†DAVIS, WILLIAM HAWLEY
Professor of English, and Editor of University Press
A.B., Harvard, 1905; A.M., Columbia, 1908. Instructor in Public Speaking, Harvard College, Summer Sessions, 1908, 1909, and first half-year, 1908-9; Professor of English and Public Speaking, Potsdam (N.Y.) State Normal School, 1909; Assistant Professor of Public Speaking, University of Kansas, 1909-10; Instructor in Public Speaking, Columbia University, Summer Sessions, 1910-12; Professor of English and Public Speaking, Bowdoin College, 1910-25. At Stanford since 1924.

†DICKEY, LLOYD BLACKWELL
Associate Professor of Pediatrics
A.B., Fargo, 1915; A.M., Illinois, 1917; B.S., Minnesota, 1921, M.B., 1922, M.D., 1923. Assistant in Zoology, University of Illinois, 1915-18; Instructor in Anatomy, University of Minnesota, 1919-21; Assistant, Puget Sound Marine Biological Station, 1921; Assistant in Medicine, University of Minnesota, 1922; Interne, State Hospital for Crippled Children, St. Paul (Minn.); Junior Interne, Lane Hospital, 1923-24, Senior Interne and Assistant in Pediatrics, 1924-25, Resident, 1925-26; Visiting Pediatrician in Tuberculosis, San Francisco Hospital, since 1927. At Stanford since 1923.

†DOWRIE, GEORGE WILLIAM
Professor of Finance (Graduate School of Business)
A.B., Lake Forest, 1901; A.M., Chicago, 1907; Ph.D., Illinois, 1913. Fellow in Economics, University of Illinois, 1910-11; Assistant in Economics, 1911-15; Assistant Professor of Finance, University of Michigan, 1916-17; Professor, 1917-18; Member of Staff, Guaranty Trust Company of New York, 1918; Professor of Finance, University of Minnesota, 1918-19, Dean of the School of Business, and Head of the Department of Economics, 1919-26; Professor of Economics, University of California, Summer Sessions, 1924, 1929, 1933; Professor of Finance, Northwestern University, Summer Sessions, 1932, 1937. At Stanford since 1926.

DOYLE, ANASTASIA
Director of Residence for Women, and Assistant in Vocational and Academic Advising for Women
A.B., Minnesota, 1908; A.M., Columbia, 1927. Teacher of History, Humboldt High School and Mechanics High School, St. Paul (Minn.), 1910-27; Assistant to Dean of Women, New Jersey College for Women, 1927-30; Director of Roble Hall, Stanford, 1930-34, Director of Lagunita Court, 1934-38, Director of Residence for Women, since 1934, Assistant in Vocational and Academic Advising for Women, since 1938; Acting Dean of Women, Stanford, Summer Quarter, 1939. At Stanford since 1930.

†DUVENECK, FRANK B.
Research Associate, Physics

†ELIEL, PAUL
Director, Division of Industrial Relations (Graduate School of Business)
Ph.B., Chicago, 1913. Commission of Immigration and Housing of California, 1914; Municipal research in California cities, 1915-16; Assistant City Manager, San Jose, 1916; Director, San Francisco Bureau of Government Research, 1917-21; Director of Industrial Relations, Industrial Association of San Francisco, 1921-36; organized Control Division, NRA, 1933; Special Adviser on Code Matters, and Acting Deputy Administrator on Pacific Coast Codes, NRA, 1933-34; Member, Advisory Council, United States Employment Service. At Stanford since 1936.

†ELLSON, DOUGLAS GEORGE
Thomas Welton Stanford Fellow in Psychic Research
EMGE, LUDWIG AUGUSTUS 109 Edgewood, SF
Clinical Professor of Obstetrics and Gynecology (Overland 4849)
B.S., Chicago, 1912; M.D., Rush Medical College, 1915. Assistant in Anatomy, University of Chicago, 1912-13; Special Worker in Pathology, Rush Medical College, 1913-14; Intern, Durant and Presbyterian Hospitals, Chicago, 1914-15; Resident and Assistant in Gynecology and Obstetrics, University of California Hospital, 1915-17. At Stanford since 1917.

ERWIN, ERNEST STEPHEN 707 Salvatierra*
Assistant Comptroller (PA 21181)
At Stanford since 1919.

ESSLINGER, ARTHUR ALBERT 1360 Emerson, P*
Associate Professor of Hygiene and Physical Education (PA 22894)
B.S., Illinois, 1931, M.S., 1933; Ph.D., Iowa, 1938. Instructor in Physical Education, Bradley Polytechnic Institute, 1931-34, Assistant Professor, 1934-38. At Stanford since 1938.

EUDIN, XENIA JOUKOFF (MRS.) 410 Second Ave., RC*
Research Associate, Russian Revolution Institute (Hoover Library)

EURICH, ALVIN CHRISTIAN Sunset Drive, Los Altos*
Professor of Education (LA 484)
A.B., North Central College, 1924; A.M., Maine, 1926; Ph.D., Minnesota, 1929. Assistant in English, North Central College, 1922-24; Instructor, University of Maine, 1924-26; Assistant in Educational Psychology, University of Minnesota, 1926-27, Instructor, 1927-29, Assistant Professor and Assistant Director of Educational Research, 1929-35, Assistant to the President and Associate Professor of Educational Psychology, 1935-36, Assistant Dean of the College of Education and Professor of Education, 1936-37, Inspector of Private Secondary Schools, 1930-31; Professor of Education, Northwestern University, 1937-38; Consultant on Pennsylvania Study, Carnegie Foundation for the Advancement of Teaching, 1935; Visiting Professor, Summer Quarters, University of Michigan, 1931, West Virginia University, 1933, Stanford, 1934, Northwestern, 1936; Lecturer, University of Florida, 1937; Director, Evaluation Study of Bennington College, since 1939. At Stanford since 1938.

EWELL, BERNICE 957 Channing, P
Statistical Secretary, Registrar's Office (PA 21873)
At Stanford since 1928.

FABER, HAROLD KNIEST 1960 Vallejo, SF
Professor of Pediatrics (Walnut 3018)
A.B., Harvard, 1906; M.D., Michigan, 1911. Interne, New York Hospital, 1911-13; Resident Pathologist, Babies' Hospital, New York, 1913-14; Fellow, Rockefeller Institute, New York, 1914-15; Captain, M.C., U.S.A., 1918-19. At Stanford since 1915.

FARNSWORTH, HELEN CHERINGTON (MRS.) 715 Salvatierra*
Associate Economist, Food Research Institute (PA 8155)

FAST, LISETTE EMERY 654 Cabrillo*
Secretary, Independent Study Plan Committee (PA 21220)
†FAVILLE, DAVID ERNEST  
Professor of Marketing (Graduate School of Business)  
1164 Hamilton, P*  
A.B., Stanford, 1922; M.B.A., Harvard, 1925. Associate Professor of Marketing, University of Oregon, 1925-27; Research Supervisor, Harvard Bureau of Business Research, 1927; Instructor, Retail Store Management, Harvard Graduate School of Business Administration, 1927-28; Dean, School of Business Administration, and Director of Business Research, University of Oregon, 1928-32; Professor of Marketing, University of Colorado, Summer Session, 1938. At Stanford since 1932.

†FENTON, NORMAN  
Acting Professor of Education  
340 Churchill, P-3023  
B.S., Harvard, 1917, A.M., 1918; Ph.D., Stanford, 1925. Intern, Boston Psychopathic Hospital, 1917-18; Neuropsychiatric Division, A.E.F., 1918-19; National Committee for Mental Hygiene, 1919-20, and Summer, 1924; Instructor, Menlo School, 1921-22; Instructor, Arizona State Teachers College, 1922-26; Associate Professor of Psychology, Ohio University, 1926-28; Lecturer, University of Southern California, 1928-30, Professor of Education, 1930-32; Adjunct Professor of Psychology, Claremont Colleges, 1932-37; Director, California Bureau of Juvenile Research, since 1928; Acting Professor of Education, Stanford, Summer Quarter, 1931, and since 1937.

FERRIS, ROXANA STINCHFIELD (MRS.)  
Assistant Curator, Dudley Herbarium  
667 Melville, P*  

FETTER, KLARA  
Research Associate, Hoover Library  
Graduate, Royal Hungarian University (Budapest), 1922, A.M., 1922, Ph.D., 1923. Postgraduate Student, Smith College, 1926-27; Instructor in Hungarian, University of Pittsburgh, 1927-29; Research Assistant, Russian Revolution Institute, Hoover Library, 1929-37. At Stanford since 1929.

†FIELD, JOHN, II  
Associate Professor of Physiology  
607 Mayfield*  

†FIELDS, RALPH RAYMOND  
Acting Assistant Professor of Education  
230 Sequoia, P*  
A.B., Arizona, 1929; A.M., Stanford, 1934. Instructor in Commerce and English, Phoenix (Ariz.) Union High School, 1930-34, Assistant Director of Research and Guidance, 1934-35; Curriculum Field Secretary, Stanford, 1936-38; Acting Instructor in Education, Stanford, Spring and Summer Quarter, 1937, Acting Assistant Professor of Education, since 1938.

†FISH, LOUNSBURY SLAGHT  
Research Associate, Graduate School of Business  
308 Lincoln, P  
A.B., Stanford, 1921. With Standard Oil Company of California since 1921: in Manufacturing Department as Chairman of Standards and Appropriation Committees, Member of Personnel and Manufacturing Committees, and Manager of Organization and Cost Control Division, 1921-35; Member of Company Wage and Salary Committee, 1936-37; Member of Department on Organization, since 1935. At Stanford since 1939.

†FISHER, WALTER KENRICK  
Professor of Biology (Zoology), and Director of Hopkins Marine Station  
844 Laurel, Pacific Grove*  

FORDYCE, ELIZABETH L.  
Secretary to the President  
583 Alvarado*  
†FRIEND, WILL A. Ravensbury and Toyonita, Los Altos-3001
Manager of the University Press (LA 29W)
At Stanford since 1920.

GANKIN, OLGA HESS (MRS.) 1001 Hermosa Way, ME*
Research Associate, Russian Revolution Institute (PA 5213)
(Hoover Library)

‡GERRY, MARTIN H., III 815 Thirtieth Ave., SF
Purchasing Agent (Bayview 1890)
A.B., Stanford, 1925. At Stanford since 1936.

GIBSON, ETTA Menlo Heights*
Secretary, Lower Division, Registrar's Office (PA 4263)
At Stanford since 1925.

GLENN, GRACE ROBERTA 555 Stanford, P
Director, Roble Dining Hall (PA 3903)
A.B., Santa Barbara State College, 1933; M.A., Teachers College, Columbia, 1938. Assistant Dietitian, Presbyterian Hospital, New York City, 1935-38; Food Supervisor, Calorrade Company, Cleveland (Ohio), 1938. At Stanford since 1939.

GOLDHAMER, HERBERT 203 Bryant, P*
Instructor in Economics (Sociology) (PA 21358)

GREEN, HELEN (MRS.) 772 Santa Ynez*
Instructor in Costuming (Drama) (PA 4738)
Student, Chouinard School of Art, 1930-33; School of Speech, University of Southern California, 1934; Costume Designer, Shakespeare Guild of America, 1934-35; Costume Executant, Shakespearean Production, Stanford, Summer Quarter, 1935; San Francisco Opera Association. Season 1935; Acting Instructor in Stage Classics, Stanford, Summer Quarters, 1936, 1937; Max Factor's Studios, Hollywood, 1936-37; Costume Designer, San Francisco Opera Ballet, Season 1938, Costume Director, since 1939. At Stanford since 1937.

HADDEN, ELIZABETH 151 Kellogg, P
Chief of Order Division, Library (PA 21480)
At Stanford since 1901.

HALL, VICTOR ERNEST 735 Middlefield, P
Associate Professor of Biology (Physiology) (PA 5240)

HANNA, LAVONE A. Kingscote*
Research Associate, Social Education Investigation (PA 8871)
†Hanna, Paul Robert
Professor of Education
737 Coronado-1825
(PA 7373)
A.B., Hamline, 1924; A.M., Columbia, 1925, Ph.D., 1929; Pe.D., Hamline, 1937.
Assistant in Psychology, Hamline University, 1923-24; Superintendent of Schools, West Winfield (N.Y.), 1925-27; Associate in Research, Lincoln School, Teachers College, Columbia University, 1928-35; Assistant Professor, Teachers College, Columbia University, 1930-35; Associate Director, Summer Demonstration School, Teachers College, Columbia University, 1929, 1931-33; Associate Editor of Lincoln School Publications; Consultant in Social Studies, State of Virginia, 1932-34; Visiting Professor, Summer Quarters, State College of Washington, 1930, University of Arkansas, 1933, Stanford, 1934. At Stanford since 1935.

Hansen, Hazel Dorothy
Associate Professor of Classics
Kingscote-2442
(PA 22862)

†Hanzlik, Paul John
Professor of Pharmacology
303 Franklin, San Mateo
(SM 1117)
Ph.C., Iowa, 1908; A.B., Illinois, 1908, A.M., 1911; M.D., Western Reserve, 1912.
Demonstrator in Pharmacology, Western Reserve University, 1912-13, Instructor, 1913-15; Associate, 1915; Assistant Professor, 1917-20; Associate Professor, 1920-21; Pharmacological Institute and Physico-Chemical-Biological Institute, University of Vienna, 1913-14; Pharmacologist, Department of Interior, and Captain, M.C., U.S.A., 1918; Vice-Chairman, Council on Dental Therapeutics, American Dental Association, since 1929; Member, Committee on Research in Syphilis, Inc., since 1928; F.A.C.D. (hon.); F.A.C.P.; Consulting Pharmacologist, San Francisco Department of Public Health, since 1934, and U.S. Department of Agriculture, since 1936. At Stanford since 1921.

†Harlow, Rex Francis
Lecturer in Education and Public Relations
365 Guinda, P
(Graduate School of Business)

†Hathaway, H. King
Consulting Professor of Scientific Management
200 Lowell, P
(Graduate School of Business)
With Midvale Steel Works, Philadelphia, 1896-1901; Superintendent, Payne Engine Co., 1902-4; Superintendent, Vice-President, Manager, Tabor Manufacturing Co., 1904-15; associated with Dr. Frederick Winslow Taylor, 1904-15; Lecturer on Scientific Management, Harvard Graduate School of Business Administration, 1912-17, and Wharton School, University of Pennsylvania, 1921-22; Lieutenant Colonel, Ordnance Department, U.S. Army, 1917-19; Consulting Engineer in Foundry Operation, Industrial Association of San Francisco, 1923-26; General Manager, Schlage Lock Co., 1927-39; consulting work in Japan and Europe, 1929; Consulting Engineer for Manning, Maxwell and Moore, and General Manager, Consolidated Ashcroft Hancock Co., 1930-32; General Consultant in Organization and Management, 1906-17, 1919-22, and since 1932. At Stanford since 1937.
HAYS, Alice Newman 526 Alvarado*
Associate Librarian of University Libraries
(PA 4296)
A.B., Stanford, 1896; B.L.S., New York State Library School, 1903. Assistant, Home Education Department, New York State Library, 1901. At Stanford since 1901.

†HEFFNER, Hubert Crouse 2340 Cowper, P*
Professor of Dramatic Literature
(PA 9646)
A.B. (with Honors in Languages and Literature), North Carolina, 1921, A.M., 1922. Instructor in English and Director of Dramatics, University of Wyoming, 1922–23; Instructor in English and Director of Dramatics, University of Arizona, 1923–26; Assistant Professor of English and Associate Director and Manager, The Carolina Playmakers, University of North Carolina, 1926–30; graduate study and research, in Literature and Drama, University of Chicago, 1930–34; Visiting Professor of Dramatic Literature, Northwestern University, Summer, 1930, Professor of Dramatic Literature, 1930–39; International Research Fellow, Henry E. Huntington Library, 1934–35, and Summer, 1936; Acting Professor of Dramatic Art, Stanford, Summer Quarter, 1937; Acting Professor of Dramatic Literature, University of California, Summer, 1939. At Stanford since 1939.

†HERRE, Albert W. C. T. 2399 South Court, P*
Curator of Ichthyology
(PA 3358)
A.B., Stanford, 1904, A.M., 1905, Ph.D., 1909. Assistant in Zoology, Stanford, 1903–4; Professor of Biology, University of Nevada, 1909–10; Professor of Geography, Washington State Normal, 1915–17, Professor of Biology and Hygiene, 1917–20; Chief, Division of Fisheries, Bureau of Science, Manila (P.I.), 1920–28; Crane Pacific Expedition, 1928–29; Herre Philippine Expedition, 1931; Expedition to Micronesia, China, and Indo-Malaya, 1933–34; Expedition to China, Philippines, Borneo, Malaya, and India, 1936–37. At Stanford since 1928.

HITCHCOCK, Jeannette McCrory 252 Everett, P-1287
Keeper of Rare Books

†HOROWITZ, Norman Harold 214D Menalto, P*
National Research Council Fellow (Biology)
B.S., Pittsburgh, 1936; Ph.D., California Institute of Technology, 1939. Teaching Fellow in Biology, California Institute of Technology, 1936–39; Research Assistant, Marine Biological Laboratory, Woods Hole (Mass.), Summer, 1937. At Stanford since 1939.

†Hunt, Ernest Paul 127 Harriet, P*
Associate Professor of Physical Education
(PA 4449)

†Jackson, Jacob Hugh 445 El Escarpado*
Professor of Accounting, Dean of the Graduate
School of Business, and Acting Comptroller
(PA 3536)
A.B., Simpson, 1912; M.B.A., Harvard, 1920; L.L.D., Simpson, 1930. C.P.A. (Wisconsin) 1919, (Massachusetts) 1920, (California) 1927; Assistant Professor of Commerce, University of Oregon, 1916–17; Traveling Fellow, American University, 1917–18; Assistant Professor of Accounting, University of Minnesota, 1918–19; Assistant Professor of Accounting, Graduate School of Business Administration, Harvard University, 1920–21, Professor of Accounting, 1923–27; Lecturer in Auditing, University of Chicago, Summer Quarter, 1923; Acting Professor of Economics, Stanford, Summer Quarters, 1928, 1929; Lecturer, William A. Vawter Foundation on Business Ethics, Northwestern University, 1932; associated with Price, Waterhouse & Co., New York, Boston, and San Francisco, 1921–30. At Stanford since 1926.
OFFICERS

†JACOBSON, DAVID S.
Assistant Director of Stanford Fund

JAMESON, ELOISE
Research Associate, Medicine

JEWELL, MARGARET ELAINE
Instructor in Hygiene and Physical Education (Women)

†JOHANSEN, WALDEMAR W. A.
Technical Director of Dramatics
A.B., Stanford, 1932, A.M., 1933. Head of Art Department, Riverside Junior College, 1935-36; Head of Art Department, Santa Monica Junior College, 1936-37. At Stanford since 1937.

JONES, FAY HAMILTON (MRS.)
Secretary, Political Science and School of Social Sciences

†JONES, HAROLD ELLIS
Acting Professor of Psychology
A.B., Amherst, 1918; A.M., Columbia, 1920, Ph.D., 1923. Assistant in Biology, Amherst, 1918-19; Instructor in Psychology, Columbia, 1922-26, Assistant Professor, 1926-27; Assistant Professor of Psychology, University of California, 1927-28, Associate Professor, 1928-31, Professor, since 1931; Director of Research, Institute of Child Welfare, University of California, 1927-33, Director, since 1935; on Faculty, Summer Sessions, Columbia, 1923-25, University of California, 1928-29, University of Chicago, 1931.

†JONES, HARRY WILLMER
Acting Assistant Professor of Law

JOSEPHSON, GISELA B. (MRS.)
Research Associate, German Revolution Institute, Hoover Library
Ph.D., University of Heidelberg (Germany), 1934. Research Assistant, Hoover Library, 1934-38. At Stanford since 1934.

†JOSEPHSON, GLEN EUGENE
Research Associate, German Revolution Institute, Hoover Library
A.B., Illinois College, 1925; A.M., Stanford, 1927. Instructor, Kamehameha Schools (High School), Honolulu, 1927-29; Instructor, Menlo School and Junior College, 1929-30, and Summer Sessions, 1929 and 1930; Student, University of Grenoble (France), 1930-31, University of Heidelberg (Germany), 1931-32, 1933-34, Sorbonne University (France), 1932-33; Instructor and Student Counselor, Palo Alto High School, 1935-37; Research Assistant, Hoover Library, 1934-38. At Stanford since 1934.
Junkert, Mabel A. (Mrs.)
Secretary to the Chairman of Directors, Hoover Library
At Stanford since 1924.

†Kaslow, Arthur Louis
Examining Physician, Men Students' Health Service
B.S., Creighton, 1933, M.D., 1935. Interne, Hollywood Hospital, Los Angeles, 1935-36; Resident Physician in charge of Los Angeles County Y.M.C.A. Summer Camps, 1936; Resident, Community Hospital of San Mateo County, 1936-37; House Physician, Providence Hospital, Oakland, 1937-38; Research Fellow in Endocrinology, Institute of Experimental Biology, University of California, 1937-38. At Stanford since 1938.

Kaulfers, Walter Vincent
Associate Professor of Education
A.B., San Diego State Teachers College, 1925; A.M., Stanford, 1929; Ph.D., 1933. Instructor in Modern Languages, San Diego City Schools, 1925-29; Acting Instructor in Education, San Diego State Teachers College, 1929; Acting Instructor in Education, Stanford, Summer Quarter, 1933; Instructor in Spanish and German, Long Beach Junior College, 1929-34; Curriculum Chairman of Foreign Languages, Palo Alto City Schools, 1935; Associate Editor, *Hispania* and *California Journal of Secondary Education*; Instructor and Supervisor of Modern Languages, Palo Alto City Schools, 1934-36; Traveling Fellow, Carl Schurz Memorial Foundation, Europe, 1936; Director of Modern Languages Curriculum, Menlo School and Junior College, since 1936; Co-director, Stanford Language Arts Investigation, since 1937; Curriculum Adviser, National Commission on the Relation of Schools and Colleges, Ohio State University, Autumn Quarter, 1938. At Stanford since 1934.

Keen, Angeline Myra
Curator of Paleontology
A.B., Colorado College, 1930; A.M., Stanford, 1931; Ph.D., California, 1934. At Stanford since 1934.

†Kefauver, Grayson Neikirk
Professor of Education, and Dean of the School of Education
A.B., Arizona, 1921; A.M., Stanford, 1925; Ph.D., Minnesota, 1928. Instructor and Vice-Principal, Tucson (Ariz.) High School, 1921-23; Principal of Elementary School, Fresno, 1923-24; Vice-Principal of Senior High School and Director of Junior High School, Fresno, 1924-25; Director of Research and Guidance, and Director of Vocational Survey, Fresno, 1925-26; Instructor in Secondary Education, University of Minnesota, 1926-28, Assistant Professor of Education, 1928-29; Associate Professor of Education, Teachers College, Columbia University, 1929-32; Member of Staff, National Survey of Secondary Education, 1930-32; Acting Professor of Education, Stanford, 1932-33. At Stanford since 1932.

Kildale, Malcolm Brus
Assistant Professor of Economic Geology, and Director of Summer Field Geology

†Kinney, Lucien B.
Acting Associate Professor of Education
Head of Mathematics Department, University High School, University of Minnesota, and Instructor in Education, 1934-37; Registrar, and Professor of Education, Oswego State Normal School, Oswego (N.Y.), since 1937.
OFFICERS

†Kirkwood, Marion Rice 249 Lowell, P*
Professor of Law, and Dean of the School of Law (PA 7395)
A.B., Stanford, 1909, J.D., 1911; LL.D., Southern California, 1926. Assistant Professor of Law, University of Oklahoma, 1911-12; Acting Professor of Law, Cornell, Summer Session, 1927; Acting Professor of Law, University of Chicago, Summer Quarter, 1930; Visiting Professor of Law, Duke University, 1930-31; Acting Professor of Law, University of Michigan, Summer Session, 1931, University of Washington, Summer Quarter, 1935, University of Southern California, 1939. At Stanford since 1912.

Knapp, Maud Lombard (Mrs.) 1751 Emerson, P*
Associate Professor of Hygiene and Physical Education (Women)
A.B., Oregon, 1919; A.M., Wisconsin, 1924. Supervisor of Physical Education, Eugene (Oregon), 1920-23; Director of Physical Education for Women, Western Illinois State Teachers College, 1924-25; Associate Professor and Director of Physical Education for Women, San Jose State College, 1925-37. At Stanford since 1937.

†Krassovsky, Dimitry M. 745 Princeton, P*
Curator, Slavic Collections, Hoover Library
Candidate of Law, School of Law, University of Petrograd, 1916; Certificate, Graduate School of Librarianship, University of California, 1930. Library Assistant, Stanford, 1925-30; Bibliographer, Slavic Collections, Hoover Library, 1930-38. At Stanford since 1925.

†Krug, Edward August 1175 Lincoln, P
Research Associate, Education (PA 9761)

†Kuhl, Ernest Peter Iowa City, Iowa
Acting Professor of English
A.B., Indiana, 1907; A.M., Harvard, 1908, Ph.D., 1913. Instructor in English and Rhetoric, University of Michigan, 1908-12, Dartmouth College, 1914-16, University of Minnesota, 1916-18; Professor of English, Goucher College, 1918-26; Extension Department, Johns Hopkins University, 1919-26; Professor of English, University of Iowa, since 1926; on Faculty, Summer Sessions, Dartmouth College, 1915, University of Minnesota, 1917, University of Maine, 1925, University of Washington, 1929.

Ladenburg, Kurt 473 Embarcadero, P
Research Associate, Chemistry (PA 9348)

†Lanz, Henry 786 Melville, P*
Associate Professor of Slavic Languages and Philosophy
Ph.D., Heidelberg, 1911. Student, Imperial University, Moscow, 1904-6, Heidelberg, 1906-11; Instructor-elect in Logic, Reform Gymnasium, and Lecturer in Aesthetics, Beethoven School of Music, Moscow, 1914. At Stanford since 1918.

†Lemos, Pedro Joseph 100 Waverley Oaks, P*
Director of the Museum and Art Gallery (PA 4893)
Assistant Professor of Etching and Lettering, University of California, 1910-11, Professor of Design and Applied Arts, 1911-12; Director of San Francisco Institute of Art, 1912-17; Exhibitor, Pennsylvania Academy of Fine Arts, Carnegie Institute, Pittsburgh, Chicago Art Institute, Corcoran Art Gallery; Honorable Mention Etchings, Panama-Pacific International Exposition; Gold Medal on Handicrafts, P.P.I.E.; Gold Medal on Etchings, California State Exposition, 1916; Editor of the School Arts Magazine, since 1919; Fellow, Royal Society of Art, London, 1934. At Stanford since 1917.
†Leonard, John Paul
Associate Professor of Education
A.B., Drury, 1923; A.M., Columbia, 1927; Ph.D., 1929. Instructor in History, Reed Junior High School, Springfield (Mo.), 1923-25; Instructor in English, Ethical Culture School, New York City, 1927-29; Associate Professor of Education, College of William and Mary, 1929-30; Professor of Education, 1930-37; Instructor, Summer Quarters, Duke University, 1933, 1934. University of Mississippi, 1935, University of Texas, 1936, 1937, 1938. At Stanford since 1937.

Lindenmeyer, Harold Fred Louis
Assistant Reference Librarian

Linton, Louise Marie
Acting Instructor in Speech and Drama

†Lockhart, William Bailey
Associate Professor of Law

Lockwood, Sherman Douglass
Acting Assistant Director of Tennis

Loring, Hubert Scott
Assistant Professor of Biochemistry

†Luckett, George Sparre
Professor of Hygiene and Physical Education
A.B., Wooster, 1907; M.D., George Washington, 1912. Covington and Madison Counties (Ala.) Health Officer, 1918-19; in charge of County Health Work, State Bureau of Health, New Mexico, 1919-21; State Health Officer, New Mexico, 1922-30; Professor of Hygiene, University of New Mexico, Summer Quarters, 1928, 1930. At Stanford since 1930.

Lumsdaine, Arthur Allen
Acting Instructor in Psychology

†Lutz, Ralph Haswell
Professor of History, and Dean of Graduate Study
OFFICERS 25

Summer Session, 1931, Harris Foundation, University of Chicago, Summer, 1933, Graduate School, Western Reserve University, Summer Session, 1936; Lecturer, University of Southern California, First Summer Session, 1938. At Stanford, 1913-16, and since 1920.

†LYND, ALBERT JOHNSON
Instructor in History

McBAIN, MARY EVELYN LAING (MRS.)
Research Associate, Chemistry
Sc.D., Bristol, 1922. Research Associate, University of Bristol, 1922-26; awarded Ellen K. Richards Prize in Chemistry, 1934; Assistant Professor of Chemistry, Stanford, 1927-29; elected National President, Women’s Chemical Honor Society, Iota Sigma Pi, 1939-41. At Stanford since 1927.

†MCBAIN, JAMES W.
Superintendent of Buildings and Grounds
At Stanford since 1912.

†MCFADON, BARRETT FREDERICK
Associate Professor of Accounting (Graduate School of Business)
A.B., Simpson, 1922; M.B.A., Harvard, 1925. Assistant Professor of Accounting, Miami University, 1925-27; Lecturer in Accounting, University of Cincinnati, 1927-28; associated with R. J. Beaman & Co., 1926-28; Arthur Andersen & Co., 1928-30; Wilson & Co., Inc., 1930-36; Assistant Professor of Accounting, Wayne University, 1936-37. At Stanford since 1937.

†MACHLUP, FRITZ
Acting Professor of Economics
Dr.Sc.Pol., University of Vienna, 1923. Lecturer Volkshochschule, Vienna, 1929-33; Research Fellow, Rockefeller Foundation, 1933-35; Visiting Lecturer, Harvard University, Second Semesters, 1934-35, 1938-39, Summer Session, 1936; Professor of Economics, University of Buffalo, since 1935; Visiting Professor, Cornell University, 1937-38; Acting Professor, Summer Sessions, Northwestern University, 1938, University of California, 1939.

McKENDRY, MARION
Secretary, School of Law
At Stanford since 1915.

†MCLEAN, PHILIP TAGGART
Reference Librarian, Hoover Library
A.B., Pomona, 1925. At Stanford since 1925.

MADVIG, ELSBETH (MRS.)
Secretary, Geology
At Stanford since 1927.

MAIER, LOUISE A.
Secretary to Director of University Libraries
At Stanford since 1925.

†MALONEY, HENRY WILFRED
Director of Minor Sports
Military Gymnastic School, Dublin (Ireland), 1899; Physical Instructor, British Army, 1899-1900; British War Service, South Africa, 1901-2; Gymnastic School, Pasadena, 1904-8; Chairman, Executive Committee, University and Club (Soccer) Football League, since 1915; Captain and Athletic Officer, A.E.F., 1917-18; Track Coach and Trainer, U.S. Track Team, Inter-Allied Games, Paris (France), 1919;
Trainer and Rugby Commissioner, Rugby Teams, Olympic Games, Antwerp (Belgium), 1920; President, California Rugby Union, since 1920; Western Representative, National (Soccer) Football Association, since 1922, Coach and Manager, Stanford's Australian Tennis Tour, Summer, 1924; Member, National A.A.U. Boxing Committee, 1925-27; President, Pacific Athletic Association of the A.A.U., 1925-27; President, Collegiate (Soccer) Football League, since 1926; Third Vice-President, National A.A.U., since 1929. At Stanford since 1908.

**Manchee, Marie**
Instructor in Physical Education for Women (PA 6969)

**Manspeaker, Almon F.**
Investment Analyst, and Lecturer in Investments (PA 6631)
(Graduate School of Business)

**Marshall, Helen**
Acting Instructor in Psychology (PA 23046)
A.B., Lake Erie College, 1913; M.A., Ohio State, 1918. Research Assistant, Commonwealth Fund, Department of Psychology, Stanford, 1921-23. Assistant in Psychology and Neuro-psychiatry Clinic, 1923-26. Instructor in Psychology and Psychiatry, 1926-34; Research Associate, Samuel S. Fels Research Institute, 1934-38; Instructor in Psychology, Antioch College, 1934-36, Assistant Professor, 1936-38. At Stanford, 1921-34, and since 1939.

**Martin, Charles Emanuel**
Acting Professor of Political Science (PA 23533)
A.B., California, 1914, A.M., 1915; Ph.D., Columbia, 1919. Columbia University Fellow in International Law, 1916-17; associated with Food Administration and War Trade Board. 1917-18; U.S. Army, 1918-19; Lecturer in International Law, University of California, 1919-20; Chairman, Department of Political Science, University of California at Los Angeles, 1920-25; Professor of International Law and Political Science, and Head of Department, University of Washington, since 1925, Dean, Faculty of Social Science, 1925-28; Carnegie Endowment Professor of International Relations, to Japan, China, Philippines, Australia, and New Zealand, 1929-30; Member, Board to Consolidate Immigration and Naturalization Services, 1932; Member, European Conferences on International Relations, 1926, 1938.

**Masters, Alfred Richard**
General Manager, Board of Athletic Control (PA 21224)
A.B., Stanford, 1924. At Stanford since 1925.

**Mears, Eliot Grinnell**
Professor of Geography and International Trade (Graduate School of Business), and Director of Summer Quarter (PA 21224)
A.B., Harvard, 1910, M.B.A., 1912; L.L.D., Grinnell, 1932. Secretary and Instructor, Harvard Graduate School of Business Administration, 1912-16; Chief, Foreign Service Division, and later American Trade Commissioner in the Near East. United States Bureau of Foreign and Domestic Commerce, Commercial Attaché to American High Commission in Turkey, 1916-20; Economist, Harbord Military Mission to Armenia and Transcaucasia, 1919; Member, Executive Committee, Institute of World Affairs, since 1926; Member, Honolulu Conference, Institute of Pacific Relations, 1927; Visiting Professor, Institut Universitaire de Hautes Etudes Internationales, Geneva, 1929-30, and Lecturer, 1938; Visiting Carnegie Professor to Universities in Near East, Austria, and Scotland, 1930. At Stanford since 1921.

**Mendelowitz, Daniel Marcus**
Assistant Professor of Art and Education (PA 7770)
OFFICERS

†MERITT, HERBERT DEAN
Assistant Professor of English

MICHELS, RALPH JOHN
Instructor in Romanic Languages

MILLER, HELEN G. (MRS.)
Assistant Director, Stanford Union
B.S., Cornell, 1927. Director of Balch Hall, Cornell University, 1929-34. At Stanford since 1934.

MILLER, JOSEPH
National Research Council Fellow (Psychology)

†MITCHELL, JOHN PEARCE
Registrar, and Professor of Chemistry

†MOORE, ARTHUR RUSSELL
Lecturer in General Physiology (Hopkins Marine Station)
A.B., Nebraska, 1904; Ph.D., California, 1911. Assistant Professor of Physiology, California, 1911-13; Associate Professor, Bryn Mawr, 1913-16; Lecturer in Physiology, Woods Hole (Mass.), Summer Sessions, 1916-20; Professor of Physiology, Rutgers, 1916-26; Professor of General Physiology, University of Oregon, since 1926; Advanced Fellow, C.R.B. Educational Foundation, 1930; Rockefeller Foundation Professor of Biology, Tohoku Imperial University of Sendai, Japan, 1933-34. At Stanford, Summer Quarters, 1926-29, and since 1934.

†MUMFORD, EDWARD PHILPOT
Research Associate, Biology
A.M., California, 1928; M.Sc., Victoria, 1929. Empire Cotton Growing Corporation and Scientific Industrial Research Scholarships, Christ's College, Cambridge, 1924-26; Commonwealth Fund Fellow, University of California, 1926-28; Special Investigator of Pacific Faunas in Marquesas, Society Islands, and Hawaii, 1928-34; continuation of work as Visiting Leverhulme Research Fellow, University of Oxford, 1933-37; continued with Oxford, 1937-38; completed, in association with Oxford, as a five-year study of faunal distribution with special reference to oceanic islands in the Pacific and elsewhere, 1938. At Stanford since 1939.

MURPHY, ARTHUR EDWARD
Acting Professor of Philosophy
A.B., California, 1923, Ph.D., 1925. Instructor in Philosophy, University of California, 1926-27, University of Chicago, 1927-28; Assistant Professor of Philosophy, Cornell University, 1928-29; Associate Professor, University of Chicago, 1929-31; Professor, Brown University, 1931-39; Professor and Head of Department of Philosophy, University of Illinois, since 1939.

MURRAY, KATHERINE
Secretary, Psychology
At Stanford since 1918.
NAGEL, LAURA INGEBORG
Recorder, Registrar's Office

†NAUGHTON, ALEXANDER EDWARD A.
Assistant Professor of Romanic Languages

NELSON, INA E. (MRS.)
Senior Bibliographer, Library
Rt. 1, Box 939, Menlo Park
At Stanford since 1926.

†NEWELL, ROBERT REID
Professor of Medicine (Radiology)
M.D., California, 1916. Assistant in Medicine, University of California Medical School, 1917. At Stanford since 1920.

†VAN NIEL, CORNELIS BERNARDUS
Professor of Microbiology (Hopkins Marine Station)

ODEN, MELITA H. (MRS.)
Research Associate, Psychology
A.B., Stanford, 1921. Director, Psychological Clinic, Louisville (Ky.), 1921-22; Psychology Department, Sonoma State Home for the Feeble Minded, 1923; Research Assistant, Gifted Children Study, Stanford, 1927-28; Research Assistant, New Revision of the Stanford-Binet Tests of Intelligence, 1927-36; Research Assistant, Gifted Children Study, Stanford, 1936-37. At Stanford since 1927.

†ORR, ROBERT THOMAS
Acting Instructor, Natural History Museum

OSBORNE, GEORGE EDWARD
Professor of Law
A.B., California, 1916; LL.B., Harvard, 1919, S.J.D., 1920. Assistant Professor of Law, West Virginia University, 1920-21; Acting Assistant Professor of Law, Stanford University, Summer Quarter, 1921; Assistant Professor of Law, University of Minnesota, 1921-23; Acting Professor of Law, Columbia University, Summer Session, 1923, Chicago, Summer Quarter, 1927; Visiting Professor of Law, Duke University, 1931-32, University of Washington, Summer Quarter, 1933. At Stanford since 1923.

OWEN, LILLIAN CAROLINE
Secretary, and Instructor in Business Reports,
Graduate School of Business
A.B., Stanford, 1920. Executive Assistant to Appointment Secretary, Stanford, 1922-25. At Stanford since 1922.

OWENS, WILLIAM
Chief, Circulation Division, Library
LL.B., Suffolk Law School, Boston, 1915. At Stanford since 1921.

†OWENS, WILLIAM BROWNLEE
Professor of Law, and Faculty Representative on
Pacific Coast Intercollegiate Athletic Conference
OFFICERS

†Page, Ben Markham
Acting Assistant Director, Summer Field Geology
A.B., Stanford, 1933, A.M., 1934. Acting Instructor in Geology, Stanford, Summer Quarter, 1937; Acting Assistant Director of Summer Field Geology, 1939; Instructor in Geology, University of Southern California, since 1937.

†Peck, Templeton
Lecturer in Journalism
A.B., Stanford, 1930. At Stanford since 1937.

Peirce, Rosamond
Junior Statistician, Food Research Institute
A.B., Smith, 1930. At Stanford since 1934.

Perham, Natalie W. (Mrs.)
Secretary to Assistant Comptroller
At Stanford since 1934.

†Pierson, Philip Hale
Clinical Professor of Medicine (Tuberculosis), Consultant in Tuberculosis (Pediatrics), and Special Consultant, Men Student Health Service
A.B., Yale, 1908; M.D., Harvard, 1913. House Officer, Massachusetts General Hospital, 1914-15; Consultant in Disease of the Lungs, U.S. Veterans Facility, Fort Miley; Consultant, San Francisco City and County Hospital, San Francisco County Health Farm, Redwood City, and San Mateo Community Hospital. At Stanford since 1916.

Potter, Gladys L. (Mrs.)
Acting Assistant Professor of Education
Ed.B., California at Los Angeles, 1925; A.M., California, 1935. Assistant County Superintendent of Schools, San Bernardino County, 1925-30; Assistant Chief, Division of Elementary and Rural Schools, State of California, 1930-39; Supervisor of Elementary Education, Long Beach City Schools, since 1939; Principal, University Elementary Demonstration School, University of California, Summer Sessions, 1937-39.

Potter, Margaret
Bibliographer, Lane Medical Library
B.S., California, 1914. At Stanford since 1919.

Price, Marjorie Bryant (Mrs.)
Secretary to the Comptroller
A.B., Stanford, 1921. Departmental Secretary, President's Office, Stanford, 1921-22, Secretary, Economics Department, 1922-23, Assistant Secretary to Comptroller and Auditor, 1927-29. At Stanford, 1921-23, 1927-29, and since 1933.

Pryor, Helen Brenton (Mrs.)
Professor of Hygiene and Physical Education, Medical Adviser, and Director of Physical Education for Women
A.B., Oregon, 1919; B.S., Minnesota, 1921, M.B., 1922, M.D., 1924. Resident, Gynecology and Obstetrics, Peking Union Medical College, 1923-24; Pediatrics, Obstetrics, University of Nanking Hospital, 1924-27; Assistant in Pediatrics, University of California, 1928-34; private practice, San Francisco, 1928-34; Visiting Pediatrician, Children's Hospital, San Francisco, 1930-36; Research Associate, Institute of Child Welfare, University of California, since 1930. At Stanford since 1935.
QUILLEN, ISAAC JAMES 350 Embarcadero, P*
Associate Professor of Education (PA 23461)
A.B., Delaware, 1929; A.M., Yale, 1932. Head, Social Studies Department, Selbyville (Del.) Public Schools, 1932-34; Assistant Professor of Social Science and Director of Social Studies, Laboratory School, Colorado State College of Education, 1934-36; Director of Social Studies Curriculum, Menlo School and Junior College, since 1936. At Stanford since 1936.

RATHBUN, HARRY JOHN 575 Kellogg, P*
Professor of Law (PA 4990)

REINHARDT, KURT FRANK 712 Salvatierra*
Associate Professor of German (PA 3947)
Ph.D., Freiburg, 1922. Student, University of Munich (Bavaria), 1916-18, University of Heidelberg (Germany), 1919-20; on Faculty, University Extension, Freiburg, 1922-24, Zürich (Switzerland), 1925-26; Editor, Freiburg and Zürich; Correspondent (Canada), 1927-28; Assistant Professor of German, and Lecturer, Department of Architecture and Allied Arts, University of Oregon, 1928-30; on Faculty, University of Southern California, Summer Session, 1938. At Stanford since 1930.

REMELE, MIRIAM FRANCES 1011 Waverley, P*
Editorial Secretary, Registrar's Office (PA 21352)
At Stanford since 1920.

RICHARDSON, INEZ GUSTIN (MRS.) 136 Wilson, P*
Research Associate and Curator, Ray Lyman Wilbur Collection (Hoover Library)

RICKER, CHRISTINE ISABELLE 615 Mayfield*
Director of Dining Halls and Stanford Union (PA 8206)
B.S., Simmons College, 1917. At Stanford since 1922.

ROBERTS, HOLLAND DEWITT 577 Donna, P-2425
Associate Professor of Education (PA 6832)
Ph.B., Chicago, 1919, A.M., 1925. Teacher, Webster Junior High School, Quincy (Ill.), 1919-20; Principal, Arlington Heights (Ill.) Township High School, 1920-25; Instructor in English, Editor of Chicago Schools Journal, and Assistant Editor of English Journal, Chicago Normal College, 1925-31; Lecturer on Teaching of English, University of Indiana, 1927-28; Instructor in English, Lincoln School of Teachers College, Columbia University, 1931-32; Instructor in English, College of Charleston (S.C.), Summer Term, 1933; Principal, Harrison (N.Y.) High School, 1932-34; Instructor and Supervisor of English, Palo Alto City Schools, 1934-36; Director of English Curriculum, Menlo School and Junior College, since 1936. At Stanford since 1934.

ROSS, ROBERT TROWBRIDGE 434 Kingsley, P*
Acting Assistant Professor of Psychology (PA 23235)
B.S., California Institute of Technology, 1927; A.M., Southern California, 1930; Ph.D., Yale, 1934. Assistant in English, California Institute of Technology, 1927-28; Scholar in English, Claremont Colleges, 1928-29; Graduate Assistant in Public Address, Pomona College, 1928-29, Instructor in Public Address, 1929-30, Resident Assistant to the Dean, 1930-31, Instructor in Psychology, 1930-32; University Fellow in Psychology, Yale University, 1933-34, Instructor in Psychology, 1934-36; Research Associate, Pasadena Playhouse and School of the Theater, since 1937; Lecturer in Psychology, California Institute of Technology, since 1938. At Stanford since 1936.
†Rossbach, George Bowyer
Acting Instructor, Natural History Museum
Stanford University*

†Savelle, Maxwell Hicks
Associate Professor of History
Menlo Ave., MP*

SciBird, Ruth
Assistant Reference Librarian
131 Byron, P*
At Stanford since 1922.

†Sears, Jesse Brundage
Professor of Education
1120 Parkinson, P*
(A PA 8556)
A.B., Stanford, 1909; Ph.D., Teachers College, Columbia, 1920. Instructor in Education, University of Wisconsin, 1909–10; Student, University of Chicago, Summer Quarter, 1910; Research Scholar, Teachers College, Columbia University, 1910–11; Assistant in Educational Sociology, Teachers College, Columbia University, Summer Session, 1911; Acting Associate Professor of Education, University of Minnesota, 1920–21; Director, Survey of University of Minnesota, Autumn Quarter, 1921–22; Visiting Professor, Summer Sessions, University of Pennsylvania, 1927, University of Pittsburgh, 1930, University of Southern California, 1936; Special Consultant to the Educational Policies Commission, Autumn, 1936; with American Council on Education, Winter, 1937. At Stanford since 1911.

Sears, Winona Woon (Mrs.)
Junior Research Associate, Chemistry
150 Webster, P
(PA 29641)

†Sharp, Stanley Louis
Assistant to Dean of Men
2381 South Court, P*
(A PA 7184)

Shedd, Solon
Curator, Branner Geological Library
663 San Juan
(PA 5972)

†Shepard, Charles Edward
Professor of Hygiene and Physical Education, and Director of Men Students’ Health Service
2002 Tasso, P-3006
(PA 7117)
B.S., Minnesota, 1920, A.M., 1922, M.B., 1923, M.D., 1924, Mayo Teaching Fellow in Physiology, Minnesota, 1920–22; Research Fellow, Marine Biological Station, Woods Hole (Mass.), 1921; Instructor in Physiology, Minnesota, 1922–23; Resident Physician, Philadelphia General Hospital, 1924–25; Lecturer on Preventive Medicine and Public Health, Western Union College, 1925–28; Associate Physician, Cragmor Sanatorium, 1929–30; Lecturer, Department of Preventive Medicine and Public Health, University of Minnesota, School of Medicine, 1936–37. At Stanford since 1930.
SHUE, VIOLET L. (MRS.)  644 Guinda, P-2273
Curator, Special Collections, Library (PA 7652)

†SILBERLING, NORMAN JOHN  415 Chaucer, P (PA 4891)
Professor of Business Research (Graduate School of Business)

†SINS, ROBERT LEE  650 Guinda, P (PA 23801)
Assistant to the Treasurer

†SKOGSBERG, TAGE  Casanova and Thirteenth, Carmel* (Carmel 482)
Professor of Marine Biology and Oceanography (Hopkins Marine Station)
A.M., Upsala, 1912, Ph.D., 1920. Curator, Zoological Institution, Upsala, 1917-20; Upsala University Scholar, Musée Océanographique de Monaco, 1915; Hopkins Marine Station, 1921; Scientific Assistant, California Fish and Game Commission, 1922; Research Assistant, University of California, 1923-25, Associate in Zoology, Second Semester, 1925-26. At Stanford, Summer Quarter, 1925, and since 1926.

†SMITH, HUBERT LELAND  1656 Taylor, SF (Tuxedo 0726)
Research Associate, Graduate School of Business
A.B., Oregon, 1923; M.B.A., Harvard, 1925. With Standard Oil Company of California, Producing Department, 1926-28; Chief Accountant, American Bitumen Company, 1929-30; Office Manager, International Bitumen Emulsions Corporation, 1931-34; with Standard Oil Company of California, Department on Organization, since 1935. At Stanford since 1939.

†SMITH, JAMES HOLLINGSWORTH CLEMMER  1955 Tasso, P (PA 21765)
Associate Professor of Chemistry (By Courtesy)
A.B., Monmouth, 1917; M.S., Chicago, 1920, Ph.D., 1921. Student, Harvard University, 1917, University of Graz, 1927, University of Zurich, 1927-28; Chemical Warfare Service, 1918; Junior Chemist, U.S. Public Health Service, 1919-21; Assistant Professor of Chemistry, Colorado College, 1921-24, Associate Professor, 1924-25; Associate Professor, Pomona College, 1925-27; Carnegie Institution of Washington, Summers, 1924-26; Staff Member, Carnegie Institution of Washington, since 1927. At Stanford since 1932.

SMITH, RUTH TANGIER  640 Tennyson, P (PA 22421)
Assistant Medical Examiner (Women)
A.B., California, 1929, M.D., 1933. Interne, Children's Hospital, San Francisco, 1932-33; Intern, Los Angeles County General Hospital, 1934; Resident Physician, Los Angeles City Maternity Service, 1935; private practice, since 1936; Research Assistant, University of California Institute of Child Welfare, 1936-37. At Stanford since 1939.

†SMITH, STANLEY ASTREDO  20 El Camino Real, Redwood City (RC 285W)
Professor of Romantic Languages
A.B., Stanford, 1903, A.M., 1905. Assistant in Romanic Languages, Stanford, 1903-4, Instructor, 1904-7; Student, Universities of Paris and Madrid, 1906-7; Instructor in French and Italian, University of Washington, 1907-11; Student, Harvard University, 1911-13, Instructor in Romance Languages, 1912-13; Professor of Romance Languages, Reed College, 1913-14; Acting Assistant Professor of French, University of Washington, Summer, 1920, University of California, Summer, 1922; Lecturer in Italian, University of California, 1927-28. At Stanford, 1903-7, and since 1914.
OFFICERS

†SOKOL, ANTHONY EUGENE
Assistant Professor of Germanic Languages
434 Columbia, P*

B.S., Mississippi State Teachers College (Hattiesburg), 1927; A.M., Stanford, 1930, Ph.D., 1932. Student, University of Vienna, 1928; Director of Modern Foreign Language Department, Mississippi State Teachers College, Hattiesburg, 1928-29; Teaching Assistant in German, Stanford, 1929-31, Acting Instructor, 1931-32, Instructor, 1932-34. At Stanford since 1929.

SPALDING, MERRILL TEN BROECK
Research Associate, Russian Revolution Institute (Hoover Library), and Assistant Professor of History
2060 Webster, P


†SPERBER, HANS
Acting Professor of Germanics
Columbus, Ohio

Ph.D., Vienna, 1907. Lecturer in German, Upsala, 1909-15; Instructor in Germanics, Cologne, 1919-25, Assistant Professor, 1925-33; Lecturer, Ohio State University, 1934-36, Professor of Germanics, 1936-39.

†SPOEHR, HERMAN AUGUSTUS
Professor of Chemistry (By Courtesy)
464 Coleridge, P

S.B., Chicago, 1906, Ph.D., 1909, Sc.D. (Hon.), 1929. Student, University of Berlin, 1907, University of Paris, 1908; Associate in Chemistry, Chicago, 1909-10; Staff Member, Laboratory for Plant Physiology, Carnegie Institution of Washington, 1911-26, Assistant Director, 1927, Chairman, Division of Plant Biology, 1928-39; Director for the Natural Sciences, Rockefeller Foundation, 1930-31; Chairman, Division of Plant Biology, Carnegie Institution of Washington, since 1931; Acting Professor, Stanford, Summer Quarter, 1924. At Stanford since 1932.

STEINMETZ, RUTH LOLITA
Acting Chief, Bibliography Division, Library
1021 Ramona, P*

A.B., Stanford, 1922. Student, School of Librarianship, University of California, 1922-23. At Stanford since 1923.

STERNER, ELEANOR HORN (MRS.)
Secretary to the Dean, School of Medicine
826 Monterey Blvd., SF

Secretary to Director of Hospitals, Stanford, 1923-32. At Stanford since 1923.

STEVENSON, JULIA R.
Secretary, Mechanical Engineering
171 Dana, P*

At Stanford since 1925.

STILLMAN, MINNA
Document Librarian
520 Alvarado

A.B., Stanford, 1903. At Stanford since 1912.

STILLSON, GRACE ELIZABETH
Senior Bibliographer, Library
451 Ruthven, P-Box 432, P


STOCKLE, LOUISE
Chief, Serial Division, Library
Hotel President, P*

A.B., California, 1923. At Stanford since 1925.
†Storey, Thomas Andrew
Professor of Hygiene and Physical Education,
Medical Adviser of Men, Director of Encina Gymnasium, and General Director of School of Hygiene and Physical Education
A.B., Stanford, 1896, A.M., 1900, Ph.D., 1902; M.D., Harvard, 1905. Diploma Interna, Long Island Hospital, Boston, 1905; Resident Physician, Boston Children's Hospital, 1906; Assistant, Instructor, and Assistant Professor of Hygiene, Stanford, 1896–1906; Associate Professor and Professor of Hygiene, and Director of the Department of Hygiene, College of the City of New York, 1906–26. At Stanford, 1896–1906, and since 1926.

†Strothmann, Friedrich Wilhelm
Associate Professor of German
Ph.D., University of Köln (Germany), 1929. Assistant, Deutches Seminar, University of Köln, 1928–30. At Stanford since 1930.

Sweet, Mary Clark
Assistant Registrar
A.B., Vassar, 1906; B.S., Simmons, 1909. At Stanford since 1923.

Tamarkin, Jacob David
Acting Professor of Mathematics
M.A.M., Petrograd, 1917. Professor of Mathematics, University of Petrograd 1917–25; Assistant Professor, Dartmouth College, 1925–27; Assistant Professor Brown University, 1927–28, Professor, since 1928; Acting Professor, University of Pennsylvania, Summer Quarter, 1933; Acting Professor, University of California, Summer Session, 1936.

Tanner, Hilda V. (Mrs.)
Secretary to the Dean, School of Engineering
At Stanford since 1920.

†Tatum, Edward Lawrie
Research Associate, Biology

†Taylor, Charles Vincent
Herzstein Professor of Biology
A.B., Mt. Morris College, 1911; A.M., California, 1915, Ph.D., 1917. Instructor in Zoology, University of California, 1917–18; Johnson Scholar, Johns Hopkins University, 1918–20; Assistant Professor of Zoology, University of California, 1920–23; Acting Assistant Professor of Zoology, Hopkins Marine Station, Summer Quarters, 1922, 1923; Assistant Professor of Zoology (on exchange), University of Michigan, 1924; Research Associate, Tortugas Marine Station of the Carnegie Institution, Summers, 1924, 1926; Visiting Professor of Zoology, University of Chicago, 1930–31. At Stanford since 1925.

†Taylor, Craig Lee
Instructor in Hygiene and Physical Education

Taylor, Elizabeth Brand (Mrs.)
Secretary to Dr. Davis, Food Research Institute
At Stanford since 1920.
†Terman, Lewis Madison
Professor of Psychology and Education

†Thomas, Frank Waters
Acting Professor of Education
A.B., Indiana, 1905; A.M., Illinois, 1910; Ph.D., Stanford, 1926. Professor of Education, Fresno State College, 1917–27, President, since 1927; on Summer Faculty, Stanford, 1926, 1936, University of Illinois, University of California, University of Hawaii, University of Southern California.

†Thomas, Lawrence Gregg
Instructor in Education

†Thornton, Norton Dolph
Assistant Director of Physical Education

†Timoshenko, Vladimir P.
Associate Economist, Food Research Institute
427 Tennyson, P*

†Tosdal, Harry Rudolph
Cambridge, Massachusetts
Acting Professor of Marketing (Graduate School of Business)
S.B., St. Olaf, 1909; Ph.D., Harvard, 1915. Instructor in Economics, Massachusetts Institute of Technology, 1915–16; Assistant Professor of Economics, Boston University, 1917–18, Associate Professor of Economics, 1918–19, Professor and Head of Department of Economics, 1919–20; Lecturer on Economics, Harvard University, 1918–19, Assistant Professor of Marketing and Director of Student Research, 1920–22, Professor of Marketing, since 1922; Faculty Editor, Harvard Business Review, since 1922.

Tracksell, Ruth
Executive Assistant, Appointment Service
A.B., Stanford, 1926. At Stanford since 1928.

†Trowbridge, Alfred Lockwood
Assistant Comptroller
A.B., Stanford, 1905. At Stanford since 1931.

True, Helen Ella
Executive Secretary, President's Office
A.B., Mt. Holyoke, 1905. At Stanford since 1914.
TruеБlood, David Elton
Chaplain, and Professor of Philosophy of Religion
A.B., Penn, 1922; S.T.B., Harvard, 1926; Ph.D., Johns Hopkins, 1934. Professor of Philosophy and Dean of Men, Guilford College, 1927-30; Assistant Professor of Philosophy, Haverford College, 1933-36; Fellow of Woodbrooke (England), 1939. At Stanford since 1936.

Tum Suden, Linda
Assistant Librarian, Lane Medical Library
At Stanford since 1921.

Tuxford, Eileen (Mrs.)
Secretary, History
At Stanford since 1927.

Twiggs, Edward M.
Acting Director of Golf
At Stanford since 1932.

Van Patten, Nathan
Director of University Libraries
Litt.D., Dartmouth, 1936. Fellow, Library Association (United Kingdom); Fellow, American Library Institute; Librarian, Wolcott Gibbs Library, College of the City of New York, 1917-20; Reference Librarian, Massachusetts Institute of Technology, 1920-21, Assistant Librarian, 1921-23; Chief Librarian, Queen's University, 1923-27; Lecturer, Library School, McGill University, 1927; Lecturer in Medical Bibliography, Medical School, University of California, since 1931. At Stanford since 1927.

Varian, Russell Harrison
Research Associate, Physics

Varian, Sigurd Fergus
Research Associate, Physics
Engaged in commercial flying for twelve years, eight years as captain in Pan American Airways; transport license S.A.T.R. rating. At Stanford since 1937.

Varneck, Elena A. (Mrs.)
Research Associate, Russian Revolution Institute
Graduate, Smolny Institute, Petrograd, 1907. Research Assistant, Russian Revolution Institute, Hoover Library, 1929-37. At Stanford since 1929.

Vishoot, Mildred (Mrs.)
Secretary, Hygiene and Physical Education (Women), and Secretary to Medical Adviser of Women
A.B., California, 1918. At Stanford since 1928.

Vold, Robert Donald
Research Associate, Chemistry, and Bristol-Myers Company Research Fellow in Chemistry

Van Wagendonk, Willem Johan
Research Associate, Biology
OFFICERS

WEICHELHETER, MARGUERITE
Credential Secretary, Registrar's Office
A.B., Stanford, 1925. At Stanford since 1925.

WELLS, MARGARET S. (MRS.)
Assistant Librarian, Education Library
At Stanford since 1925.

WEYMOUTH, FRANK WALTER
Professor of Physiology

WHITE, LYNN TOWNSEND, JR.
Assistant Professor of History

WHITTERN, JESSIE DUNTON (MRS.)
Assistant Editor, University Press
Head Proofreader, University of Chicago Press, 1911-18, Assistant Editor, 1919-25. At Stanford since 1925.

WICKES, FLORENCE
Reference Librarian, Lane Medical Library
At Stanford since 1918.

†WILBUR, RAY LYMAN
President of the University

WINDSOR, MARGARET
Senior Bibliographer, Library

†WIRT, SHELDON KESSINGER
Instructor in Anatomy
A.B., Stanford, 1928, A.M., 1929, M.D., 1934. Interne in Surgery, Lane Hospital, 1933-34; Interne, Santa Clara County Hospital, 1934; Resident in Urology, Los Angeles County General Hospital, 1935-37. At Stanford since 1938.
†WOOD, DAVID ALVRA
Associate Professor of Pathology
1709 Sixteenth Ave., SF
(Overland 3114)

†WORKING, HOLBROOK
Economist, and Professor of Prices and Statistics,
Food Research Institute
614 Alvarado*
A.B., Denver, 1915; A.M., Cornell, 1919; Ph.D., Wisconsin, 1921. Instructor in Economics, Cornell, 1916-17, 1919; Fellow in Economics, Wisconsin, 1919-20; Assistant Professor of Agricultural Economics, Minnesota, 1920-23; Associate Professor, 1923-25; Acting Professor of Economics, Chicago, Summer Quarter, 1928; Visiting Professor of Economics, Michigan, 1934-35. At Stanford since 1925.

WORSWICK, MILDRED
Secretary to Committee on Public Exercises
144 Kingsley, P*
A.B., Stanford, 1927. Secretary, Russian Revolution Institute, Stanford, 1927-29; Secretary to Conference Manager, Institute of Pacific Relations, Central Secretariat, Honolulu, 1929-30; Secretary, Committee on Public Exercises, 1931-35; Secretary to Managing Director, The Emporium, San Francisco, 1935-37. At Stanford, 1931-35, and since 1937.

†YANCEY, LEE L.
Chief Accountant
Eleanor Ave., Los Altos
LA 189
At Stanford since 1927.

YOST, MARY
Dean of Women and Lecturer in English
532 Lasuen-2238
A.B., Vassar, 1904, A.M., 1912; Ph.D., Michigan, 1917. Graduate Scholar, Vassar College, 1904-5; Assistant in English, Wellesley College, 1907-13; Instructor in English, Vassar College, 1907-13; Fellow, University of Michigan, 1913-15; Assistant Professor, Vassar College, 1915-21; Reader, College Entrance Examination Board, 1912-18, Head Reader and Examiner, 1918-21. At Stanford since 1921.

YOUNG, RUTH LEE (MRS.)
Secretary to Dr. Bennett, Food Research Institute
660 Salvatierra*
A.B., Stanford, 1922. At Stanford since 1925.

†YOUNGS, WILLARD OLIVER
Executive Associate, University Libraries
2050 Emerson, P*
B.S., California, 1932. Graduate Student, University of California, 1932-34, School of Librarianship, 1935-36; Assistant, University of California Library, 1930-36; Assistant, Berkeley Public Library, 1936; Librarian, Junior Grade, University of California Library, 1937-39. At Stanford since 1939.
GENERAL INFORMATION

LOCATION

Stanford University is situated thirty miles southeast of San Francisco, in the Santa Clara Valley, one of the most attractive portions of the state in fertility and natural beauty. The University grounds, comprising approximately nine thousand acres, are located three miles west of the Bay of San Francisco and extend into the foothills of the Santa Cruz Range. The absence of rain, the prevalence of low humidity whenever the temperature is high, the persistence of the ocean fogs which cool the California coast and almost nightly flow over the mountain rampart separating the Santa Clara Valley from the sea, constitute the peculiar characteristics of the summer climate of this region. The nights are cool, the temperature usually ranging from 50 to 58 degrees. The average midday temperature is about 70 degrees. There is never oppressive heat to interfere with University work, and outdoor recreation may be planned without danger of interruption by sudden changes of weather.

The University is reached by the Coast Division of the Southern Pacific Railway. The Palo Alto station, which is located near the entrance to the University grounds, is approximately one mile from the quadrangles.

THE UNIVERSITY YEAR

The University year begins the last of September, on the Monday falling between September 23 and 29, inclusive, and is continuous throughout four quarters of approximately eleven weeks each. Any three quarters constitute an academic year.

SUMMER QUARTER

The summer quarter differs from other quarters only as the courses of study in the various departments may be contracted, or expanded, or specialized to meet the needs of a particular constituency; or, as in Biology, where a distinctive part of the summer program is offered at the Hopkins Marine Station at Pacific Grove. The emphasis of the summer quarter is placed on advanced and graduate work, but many basic undergraduate courses are also offered.

In the School of Education and in certain other schools and departments, an eight weeks' schedule of courses is provided in order to accommodate teachers who must resume their duties the latter part of August.

Admission requirements for the summer quarter are the same as for the other quarters of the year, and are given in detail below. Matriculated students, who have been absent from the University for some time and who have pursued courses at other colleges or universities, should forward to the Registrar complete official records of such courses, in order that their credentials may be brought up to date. Similarly, new students who have previously applied for admission but have not registered in the University should file whatever additional papers are necessary to complete their credentials. Credentials previously filed and the application fee once paid should not be duplicated.
ADMISSION TO THE UNIVERSITY FOR THE SUMMER QUARTER

GENERAL REQUIREMENTS

Admission to the University may be granted with Graduate, University, Upper, or Lower Division standing. The number admitted is limited by the facilities that are available. Applicants to be accepted as candidates for admission must present satisfactory recommendations as to personal character, must offer the approved credentials required for the division concerned, and, for the University, Upper, and Lower Divisions, must pass the college aptitude test. A health examination is required of all students prior to completion of matriculation.

Application and other necessary blanks will be furnished by the Registrar on request and the use of these official blanks is required. In applying for such blanks address: THE REGISTRAR, Stanford University, California.

(A full statement of the requirements for admission to the University for the four quarters of the academic year, the method of selecting candidates in the limited groups, and the schedule of examinations for the college aptitude test will be found in the Information Bulletin.)

LIMITATIONS

Special restrictions are in force in the School of Law, the School of Medicine, the School of Nursing, the Graduate School of Business, and at the Hopkins Marine Station. In these groups applicants must first satisfy the general admission regulations, and then meet special requirements which are ordinarily on a competitive basis, preference being given to applicants with superior preparation and fitness for the work to be undertaken.

At present an unlimited number of candidates may be admitted to the Lower Division for the summer quarter only, with the understanding that of such matriculants not more than 50 men and 30 women will be promised enrollment for succeeding quarters. The selection of these students may be deferred until the end of the summer quarter, in order that scholarship records made during the quarter may be considered. Summer matriculants not thus selected may make application for succeeding quarters and will be considered on the same basis as other candidates.

COLLEGE APTITUDE TEST

An aptitude test is required of all candidates for admission to the University, Upper, and Lower Divisions. Two tests, either one of which is acceptable, are used: the Stanford Aptitude Test, given in California, Oregon, Washington, and Hawaii; and the Scholastic Aptitude Test, offered by the College Entrance Examination Board, for applicants from other states and countries.

When credentials are otherwise satisfactory, admission may be granted provisionally to candidates who, because of remoteness from examination centers or for other reasons satisfactory to the Committee on Admission and Advanced Standing, have failed to take the Stanford Aptitude Test, the Scholastic Aptitude Test, or a similar acceptable examination. Such candidates may be denied admission, at the discretion of the Committee, if a score below 50 is obtained in the college aptitude test to be taken at Stanford University just before the beginning of the quarter for which admission is desired.
In February and March, the Stanford Aptitude Test is given in numerous centers in California. (The schedule of examinations to be given in 1940 will be found in the Information Bulletin.) The test is also given at the University a few days prior to the September, January, April, and June matriculation dates.

A fee of five dollars is charged, due at the time of the examination, to cover cost of examination, scoring, and organization of results for use in the educational guidance of students.

ADMISSION TO THE GRADUATE DIVISION

The requirements for graduate standing are fulfilled by graduates of colleges and universities of recognized standing whose credentials evidence ability and promise, and who expect to become candidates for advanced degrees, or for teaching or administrative recommendations, or who intend to pursue regular advanced, professional, or research courses.

Admission to the University with graduate standing does not necessarily imply immediate admission to candidacy for an advanced degree. (For details concerning the requirements for advanced degrees consult pages 58–64.)

Special restrictions are in force in the School of Law, the School of Medicine, the School of Nursing, the Graduate School of Business, and at the Hopkins Marine Station. In these groups applicants must first satisfy the general admission regulations, and then meet special requirements which are ordinarily on a competitive basis.

Application for admission must be made on the blank furnished by the University, and the candidate must designate on this blank the School in which he desires to choose his major subject. All credentials should be filed with the Committee on Admission and Advanced Standing at the Registrar’s Office early enough to receive assurance of admission before Registration Day, thus avoiding needless expense and disappointment.

The credentials required are: (1) Personal application for admission with graduate standing, including application fee of five dollars; (2) official transcript of all college work completed, including certificate of degrees received; (3) statements of personal qualifications on blanks furnished by the University.

ADMISSION TO THE UNIVERSITY DIVISION

The University Division has been organized to permit students of distinctly superior ability to proceed directly toward the degree of Master of Arts, or other advanced degrees, without obtaining the degree of Bachelor of Arts, or having necessarily conformed to the requirements for this degree or for the Lower Division. The plan involves the preparation of an individual program of study; careful, personal consultation with members of the faculty in charge of the field chosen; maintenance of a high standard of scholarship; and final approval of the program by the University Committee on Graduate Study as acceptable for the advanced degree desired.

The following three classes of students may be admitted to the University Division:

1. New students who have completed with distinctly superior scholastic records the equivalent of not less than 87 quarter units at an educational institution of recognized standing, provided they have completed the requirements of the first two years of undergraduate work established by the insti-
tutions from which they transfer, and, in addition, have passed the college aptitude test.

2. Students already enrolled in the Lower Division in this University who wish to transfer to the University Division, without completing the academic requirements of the Lower Division.

3. Students already enrolled in the Upper Division who have done work of a quality represented by at least an average grade of B.

(For full particulars concerning admission to the University Division in each of these groups, consult the Information Bulletin.)

Application and credential requirements for new students are the same as for the Upper Division. (See below.)

ADMISSION TO THE UPPER DIVISION

Candidates for admission to the Upper Division must have completed collegiate work which is satisfactory in quantity and quality and, in addition, must pass the college aptitude test.

The quantity requirement is met by those who have completed the equivalent of at least 87 quarter units (two years) at an institution of recognized standing. Credit for physical or military training will not be counted as part of this required number of units.

The quality of the work will be considered satisfactory if the average grade of the entire previous record, and of the last quarter (or semester), is at least equivalent to the quality represented by the average grade of C at this University, where the grading scale includes A, B, C, and D as passing grades. The determination of the equivalence of the average grades of any institution is based upon the Stanford records of students who have transferred to this University.

Special restrictions are in force in the School of Medicine, the School of Nursing, and at the Hopkins Marine Station. In these groups, applicants must first satisfy the general admission regulations, and then meet special requirements which are ordinarily on a competitive basis.

Application for admission for the summer quarter must be made on the blank furnished by the University, and the candidate must designate on this blank the School in which he desires to choose his major subject. All credentials must be filed with the Committee on Admission and Advanced Standing at the Registrar's Office on or before June 1, for women candidates, and June 10, for men candidates. (After these dates, admission may still be granted if facilities are available.)

The credentials required are: (1) Personal application for admission with Upper Division standing, including application fee of five dollars; (2) official transcript of all college work completed, including statement of honorable dismissal from the institution last attended; (3) two statements of personal qualifications on blanks furnished by the University, at least one of which shall be filled out by an instructor in the institution last attended; (4) record of any college aptitude or similar test other than that given by Stanford University.

ADMISSION TO THE LOWER DIVISION

(A) FROM COLLEGES OR UNIVERSITIES

Application for admission to the Lower Division with advanced standing will be received from candidates who, in addition to passing the college
aptitude test, have completed collegiate work which is satisfactory in quantity and quality.

The quantity requirement may be met by candidates whose collegiate records cover less than two years' work at an institution of recognized standing. A candidate who has completed less than a full year of college work (approximately 45 quarter units) must also meet the requirements for entrance from preparatory schools.

The quality of the work will be considered satisfactory if the average grade of the entire previous record, and of the last quarter (or semester), is at least equivalent to the quality represented by the average grade of C at this University, where the grading scale includes A, B, C, and D as passing grades. The determination of the equivalence of the average grades of any institution is based upon the Stanford records of students who have transferred to this University.

Application for admission for the summer quarter must be made on the blank furnished by the University, and all credentials must be filed with the Committee on Admission and Advanced Standing at the Registrar's Office on or before June 1. (After this date, admission may still be granted if facilities are available.)

The credentials required are: (1) Personal application for admission to the Lower Division, including application fee of five dollars; (2) complete high-school record (except for candidates who have completed a full year or more of collegiate work with satisfactory grades); (3) two statements of personal qualifications on blanks furnished by the University, at least one of which shall be filled out by an instructor in the institution last attended; (4) official transcript of all college work completed, including a statement of honorable dismissal from the institution last attended (regular transcript form of the institution to be used); (5) record of any college aptitude or similar test other than that given by Stanford University.

(B) FROM PREPARATORY SCHOOLS

APPLICATION AND CREDENTIALS

Application for admission for the summer quarter must be made on the blank furnished by the University, and all credentials must be filed with the Committee on Admission and Advanced Standing at the Registrar's Office on or before June 1. (After this date, admission may still be granted if facilities are available.)

The credentials required are: (1) Personal application for admission to the Lower Division, including application fee of five dollars; (2) complete high-school record; (3) two statements of personal qualifications on blanks furnished by the University; (4) record of any college aptitude or similar test other than that given by Stanford University; (5) official report of any examinations taken through the College Entrance Examination Board.

SCHOLARSHIP REQUIREMENTS

Candidates for admission to the Lower Division with first-year undergraduate standing may fulfill the scholarship requirements, as explained below, either (I) without subject examinations, by completion of a regular four-year high-school course, or its equivalent, in an accredited preparatory school; or (II) with subject examinations, by passing the examinations of the College Entrance Examination Board. (Candidates who do not meet these scholarship requirements may qualify for consideration for admission at a
later date by the completion of one year of satisfactory college work, approximately 45 quarter units, in an approved institution.)

1. Without Subject Examinations.

The scholastic requirements for admission by certification from preparatory schools include the presentation of credentials covering the completion of the regular four-year preparatory school course, and, in addition, adequate evidence of ability demonstrated during the last three years of a four-year preparatory school or in a senior high school.

The credentials must show:

1. Graduation from an accredited preparatory school.
2. An acceptable recommendation as to scholastic promise from the preparatory school principal.
3. A satisfactory score on the Stanford University College Aptitude Test or on the Scholastic Aptitude Test offered by the College Entrance Examination Board.
4. The completion of fifteen units with passing grades.
5. The completion, after the ninth grade, of two units of passing grade in English.
6. The fulfillment of one of the following requirements covering the quality of the school work:
   a) The completion, after the ninth grade, of eleven units, each with recommending or certificate grade.
   b) The completion, after the ninth grade, of nine units, each with recommending or certificate grade, provided the score obtained on the College Aptitude Test is above the Stanford median.
   c) The completion, after the ninth grade, of nine units, each with recommending or certificate grade, provided that the average of the total record after the ninth grade and the average of the work of the last two years is not less than B on the basis that A, B, C, and D are the passing grades.

A unit represents a year's study of one subject in a preparatory school, normally in a class meeting five times a week for forty-minute recitation periods, or the equivalent. In assigning credit values, two laboratory, shop, drawing, typing, or practice periods, not requiring additional study or preparation, are regarded as the equivalent of one recitation period. The length of the school year is assumed to be from thirty-six to forty weeks.

One unit only will be accepted for typing; not more than three for music (only one of which may be in vocal or instrumental technique or both); and none will be accepted for physical education, military training, penmanship, or spelling.

Recommending or certificate grades should be established by the school, and must be at least 5 per cent above the lowest passing grade. In California high schools using A, B, C, and D as passing grades, grades of A and B are recommending grades. When A and B are the recommending grades, the combination of term grades of C and A, or C and B, will be accepted as recommending; but the combination of A and C, or B and C, will not be so accepted.

In a subject continued for more than one year all the units offered will be considered of recommending grade if the last unit and the average of all the grades in that subject meet the recommending standard.

Units first completed with less than recommending grades may be raised to the recommending standard, either by repetition in a regular school term
or by passing the examination of the College Entrance Examination Board in that subject.

II. With Subject Examinations.

The admission requirements may be met by candidates, whether or not they are graduates of approved preparatory schools, who pass the examinations offered by the College Entrance Examination Board either: (1) in subjects aggregating fifteen units, including at least two of English, or (2) the comprehensive examinations in four subjects, in addition to submitting a preparatory school record covering fifteen units. Examinations of the New York Examination Board (Regents' examinations) and of the Minnesota State Board may be accepted in approved subjects passed with a grade at least ten per cent above the lowest passing grade.

Such candidates must also pass the Stanford University College Aptitude Test or the Scholastic Aptitude Test offered by the College Entrance Examination Board. (For information regarding these examinations, see the Information Bulletin.)

APPROVED PREPARATORY SCHOOLS

Approved Preparatory Schools are schools maintaining full four-year high-school courses, or full three-year senior high-school courses and accredited (1) by the New England College Entrance Certificate Board, by the North Central Association of Colleges and Secondary Schools, by the Association of Colleges and Secondary Schools of the Southern States, by the Association of Colleges and Secondary Schools of the Middle States and Maryland, by the Northwest Association of Secondary and Higher Schools, by colleges and universities of recognized standing, or (2) upon inspection undertaken or authorized by the University.

The University records of first-year students will be considered as additional evidence of the standing of preparatory schools and of their good faith and success in meeting the requirements of the University, and such evidence will be made use of in determining as to the continuance of accrediting relations.

SUBJECTS

The only prescribed subject for admission to the Lower Division is English (minimum, two units after the ninth grade). It is usually advantageous, however, for applicants to anticipate, in the high school, certain Lower Division requirements of the University and to offer the following as part of the fifteen units:

*Three units in English; three units in a foreign language; one unit in either biology, botany, physiology, or zoology; one unit in either physics or chemistry; one unit in American history (or in American history and civics).*

In anticipation of an engineering course, the applicant is advised to offer, in addition to the language and science listed above, *one unit in plane geometry, two units in algebra, one-half unit in trigonometry, and one unit in mechanical drawing, including, also, one unit each in physics and chemistry.* If these entrance credits are not presented, certain adjustments must be made in the curriculum which may result in delayed graduation.
SUMMER QUARTER REGISTRATION

The regular registration day for all students is Thursday, June 20. Registration for the quarter closes on Friday, July 5; for courses in the School of Education, on Monday, July 1, except by special arrangement in advance with the Dean of the School of Education.

Matriculated students may register after June 20 only on payment of a special fee: two dollars on the first or second day, three dollars on the third day, four dollars on the fourth day, and so on up to the maximum of ten dollars. There are no late registration fees for new students.

Registration hours are from 8:00 A.M. to 12:00 noon and from 1:00 to 5:00 P.M.

AMOUNT OF WORK

Graduate students are not held to any prescribed number of units, but ordinarily registration will not be permitted unless such students are prepared to devote at least half of their working time to university study.

The normal amount of work to be registered for each quarter by undergraduate students is fifteen units. Registration by undergraduate students for less than thirteen units of work is permitted in the case of students doing outside work for self-support, where considerations of health are involved, or for other reasons satisfactory to the Committee on Registration. All such programs of study must be approved by the major department or school (or Lower Division) and by the Committee on Registration.

Maximum limits upon the number of registered units which may be counted toward the 180 units required for graduation apply to certain classes of students. (See Information Bulletin.) New Upper Division students are limited to eighteen units during their first quarter of residence, and new Lower Division students to sixteen units.

Petitions for irregular registration are to be presented at the beginning of the quarter.

Every unit for which credit is given is understood to represent approximately, for the average student, three hours of actual work per week, through one quarter.

Registration for Eight Weeks' Term.—Students who register for the eight weeks' term only are limited to sixteen units. This limitation applies to course work. If a student is carrying thesis work as well, the limit will be twelve units of courses plus the thesis work. Further regulations concerning registration of students in the School of Education will be found on page 88.

CHANGES IN STUDY LISTS

Changes may be made in the study lists, with the consent of the instructors concerned, of the major department or school (or Lower Division), and of the Committee on Registration, during the first two weeks following registration day. At the end of the first two weeks all study lists are to be considered as fixed. After this period petitions to drop or take up courses are granted only for extraordinary reasons and only on payment of a special fee of two dollars for each course. During the last four weeks of the quarter no courses may be officially removed from the student's study list for any reason whatever; but if failure to complete a course satisfactorily be due to
PART-TIME ENROLLMENT FOR THE 1940 SUMMER QUARTER

Graduate students regularly enrolled in the University, or new graduate students who have fulfilled admission requirements, may register for a maximum of eight units of credit, with the approval of the major department, upon payment of fees as follows: Tuition Fee, $50; Community Fee, $15. (This does not apply to students in the Graduate School of Business, the School of Law, or at the Hopkins Marine Station.)

This arrangement is intended primarily for graduate students who do not wish to undertake a full program of academic work during the summer, and will count only as a half quarter of residence toward meeting the requirements for advanced degrees.
illness or other unavoidable circumstance, application may be made to the Committee on Scholarship for such relief as shall seem equitable.

SUMMER QUARTER FEES

The Application Fee for all candidates for admission to the University, and for all registered students applying for admission to the Graduate Division, is $5, payable at the time of application. (This fee, once paid, is not returnable, but may be transferred to a later date by students who fail to matriculate.)

The Tuition Fee for all students, graduate and undergraduate, is as follows:

- Graduate School of Business: $130.00
- School of Education (eight weeks): 100.00
- School of Law (first or second half): 50.00
- School of Medicine: 115.00
- All other schools and departments: 100.00

The Community Fee for all students registered at the University is $15 per quarter. This fee covers the privileges of the gymnasium, athletic grounds, Hospital Fund, the Stanford Union or Women's Clubhouse, the Memorial Hall Fund, and membership in the Associated Students. Proportionate adjustments will be made in the Community Fee for students registering for only one-half of the quarter in the School of Law or in the Graduate School of Business. The Community Fee is not collected from students registered at the Hopkins Marine Station. Students registered in the School of Medicine at San Francisco, or for Field Geology, are charged a Hospital Fee of $5 instead of the Community Fee. Medical students in San Francisco are also charged a fee of $1 per quarter for student athletic privileges and, during the winter quarter, a student body fee of $1.

A General Library Fee of fifty cents per quarter is charged each undergraduate and graduate student registered in the University, except students in the School of Medicine in San Francisco and students registered in professional schools collecting their own library fees.

A Law Library Fee of $5 per quarter is charged all students majoring in the School of Law.

A Business Library Fee of $1 per quarter is charged all students majoring in the Graduate School of Business. All other students using the library of the Graduate School of Business are charged a fee of $5 per quarter.

Laboratory and Syllabus Fees.—In addition to the fees listed above, students in laboratory courses pay for the materials which they use, and in some courses syllabus and other fees may be charged. (These fees will be published in the Summer Quarter Time Schedule.

Medical Deposits and Fees.—In medical courses a deposit, ranging from $10 to $20 per annum, is required to cover breakage or loss of apparatus and materials, such deposits being returnable, less charge for breakage, loss, or wear and tear of apparatus.

In the School of Medicine, students who have paid the regular fees in full, and wish to take additional work before graduation, will pay for this work such fees as are decided upon in conference with the Dean and Executive Head of the Department in which such courses are taken.

The University reserves the right to change at any time, without previous notice, tuition and other fees.

Refunds of portions of tuition and community fees may be granted to students withdrawing from the University within four weeks after the day
of registration, provided written requests are filed within two months. The refunds are made according to the circumstances of the withdrawal. (See Information Bulletin.)

LIVING ACCOMMODATIONS

MEN

Toyon Hall will be open for the summer quarter. New Lower Division men are required to live in the dormitory, unless they reside at home or with relatives, or unless they are doing work for which part or all of the compensation includes a room. No new Lower Division men are permitted to live in fraternity houses.

Applications for room assignments for men should be made, preferably early in May, either by letter or in person to the Dean of Men. Such applications should be accompanied by a remittance of $10, payable to Stanford University, which will be applied on the total rental for the room occupied. In assigning rooms an effort is made to separate graduate and undergraduate students. Applicants for dormitory rooms are requested to indicate to which group they belong.

The cost of rooms in the dormitory is from $25.50 to $45 for the quarter. Room rent is payable at the beginning of the quarter. Occupants of the dormitory are expected to furnish their own blankets, comforters, and bedspreads for standard size single beds. The University supplies and launders sheets, pillow cases, and towels for all men living in the dormitory, and for this service there is a charge of thirty cents per week. Each student will be required to pay also a small breakage fee and to deposit $1 for the key to his room.

Private rooms are available in Palo Alto, at an average distance of a mile and a quarter from the University, with bus transportation facilities to and from the campus. Some rooms, other than those in the dormitory, are also available on the campus. These rooms range in price from $10 to $25 a month. Board may be obtained at the Cellar and the a la carte dining-room of the Stanford Union.

The University reserves the right to increase dormitory rentals and board rates without previous notice.

WOMEN

All undergraduate women not residing with parents or guardians must live in a University residence during the summer quarter. The residence to be open for the summer of 1940 will depend upon the anticipated enrollment for the quarter. During the summer quarter only, University residences are open to graduate women on the same basis as to undergraduates. Applications for rooms should be made to the Director of Residence, Box 1772, Stanford University, by June 1 and should be accompanied by a deposit of $25, payable to Stanford University. This deposit will be applied on the total cost of room and board for the quarter. It will not be refunded after registration day, June 20, 1940, except in unusual circumstances (as explained on the back of the receipt).

The cost of room and board in the University residences is as follows: full quarter, $137.50, payable in advance or in two installments of $97.50 and $40, respectively; eight weeks' term in the School of Education, $127.50, payable in advance or in two installments of $97.50 and $30, respectively. This includes room rent for the time specified and board for six days per
week, Saturday excluded. Room and board may be extended beyond the eight weeks' period by the payment of the amount for the full quarter, or $1.50 per day for room and board.

Rooms are equipped with cot bed, mattress, chest of drawers, desk, chair, bookcase, wicker armchair, and curtains. Students rooming in the dormitories furnish couch covers, bed linen, blankets, towels, bureau scarfs, rugs, and drapes, if desired. For summer quarter students, a few rugs are available for rent; and bed linen and blankets may be rented from the Director of Residence at the rate of $3 for the quarter, or any period thereof, but as the supply is limited no guaranties can be given that bedding will be available. It is advisable, therefore, to apply for bedding when making application for a room. Deposit fees of $1 for key to the room and $1.50 for a pillow are required; both deposits may be refunded at the end of the quarter if the articles are returned in good condition.

Graduate women students not residing in University residences may live only in places approved by the Office of the Dean of Women.

The University reserves the right to change the published rates or arrangements without previous notice.

UNIVERSITY HEALTH CONTROL

The Committee on Public Health.—This Committee considers matters pertaining to the health of the University community in consultation with the properly constituted authorities. As the University curriculum is adapted to students in normal health and physical development, the Committee is authorized to require the observance of such limitations of University work and residence as may be deemed necessary in individual instances, and to require temporary or permanent withdrawal from the University when the interests of the student or the University may demand it. The Committee is also authorized to exercise the official powers of a local Board of Health when called into action by the County Health Officer.

University Health Service.—This department performs the functions of a public health service for the entire campus population. Regular inspections are made of premises, food supplies, and the handling of foods. Bacteriological examinations are made regularly of water supplies and swimming pools, and of samples of milk from all dairies that supply the community. Students who are ill are cared for at the Palo Alto Hospital. Communicable diseases are controlled through careful observation of all suspicious cases and known contacts. The Public Health Laboratory of the City of Palo Alto assists in the laboratory diagnosis of reportable cases and in the identification of carriers on the campus. The Palo Alto Isolation Hospital on the campus is available for control and treatment of reportable cases.

STUDENT HEALTH SERVICES

The general purposes of the Student Health Services for men and women are briefly as follows:

1. To make accurate, dependable, thorough health examinations of students; to give sound advice and instruction concerning physical or mental health or social adjustment; to guide the student facing the probability of serious illness to the professional medical service of his choice and to appropriate hospitalization, with as little delay and as little health hazard as possible; to pass on the acceptability of Rest Homes proposed for men or for women students; to approve for admission to the Rest Homes only stu-
students who are temporarily in need of home conditions and home care, but who are not acutely ill and do not require nursing and medical attention; to avoid competition with the private practitioner, and to undertake no bedside or hospital treatment of sick students; to attempt no phase of professional medical service that cannot be performed with a grade of professional competence equal to the best that is available to the student elsewhere.

2. To take care that the University regulations governing vaccination, as stated below, are uniformly respected, and that no student, or other person, is vaccinated by either Service but by the physician of his choice.

3. To co-operate with the officers of the University in all matters which affect the student's mental or physical health; and to recommend temporary leaves of absence on account of health, or withdrawal of students whose health is being injured by being in the University or who are a health menace to other students.

**Vaccination.**—Not later than four weeks after the day of registration every student must file with the Committee on Public Health a certificate, signed by the vaccinator, who must be a duly licensed and practicing physician, giving exact dates of vaccination, and showing acceptable vaccination within seven years.

Non-compliance with these requirements will result in a fine of two dollars after four weeks, and cancellation of registration after five weeks from the day of registration.

Certificates are to be filed at the Registrar's Office. They will be returned upon request. "Conscientious objections" will not be recognized as exempting anyone. Unavoidable delay, or failure to secure satisfactory certificate, will not exempt anyone from the fine.

(It is advised that candidates comply with this requirement before coming to the University, and that vaccination certificates be sent in advance by mail. Blank certificate forms may be obtained at the Registrar's Office.)

**STUDENT HEALTH SERVICE FOR MEN**

**Examinations and Conferences.**—A health examination is required of all men students prior to the completion of matriculation. This first examination is in two parts. One is a rapid, thorough examination that is mainly physical, given before the student enrolls in his classes. The other is a leisurely conference, that may be largely subjective, with such additional procedures as may be necessary to complete the examination, during the first quarter of the student's attendance. Men who are found in such condition that they probably will be unable to carry the normal student program without health injury to themselves, or who are a menace to the health of their fellow-students, are denied matriculation or continued registration in the University. All men planning to participate in athletics are required each season to pass satisfactorily a health examination before going into active training.

Important health advice is followed up in later required conferences in order to learn the use the student has made of the advice given. Those who fail to take reasonable care of incapacitating defects, or who expose others to health injury because of their lack of self-care, are not permitted to remain in the University. In addition to the required conferences, students are subject to call by the Health Service at any time.

Hours are scheduled every day, Saturday morning included, in the offices of the Student Health Service, for men who desire help in the solution of their problems of physical, emotional, or social health.
Medical Treatment.—Each student is expected to select a private physician on whom he may call in case of illness, and is so advised during the required conference following the prematriculation examination. Help in securing the service of the private physicians or surgeons of their choice may be obtained by consulting the Student Health Service.

Emergency treatment may be given in the offices of the Student Health Service, safeguarding the student until the arrival of his own physician. A limited office service is available for the treatment of ambulatory cases.

Consultation with experienced outside specialists, limited X-ray examinations, and certain laboratory tests may be secured without expense to the student in case the staff examiner finds such additional information necessary to his solution of a health problem.

(For details concerning regulations governing the care of athletic injuries, see *Sports Announcement of School of Hygiene and Physical Education*.)

Student Health Service for Women

Examinations and Consultations.—A health examination is required of (1) all new women students; (2) students who are returning to the University after an absence of a year or more. New women are examined during the first two weeks of their first quarter, and senior women are urged to receive an examination during the quarter preceding graduation. Students who are not required to have an examination may receive one upon request. If any serious abnormal condition is disclosed, the student is denied matriculation or continued registration in the University. Advice is given concerning conditions which would be amenable to treatment and hygienic living. Students registering for work in the Department of Hygiene and Physical Education are subject to health examinations to determine not only their fitness for athletic work, but the type of activity which would best meet their specific needs.

If the first examination has disclosed the need, a second more thorough examination is given, followed by periodic consultations. Students may be required to report to the Health Service upon the discretion of the Medical Adviser. Hours for consultations with the Medical Adviser are scheduled every week day including Saturday mornings.

Medical Treatment.—Emergency treatment for any illness or injury is offered by the medical service, as well as treatment for temporary ambulatory cases. In case of serious illness the student is referred to the physician of her choice, as the University offers only limited medical treatment.

Certain aids to diagnosis, such as X-ray examinations, laboratory analysis, or examination by specialists, may be obtained without expense to the student, in case the medical examiner finds them necessary.

The house mothers of sorority houses and head residents of women’s living groups are requested to submit daily reports of any illness in their respective houses. In this way the medical service is kept informed of any illness among the students and prompt attention is given to them.

Athletic Injuries.—The University is not responsible for any accidents or injuries incurred in athletic sports or contests.

Hospital Fund

The University does not maintain an infirmary for the care of students who are ill. The Hospital Fund, which is financed by the payment of $5 per quarter by each student as part of the Community Fee, provides limited
financial assistance to students needing medical or surgical treatment at the Palo Alto Hospital, or at the Stanford University Hospitals in San Francisco. Charges for calls at a doctor’s office, for visits by a doctor to a patient’s home, except as hereinafter provided, must be paid by the student.

*Hospitals.*—The Hospital Fund is available to students admitted to the Palo Alto Hospital (on request of the Medical Adviser or a local physician), or to campus students admitted to the Stanford University Hospitals in San Francisco (on request of the Medical Adviser), whose illnesses or other conditions requiring hospitalization were not present, or whose presence was unknown and unsuspected, at the time of matriculation in the University. Rebates for service will be paid in accordance with the following regulations:

1. For all acute conditions requiring hospitalization, students will be allowed four dollars a day toward the regular hospital room rate for the first five days and two dollars a day after the first five days for a period not to exceed a total of thirty days.

2. The Fund will pay toward the cost of hospital visits made by physicians the sum of two dollars a day for a period not to exceed the first five days of hospitalization except in cases requiring the use of the operating room, in which event no payment for physicians’ visits will be made.

3. When the surgery is required the Fund will absorb the charge for the use of the operating room and for anesthesia materials furnished.

4. The Fund will pay during the first five days of hospitalization such X-ray and laboratory fees as are necessary to establish diagnoses of conditions which require hospital attention.

5. The Fund will not pay any part of professional fees for (a) surgical operations; (b) administering anesthetics; (c) consultants’ fees; (d) applications of casts; or for costs of dressings or drugs; or miscellaneous charges associated with hospitalization.

The foregoing charges are paid only in the event a student is admitted to the Palo Alto Hospital on the order of the Medical Adviser of Men, the Medical Adviser of Women, or of one of the local physicians, or to the Stanford University Hospitals on the approval of the Medical Adviser.

The University cannot advise students in regard to the choice of a physician.

*Medical Students.*—These regulations do not apply to students enrolled in the Medical School in San Francisco. A separate fund is maintained for their benefit.

**VOCATIONAL GUIDANCE**

University students gain more from their college experience if they have a reasonably definite vocational or life objective. Many students enroll in the University before they have made such a decision, however, and these are urged to come to some definite conclusion as to their general field of work during their first two years in the University. It should be understood that undergraduate college work does not provide full training for most vocations, but whatever specific vocational values are to be found in college work can be better obtained if a decision has been made.

Members of the staffs of the offices of the Dean of Men and the Dean of Women act as counselors for students who are undecided concerning their vocation. Certain tests are available to help reveal a student’s capabilities,
while an extensive file of printed material and contacts maintained with outside vocational advisers help provide the student with current vocational information.

The selection of a major field of study is closely related to a student's vocational goal. With this in mind, a series of lectures by department heads has been given during past years outlining the vocational possibilities for which training is given. A concise bulletin, *University Training and Vocational Outlets*, was recently printed to give a complete picture of the University's offerings by schools and the vocations for which preparation is given. This bulletin may be secured from the Registrar's Office for fifteen cents per copy.

A feature of the orientation program for new students is the assistance given in establishing proper habits of study so necessary for scholastic success. Particular attention is given to training in effective habits of silent reading. Bulletins for student use have been prepared in both the general field of study habits and the particular field of silent reading.

Prospective students may write to the secretary of the Committee for reading suggestions on particular vocations, or for aid on other problems of a scholastic or vocational nature. Various committees of the student body further assist the new student in his first days on the campus.

(Communications may be addressed to the Secretary, Dr. Karl M. Cowdery, Registrar's Office.)

**SELF-SUPPORT OF STUDENTS**

Students who plan to earn part or all of their expenses during the summer quarter should file application with the Appointment Service as soon as they have made definite arrangements to come to the University; and immediately after arrival should arrange for a personal interview.

The opportunities for employment include waiting on table, intermittent manual labor, and housework. In addition, there is the possibility of clerical work. At the Stanford Union, cashiers, soda fountain clerks, waiters, and other assistants are needed, and application for these positions should be filed with the Director of Dining Halls, Stanford University.

In general, students should not undertake to earn a larger proportion of their expenses than is absolutely necessary, especially during the first quarter of residence at the University, or when planning to register only during the summer quarter. It is far more profitable for such students to devote free hours to increasing proficiency in their studies.

No charge is made by the Appointment Service for assistance rendered self-supporting students.

**APPOINTMENT SERVICE**

The Appointment Service, located in the Registrar's Office, is available to all students of the University. Its purpose is briefly as follows:

1. To assist graduating students and alumni of the University to obtain permanent employment or promotion in the kind of work for which they have prepared themselves.

2. To help students of the University who are earning part or all of their own expenses to find suitable part-time employment.
3. To help students to find full-time temporary employment, whether the purpose be merely to earn money or to become more proficient in their chosen field of work.

4. To give inquiring students and graduates as accurate information as possible regarding the actual opportunities presented by the different fields of employment.

The Appointment Service aims to secure and keep on file a complete record of the education, experience, and personal qualifications of each applicant for a position, to be used by prospective employers in determining whether or not the applicant is qualified for the position to be filled. In order that the statements made may be frank and reliable, they are never shown to applicants.

The University reserves the right of refusing to extend its co-operation to applicants who apply for positions for which they are manifestly unfit.

Forms for registration may be obtained of the Appointment Service upon request. When asking for forms it is necessary to state whether part-time, temporary, or permanent employment is wanted; and for the latter whether teaching or non-teaching.

Teachers should renew registration annually, preferably in September. Those desiring permanent employment other than teaching should renew their registration in September and keep the Appointment Service constantly informed regarding their needs. Those seeking part-time or temporary employment must renew registration at the beginning of each quarter. The responsibility of renewing registration is placed upon the applicant.

Experienced teachers who are graduates of other institutions and who plan to enroll for the summer quarter preparatory to teaching in the public schools of California should ask the appointment office of the institution which they have last attended to send directly to the Stanford Appointment Service a complete set of their confidential recommendations, and should notify this Service that such a request has been made. Actual registration with the Appointment Service can then be completed immediately upon arrival at the University, thus giving summer students full benefit of the services to which they are entitled during the placement season. The Appointment Service will not be in a position to recommend teachers whose records are incomplete or unsatisfactory. Moreover, the privilege of reregistration must depend upon the success of the applicant in the first position he secures through this Service.

Appointment secretaries in eastern institutions can materially aid their graduates in securing satisfactory positions in California by giving this information promptly to interested applicants and by furnishing complete recommendations without delay. Frank, personal letters concerning the applicant will be especially helpful.

At the time of registration, applicants for permanent positions are charged a record fee to cover cost of compiling an accurate personnel record designed to serve during the whole lifetime of the individual. Charges are made to cover cost of copying and mailing records, and for exceptional telephone and telegraph charges. No charge is made for services rendered students for part-time or temporary work, and no charge is based upon the securing of positions of any kind.

All communications should be addressed to The Appointment Service, Stanford University, California.
LOWER DIVISION REQUIREMENTS

The Lower Division consists of the first and second years of the University curriculum. Its object is to introduce the student to fundamental fields of human interest, and to this end it requires the completion of certain studies during the first two years. To the students enrolled in the Lower Division the members of the Committee on Lower Division Administration stand in the same relation as that occupied by departmental advisers toward their major students.

Under the supervision of the Committee on Lower Division Administration, the work of the first two years is divided into three groups. Every student is required to take at least fifteen units in each of these groups during the first two years in the University. The work should be distributed so that not less than six units will be completed in each group each year. The requirements are as follows:

**Group I.**—Arts and letters (English, foreign language, music, and art).

a) The completion in the University of the second quarter of a second-year reading course in a foreign language, or of a more advanced course.

b) English A during the first year, provided the student has failed to pass the matriculation test in English.

c) Six units of English composition (English 2a, 2b or 2c) preferably during the first year.

d) Electives to make up the required total of fifteen units of arts and letters, if the above requirements have not totaled that amount.

**Group II.**—Natural sciences, mathematics (applied mathematics, biology, botany, chemistry, engineering, geology, hygiene, logic, mathematics, military science, mining and metallurgy, physics, psychology, zoology and entomology).

a) Nine units of biological science; or nine units of physics, chemistry, or physical sciences during the first year. (The units in each case include laboratory work.)

   (1) Biological science for those who have completed a high-school year of physics or chemistry only.

   (2) Physics, chemistry, or physical sciences for those who have completed a high-school year of biological science only.

[Note. — For those who have completed neither a biological science nor a physical science in high school, the requirement is nine units of biological science and nine units of physics, chemistry, or physical sciences (a total of eighteen units taken during the first and second years).]

b) Electives to make up the total of fifteen units in the group.

**Group III.**—Social sciences (history, political science, economics, philosophy, and education).

a) History of Western Civilization (History 10, 11, 12), twelve units, during the first year.

b) Social sciences, during the second year. This requirement may be fulfilled by taking (1) Social Sciences 1, 2, 3, or (2) Economics 1 and 2, or (3) Political Science 1 and 2, or (4) two courses selected from those approved by the Lower Division Committee. (Approved courses at present are: Economics 75; Philosophy 2 or 7 or 10; Political Science 51; Psychology 51.)
Students enrolled in the Lower Division will be required to attain an average grade of C on their total record in the University before they are given Upper Division standing.

Physical training must be taken during the first six quarters in the University by all Lower Division students except those registered in the military department. No credit toward the degree of Bachelor of Arts is allowed for practical work in either physical or military training until this requirement is satisfied. Students transferring from other institutions, except those who register in the military department, are required to take a maximum amount of six quarters of physical training at this University, unless all other Lower Division requirements are completed before the expiration of this time.

Students transferring from other institutions with advanced standing will be relieved from such of the group requirements of the Lower Division as, in the judgment of the Committee on Lower Division Administration, they have substantially completed elsewhere. Such students should consult the Lower Division office.

The requirements of the Lower Division may be anticipated to some extent by the proper choice of subjects presented for entrance credit. These may well include: three units in a foreign language, one unit in a biological science, one unit in physics or chemistry, and two units in history. Of the latter, one unit should be in United States history and one unit in Ancient, European, or English history. This is especially to be recommended when an engineering course has been definitely chosen, in which case trigonometry should also be included.

Most of the science departments in the University, including the School of Medicine, require a reading knowledge of French or German for graduation, and German is required for all advanced degrees in the Chemistry Department. It is advantageous to begin these languages before matriculation.

MAJOR SUBJECT REQUIREMENTS

The selection of a major subject will be made ordinarily at the end of the second year upon completion of the requirements of the Lower Division. The Lower Division student may, however, at the beginning of any quarter designate the particular field in which he expects later to do his major work, and will then be directed to the proper school for consultation and advice regarding electives before making up his study-list.

At the beginning of the junior year, and upon completion of the Lower Division requirements, the student selects as a major subject the work offered by some one school. The school so chosen has the authority to prescribe not more than sixty units in the major subject (exclusive of elementary courses which may have been offered for entrance). The school shall also recommend such other courses as may be considered desirable, and shall exercise an advisory supervision over the student's curriculum from quarter to quarter. It shall be considered a general principle of University policy, to be departed from only in exceptional cases, that at least ninety of the one hundred and eighty units required for the degree be taken outside the major field of study.

In applied science the school may prescribe as much of the entire one hundred and eighty units as it shall deem essential to the technical or professional requirements of the major subject.

Within these limitations the work is elective, and the student may freely choose any course which his previous studies have prepared him to undertake.
(A student in regular undergraduate standing who does not intend to become a candidate for the degree of Bachelor of Arts may choose, with the approval of his advisers, any course in the University which his previous training has prepared him to undertake.)

UNIVERSITY DIVISION REQUIREMENTS

The University Division has been organized to permit students of distinctly superior ability to proceed directly toward the degree of Master of Arts, or other advanced degrees, without obtaining the degree of Bachelor of Arts, or having necessarily conformed to the requirements for this degree or for the Lower Division. An outline of the plan and its requirements, together with information relative to the transfer of Lower and Upper Division students to the University Division, will be found in the Information Bulletin.

DEGREES

Candidates may be presented for graduation in January, April, June, and September.

No degree will be conferred upon any person who has not spent at least three quarters in resident study at the University. No honorary degrees are given.

BACHELOR OF ARTS

The degree of Bachelor of Arts (A.B.) is conferred upon candidates recommended by the Committee on Graduation who, in addition to fulfilling the following requirements, have applied in advance for graduation.

1. The completion of one hundred and eighty (quarter) units of university work, including the required Lower Division courses, together with the required physical or military training.

2. The acquirement of twice as many grade points as there are units registered on the candidate’s record card.

3. The completion of the major subject requirements as prescribed by a school. The recommendation of that school is necessary to graduation.

Forty-five units constitute a normal year’s work (see page 46); but the ordinary class divisions (freshman, sophomore, junior, senior) are not recognized by the University. The degree is conferred whenever the requirements are met, provided the candidate has spent three quarters in resident study and completed at least forty-five units (including the last fifteen) in this University. In special cases, students who have obtained at least one hundred and thirty-five units in resident work, and who have completed all major requirements, may be exempted from completing the last quarter’s work in this University and permitted to complete the required number of units elsewhere.

If graduates of other universities desire to become candidates for the baccalaureate degree, the question of units required for graduation may be waived, upon approval of the Committee on Admission and Advanced Standing, and the degree conferred on the satisfactory completion of not less than forty-five units of university work and the fulfillment of all major and minor requirements.

As a recognition of high scholastic attainment the Bachelor’s degree may be granted “with distinction” or “with great distinction.”
MASTER OF ARTS

The degree of Master of Arts (A.M.) is conferred on recommendation to the Academic Council by the Committee on Graduate Study, upon the satisfactory completion of one academic year of graduate work at this University, the presentation of an approved thesis, and the passing of such general or final examinations as may be set by the school or department concerned.

A Bachelor's degree from this University, or evidence of equivalent training, is required for admission to candidacy. In no case will the degree be granted unless the student has been registered for three quarters after completing the requirements for the Bachelor's degree. A longer period of residence will be necessary for students who are inadequately prepared or who devote less than the normal amount of time to their studies. During the final quarter, however, when the degree is to be conferred, it is expected that the candidate will be a registered student in this University.

Admission to candidacy is granted by the Committee on Graduate Study on the basis of an application, approved in writing by the school or department in which the candidate proposes to take the degree, and filed with the Registrar not later than the fourth week of the second quarter of residence. This application should include the subject of the proposed thesis and a program of study approved by the school or department. Applications once submitted must be kept on file and may not be withdrawn even if substitutes are filed and accepted. At least two-thirds of a year’s work must be devoted to advanced or graduate study in the major subjects or in closely allied subjects. Work may be done in connection with regular courses, or, as research, independently of them.

A thesis presented for the degree of Master of Arts should show that the candidate has ability to do independent thinking. A copy of the thesis, bearing the approval of the instructor under whose supervision it was prepared, must be submitted to the Committee on Graduate Study by the date on which instruction closes for the quarter in which the degree is to be conferred. This copy shall be the original, not a carbon copy, typed on paper of standard size and weight, with a title page of the form prescribed by the Committee, and suitably bound. The thesis upon acceptance will be placed in the University Library.

MASTER OF BUSINESS ADMINISTRATION

The degree of Master of Business Administration (M.B.A.) will be conferred, upon the recommendation of the Committee on Graduate Study, when the student has satisfied the requirements laid down by the faculty of the Graduate School of Business. (Full particulars concerning these requirements will be found in the Announcement of the Graduate School of Business.)

MASTER OF EDUCATION

The degree of Master of Education (Ed.M.) is conferred, upon recommendation of the faculty of the School of Education and the Committee on Graduate Study, on students who complete satisfactorily the program of advanced study in education as outlined by the faculty of the School of Education. This program involves a minimum of two years of graduate study.

Admission to candidacy is made on recommendation of the Committee on Advanced Degrees, which bases its decision on a preliminary conference with
the candidate and on all available evidence relative to the candidate's fitness to enter upon the program. Among the items considered by this Committee is the score on an aptitude test administered by the University.

After preliminary admission to candidacy the work of the student progresses under the guidance of an adviser chosen by the student from the representatives of the faculty in the field of concentration.

(For complete information regarding requirements for the Ed.M. degree, consult the Announcement of the School of Education.)

ENGINEER

Admission to Candidacy.—Admission to candidacy for the degree of Engineer is granted by the University Committee on Graduate Study to (A) the holder of a Bachelor's degree from this University, or its equivalent, or (B) a student who, on the basis of scholarship, has been granted admission to the University Division (see regulations governing the University Division, pages 41-42). Admission to candidacy is made on the basis of an application (1) made in quadruplicate on the blank provided by the Registrar's Office, (2) setting forth the program of study and the subject of the thesis, (3) formally approved by the department covering the major subject, (4) formally approved by the School of Engineering, and (5) filed with the Registrar not later than the fourth week of the quarter preceding that in which the degree is to be granted.

Applications once submitted must be kept on file and may not be withdrawn even if substitutes are filed and accepted.

Residence.—Six quarters in residence are required for the degree of Engineer. A longer period of residence will be necessary for candidates who are inadequately prepared or who devote less than the normal proportion of time to their studies. During the final quarter, however, when the degree is to be conferred, it is expected that the candidate will be a registered student in this University. The residence requirement may be waived in part in exceptional cases by the University Committee on Graduate Study upon recommendation of the department and approval of the School of Engineering.

Program of Study.—The program of study must satisfy the department chosen by the student, and include ninety units of which at least sixty units must be devoted to advanced or graduate study in the major subject or intimately allied subjects.

Candidates for the degree of Engineer in the University Division, not being candidates for the Bachelor's degree in the School of Engineering, need not follow the curriculum of that School in its entirety. It is recognized, however, that the best preparation for specialized engineering training is a broad foundation of cultural, scientific, and fundamental engineering studies. Students in the University Division will therefore be expected to complete the substantial equivalent of the course prescribed by the School of Engineering. They shall arrange their study programs in consultation with the head of the appropriate department, and such programs shall be subject to the approval of the Dean of the School until the requirements are substantially met, after which time they shall be subject to the approval of the major department only.

Approval of Application.—The student should present in quadruplicate his application for admission to candidacy, made as directed under (1) and (2) above, to the department.

The department will approve the application upon satisfactory evidence
that the student is adequately prepared to complete the accepted program of study and that he is likely to complete the program within the scheduled time and in a creditable manner.

The department will transmit each approved application for admission to candidacy for the degree of Engineer to the School of Engineering for approval by its Executive Committee and transmission to the University Committee on Graduate Study.

**Thesis.**—A copy of the thesis, bearing the approval of the instructor under whose supervision it was prepared, must be submitted to the University Committee on Graduate Study by the date on which instruction closes for the quarter in which the degree is to be conferred. This copy shall be the original, not a carbon copy, typed on paper of standard size and weight, with a title page of the form prescribed by the University Committee on Graduate Study, and suitably bound. The department may require a second copy of the thesis for the department files. The thesis upon acceptance will be placed in the University Library.

**Examinations.**—Final or general examinations of the candidate may be prescribed by the School or department.

**Recommendation.**—Upon the satisfactory completion of the foregoing requirements and the receipt of the written recommendation of the department bearing the written approval of the School, the University Committee on Graduate Study will recommend that the University confer upon the candidate the degree of Engineer in the department and subdivision of engineering in which his thesis lies.

**DOCTOR OF EDUCATION**

The degree of Doctor of Education (Ed.D.) is conferred, upon recommendation of the faculty of the School of Education and the Committee on Graduate Study, on students who complete, in a satisfactory manner, the program of advanced study in education as prescribed by the faculty of the School of Education, submit a satisfactory dissertation, and give evidence of broad and substantial scholarship in the selected fields. This degree is of two types: (I) the Administrator type, and (II) the Master-Teacher type. The time requirement is a minimum of three years of graduate study.

Admission to candidacy for either type of the degree is based upon a preliminary conference with the Committee on Advanced Graduate Degrees of the School of Education. This committee will use all available evidence on the candidate's fitness to enter upon the program. Among the items considered is the score on an aptitude test administered by the University.

After preliminary admission to candidacy the work of the student is under the guidance of an adviser chosen by the student from the representatives of the faculty in the field of concentration. At least four weeks before the last day of instruction in the quarter in which the degree is to be conferred, the candidate must deposit with the School of Education three typewritten copies of the dissertation, bound according to University regulation; and file at the Registrar's Office an approved abstract of the dissertation, 500 to 2,000 words in length, and a brief biography. A deposit of $25 will be required to cover cost of publishing the abstract in the annual volume issued by the University.

(For complete information regarding requirements for the Ed.D. degree, consult the *Announcement of the School of Education.*)
BACHELOR OF LAWS

The degree of Bachelor of Laws (LL.B.) is conferred upon recommendation of the Committee on Graduate Study on students who have received the degree of Bachelor of Arts, or its equivalent, from this University or from some other institution of recognized collegiate rank, and who have thereafter: (1) satisfactorily completed courses in law aggregating 117 units if pursuing the four-year law course, or 120 units if pursuing the three-year law course; (2) devoted thereto nine full quarters of time; and (3) otherwise satisfied the requirements of the University and of the School of Law. (For information concerning the pre-legal curriculum, the four-year law course, and other matters relating to degrees in law consult the Announcement of the School of Law.)

MASTER OF LAWS

The School of Law offers work leading to the degree of Master of Laws (LL.M.) to those wishing additional training. This work is designed to serve the needs of two groups of students: those desiring a more complete training for the practice of law and those looking forward to law teaching or other forms of scientific legal research. The work offered is varied and can be adapted to the needs of each student. Opportunity will be afforded the student to include in his program such second- and third-year law courses, not already completed, as are desirable for the rounding out or supplementing of his previous training. In addition he must do a certain amount of directed research. Arrangements have also been made with the Graduate School of Business whereby fourth-year law students will be admitted to such courses in business as are most appropriate for the lawyer. The practice of law today is such that to be efficient the lawyer must be able to understand not only his business client's point of view, but also his client's business problems. Such courses as Accounting, Business Finance, Statistics, and Industrial Relations are admirably adapted to this purpose and may be included as a part of the fourth-year program. (For an outline of courses in business see the Announcement of the Graduate School of Business.)

Admission to candidacy for the degree of Master of Laws will be granted only to students who are eligible for admission to the School of Law in regular standing and who have completed, with grades acceptable to this faculty, the work for the first degree in law at this University, or at some other university law school of recognized standing in which the work for the first degree in law covers a period of not less than six years of combined academic and law study, and who otherwise satisfy the requirements of the University and of the School of Law.

The degree of Master of Laws will be conferred upon students so admitted to candidacy upon the successful completion of one year (39 units) of work in this school in accordance with the rules of the University and of the School of Law. Upon his admission to candidacy, each student must present for the approval of the faculty the program which he wishes to pursue for this degree. The major portion of such program shall be in law and shall include at least ten units in two or more fourth-year law courses, in one of which a minimum of six and a maximum of eight units shall be devoted to the preparation of an acceptable thesis.
DOCTOR OF THE SCIENCE OF LAW

Admission to candidacy for the degree of Doctor of the Science of Law (J.S.D.) will be granted only to those who have received the degree of Master of Laws at this University and who have completed the work required for such Master's degree with marked excellence and have given clear proof of ability to do independent research in law of a high order.

The degree of Doctor of the Science of Law will be conferred upon applicants so admitted to candidacy who spend one full academic year in independent legal research and as a result thereof present a thesis which is, in the opinion of the faculty of the School of Law, a contribution to knowledge. Such work and thesis shall conform to the rules and regulations of the University and of the School of Law.

DOCTOR OF MEDICINE

The degree of Doctor of Medicine (M.D.) is conferred, upon recommendation of the Committee on Graduate Study, on students who complete the five years' curriculum in medicine (which includes the interne year), based upon the three years' pre-medical course as laid down by the University. (Full information concerning requirements for the M.D. degree will be found in the Announcement of the School of Medicine.)

DOCTOR OF PHILOSOPHY

General Regulations.—The degree of Doctor of Philosophy (Ph.D.) is conferred on recommendation to the Academic Council by the Committee on Graduate Study, upon evidence of substantial scholarship, high attainment in a particular field of knowledge, and ability to do independent investigation and present the results of such research. Admission to candidacy requires a Bachelor's degree from this University, or evidence of equivalent training, and a reading knowledge of French and German. After admission to candidacy each candidate must pass an oral examination, present an acceptable dissertation, and, in certain cases, pass a second oral examination, before the Committee on Graduate Study will recommend the candidate for the degree. A minimum of three years (nine quarters) of graduate study satisfactorily completed is required of candidates; at least one of these years, ordinarily the last, must be spent as a registered student at Stanford University. It is expected that candidates for the degree will be registered in the University during the quarters in which the oral examination is given and in which the degree is conferred, unless formal arrangements to the contrary are made in advance.

All applications or petitions to the Committee on Graduate Study must be submitted to the school or department concerned for approval before being filed with the Registrar. Communications should be addressed to the Dean of Graduate Study, Registrar's Office, Stanford University, California.

Admission to Candidacy.—An application for admission to candidacy must be made on a form to be obtained and filed at the office of the Registrar. This should be done during the second year of residence for the degree, in any event not later than the fourth week of the last academic year of residence for the degree. This application must set forth a major subject and one or two minor subjects (or a major and a distributed minor), together with the subject of the dissertation and the proposed program of study, and must be
DEGREES

approved by the schools or departments concerned. If necessary, a substitute application may be filed for acceptance at a later date, but the original may not be withdrawn. Approximately two-thirds of the proposed program shall be devoted to the major subject, though in exceptional cases the requirement for the minor may be waived by the Committee on Graduate Study, upon a written petition from the applicant stating the reasons therefor and bearing the approval of the major and minor schools or departments.

In order to determine his fitness to fulfill the major and minor requirements each prospective candidate shall be examined orally or in writing by the schools or departments in which he proposes to work for the degree. If the respective faculties consider the applicant properly qualified, the executive heads of the schools or departments concerned shall recommend in writing to the Committee on Graduate Study that admission to candidacy be approved. This recommendation should be made on blanks obtainable at the office of the Registrar not later than the fourth week of the last academic year of residence for the degree.

Foreign-Language Requirement.—Application for admission to candidacy must be accompanied by certificates stating that the student possesses a reading knowledge of French and German. In special cases, with the approval of the school or department, and the Committee on Graduate Study, another foreign language may be substituted for French or German when such substitution is justified by the literature of the applicant's general field of study. The certificates shall be issued by examiners designated by the Committee on Graduate Study. (The dates assigned for foreign-language examinations each quarter are published in the Time Schedule.)

Oral Examination.—When a candidate has shown special ability in his field of study and has proved his capacity for independent investigation, to the satisfaction of the school or department concerned, he may arrange through the Dean of Graduate Study for an oral examination. The purpose of the examination is to test the candidate's command of his fields of study and to confirm his fitness for scholarly pursuits. This examination shall be approximately three hours in length and shall be held not later than the eighth week of the last (academic) year of candidacy. The examining committee shall be composed of (1) the Dean of Graduate Study or his delegate, presiding, (2) five or more professors, appointed by the Dean of Graduate Study, from the schools or departments in which the major and minor subjects lie, (3) any representatives selected by the major and minor departments, and (4) any members of the Academic Council who may attend. The candidate may be recommended to the Committee on Graduate Study on the favorable vote of three-fourths of the examiners.

Five members present and voting, including representatives of both major and minor subjects, shall constitute a quorum.

Dissertation.—Recommendation for the degree shall be made only after the acceptance of a dissertation, which must be a contribution to knowledge and the result of independent work, expressed in satisfactory form. At least four weeks before the last day of instruction in the quarter in which the degree is to be conferred, the candidate must deposit at the Registrar's Office (1) three printed or typewritten copies of the dissertation, including one original copy, (2) an abstract of its contents, and (3) a brief biography, all approved by the school or department. Upon the deposit of the dissertation, the Dean of Graduate Study shall appoint a special committee of three whose duty it shall be to read the dissertation, conferring with the candidate if it so
desires, and to report to the Dean of Graduate Study whether or not in its opinion the dissertation is of a scope and quality acceptable in fulfillment of this requirement for the degree.

If the reading committee fails to recommend the approval of the dissertation, the candidate shall be offered an oral examination on the dissertation, to be conducted by a committee constituted in the same manner as the committee conducting the primary oral examination and subject to the same regulations as to quorum, voting, and recommendations. Upon successfully passing such an examination the candidate shall be permitted to revise and resubmit his dissertation.

_Dissertation, Biography, Abstract, and Deposit._—Directions regarding the form of the dissertation, title page, abstract, and biography may be obtained at the Registrar’s Office. After its final acceptance, the Registrar shall order the three copies of the dissertation bound at the expense of the candidate. These copies shall be made available for loan from the University Library. The abstract, 500 to 2,000 words in length, will form a part of a volume issued annually by the University. Each candidate shall make a deposit (approximately $35) at the Comptroller’s Office, on or before the last day of instruction in the last quarter of candidacy, to cover the cost of binding his dissertation and his share of the cost of publishing the volume of abstracts.

**CREDENTIALS FOR PUBLIC SCHOOL SERVICE**

Stanford acts as agent for the State Department of Education of California in recommending students for credentials for service in California public schools, and also recommends to the proper educational authorities in other states that such credentials be issued.

Training is offered by Stanford University for the following credentials:
- General Secondary
- Junior College
- Special Credential in Speech Arts for the Correction of Speech Defects
- Administration and Supervision
- School Counseling
- Educational Research
- Child Welfare and Supervision of Attendance

The _Credential Bulletin_ issued by the School of Education gives complete information regarding requirements for credential recommendations by Stanford. This bulletin will be mailed, upon request, and should be carefully consulted by candidates for admission to the University who are planning to secure credentials. Information concerning the various requirements to teach in other states may be secured upon inquiry at the office of the Credential Adviser.

**CLUBHOUSES**

The Stanford Union, located south of the quadrangles, comprises three buildings with connecting arcades which are attractively located around a court half an acre in extent, with a fountain, the gift of the Class of 1922, as a central feature. Besides dormitory accommodations, these buildings contain public dining rooms, a spacious lobby, and offices for the student organizations. The Women’s Clubhouse, at the left of the main entrance, provides a social center for the women of the University with meeting rooms for various University and alumnae groups. The Stanford Union was projected by Herbert C. Hoover of the Class of 1895 and built by contributions from students, alumni, faculty, trustees, and friends of the University.
THE STANFORD DAMES

The Stanford Dames, a chapter of the National Association of University Dames, is an organization open to the wives of students in any department of the University. Its purpose is the promotion of acquaintance among these women that their temporary residence at the University may be more pleasant. Its meetings are held in the rooms of the Stanford Women's Club-house, at 3 o'clock on the first and third Thursdays of each month during the University year. Those eligible for membership may become members by paying the annual dues of one dollar.

SPECIAL LECTURES AND RECITALS

During the summer quarter there is presented by the University a series of public lectures covering various fields of interest. These lectures are offered at late afternoon and early evening hours, times free from other academic exercises, and are open to students and faculty without admission charge. A number of concerts and recitals are also given on the campus.

Due to the importance of the program of the Division of Speech and Drama there will be presented interesting plays as well as several play readings during the quarter.

The easy access to San Francisco makes it possible to supplement this local program with visits to the theaters, concert halls, and galleries of the great metropolitan city noted for its cultivation of art and music.

OPPORTUNITIES FOR RECREATION

Stanford is a residence university surrounded by a beautiful campus of approximately nine thousand acres which extends into the foothills of the Coast Range and which offers many opportunities for recreation. A first-rate golf course is located on the campus within walking distance of the main buildings. Operated under University auspices this course is available to all students at a small fee. There are four splendidly-equipped open-air swimming pools, many excellent tennis courts, and gymnasiums for men and women which provide full facilities for physical training. A short distance from the Stanford community and on the University grounds is Searsville Lake, available for boating, swimming, and picnics. The near-by mountains and beaches are most inviting for excursions. There are points of interest easily accessible for week-end excursions, and special motor trips may be taken to Carmel, Monterey, Santa Cruz, Big Basin, La Honda, Half Moon Bay, and Lick Observatory on Mount Hamilton.

Recreational facilities at the Women's Gymnasium are open to all students and faculty as well as to members of summer conferences held on the campus. On Sunday afternoons the swimming pool will be open for both men and women, and regularly available are facilities for tennis, badminton, volleyball, and golf. Arrangements for the use of facilities may be made at the office of the Women's Gymnasium.

Although situated in the country, Stanford is a suburban community of San Francisco, and excellent transportation facilities make readily accessible the advantages of this great city, so full of charm and interest for visitors.
COURSES OF INSTRUCTION

[Courses numbered 1 to 99 inclusive are primarily for Lower Division undergraduates; from 100 to 199 inclusive, for Upper Division undergraduates; from 200 to 499 inclusive, for graduate students. Courses scheduled at the Hopkins Marine Station are numbered 500 to 599 inclusive. Detailed statements regarding requirements for degrees in all departments of the University will be found in the Annual Register or Announcement of Courses. The University reserves the right to make, without notice, any necessary changes in the regulations and courses outlined herein.]

SCHOOL OF BIOLOGICAL SCIENCES

LEROY ABRAMS, CHARLES HASKELL DANFORTH, WALTER KENRICK FISHER, EDWIN WILLIAM SCHULTZ, CHARLES VINCENT TAYLOR (Chairman), FRANK WALTER WEYMOUTH, Executive Committee

The School of Biological Sciences comprises the following departments of instruction and research: Biology (including the Hopkins Marine Station and the Natural History Museum), Anatomy, Bacteriology and Experimental Pathology, and Physiology.

The School provides: (1) informative courses for the general student, (2) programs of study leading to the degree of Bachelor of Arts, and (3) museum, library, and laboratory facilities for graduate study and research in any of the biological fields represented on the campus or at the Hopkins Marine Station at Pacific Grove.

Five programs of study leading to the degree of Bachelor of Arts are offered by the School. This degree is conferred only upon recommendation of the Executive Committee of the School.

REQUIREMENTS FOR GRADUATION

All candidates for the degree of Bachelor of Arts entering subsequent to June, 1939, are required to complete a minimum of 71 units in one of the five programs prescribed by the School. Each program will include (1) the series of foundation courses, which must be completed with at least an average grade of C, (2) 22 units of cognate courses in the physical sciences, and (3) elective courses in the School and related fields to complete the total major requirement of 71 units. Ordinarily this will involve 25 units of elective courses.

A student transferring from another institution should file a statement of credits promptly with the secretary of the School. These credits will be evaluated by the Executive Committee and the student will be duly advised in regard to his remaining program.

FOUNDATION COURSES

This series provides a broad foundation in basic biological disciplines. A total of six courses is required in this series. The first three courses, dealing primarily with the comparative structure of organisms, constitute a year's
sequence and are required of all students. In the remaining fields represented in this series, certain specified options are provided:*

1. Comparative Structure: Biology 91 4 units
2. Comparative Structure: Biology 92 4 units
3. Comparative Structure: Biology 93 4 units
4. Embryology: Biology 105 4 units or Anatomy 112 5 units
5. Physiology: Biology 106 4 units or one of the following:
   Physiology 153† 9 units
   Bacteriology 238† 5 units
   Biology 530‡ 7 units
   Biology 534‡ 5 units
   Biology 538‡ 5 units
6. Genetics: Biology 107 4 units or Anatomy 141 2 units

† Given on the campus.
‡ Given at Hopkins Marine Station.

COGNATE COURSES

Chemistry 10, 11, 12 (or equivalents) 12 units
Other elementary physical science 10 units

The foundation and cognate courses should ordinarily be completed by the end of the junior year, thus leaving the senior year free for elective courses, to be chosen according to the student’s needs and interests.

ELECTIVE COURSES

The total number of units acquired by the student in the fulfillment of the foundation and cognate course requirements will vary depending upon the options chosen. The requirement for the major will be completed by electing additional courses to make the total 71 units.

All courses listed in the Announcement of Courses in the departments constituting the School of Biological Sciences, unless otherwise specified in the Announcement of Courses, may be elected toward the fulfillment of this requirement. In addition, the following courses in related fields outside the School will be accepted, and such other courses as may be approved by the Executive Committee of the School:

Chemistry 111, 112, 121, 123, 136, 141, 142, 143, 144, 181, 183, 241
Economics 187, 188
Physics 25, 161, 162
Psychology 130, 133, 194, 195
Geology 102, 141, and other courses in paleontology given in the Department of Geology

Ordinarily not more than half of the elective units may be taken outside the School.

* The only exception permitted is the substitution of Biology 1, 2, and 3 for Biology 92. If this substitution is made, the student will have his elective units adjusted so that the total number of units required for the major shall not exceed 71 units.
PROGRAMS LEADING TO THE DEGREE OF BACHELOR OF ARTS

The object of the foundation series is to ensure for all students majoring in the School of Biological Sciences a common basic training. A student may desire to concentrate his elective work in some special field or he may choose to spread his elective work rather broadly in the School and related fields. Accordingly, five different programs leading to the degree of Bachelor of Arts are provided.

1. Bachelor of Arts in Biological Sciences (Biology).
   The elective subjects may either be concentrated in some field in the Department of Biology or distributed more widely in the departments of the School and related fields. A program leading to this degree may be arranged with the help of an adviser to meet the needs and interests of the student.

2. Bachelor of Arts in Biological Sciences (Anatomy).
   The elective subjects will be taken in the Department of Anatomy and related fields as prescribed. (See annual Announcement of Courses.)

3. Bachelor of Arts in Biological Sciences (Bacteriology).
   The elective subjects will be taken in the Department of Bacteriology and related fields as prescribed. (See annual Announcement of Courses.)

4. Bachelor of Arts in Biological Sciences (Physiology).
   The elective subjects will be taken in the Department of Physiology and related fields as prescribed. (See annual Announcement of Courses.)

5. Bachelor of Arts in Biological Sciences (Basic Medical Sciences).
   Students who have completed the foundation courses in the School of Biological Sciences and have been admitted to the School of Medicine may, upon completion of 45 units of medical work with an average grade of C, be recommended for the degree of Bachelor of Arts in Biological Sciences (Basic Medical Sciences).

ADVANCED AND RESEARCH COURSES

Advanced courses and research are offered to qualified students in the following disciplines of the biological sciences, which are well represented on the campus and at the Hopkins Marine Station by able teachers and investigators: (a) plant systematics, animal systematics and connected interests (entomology, herpetology, ichthyology, marine invertebrates); (b) plant morphology, invertebrate and vertebrate morphology; (c) human anatomy, anthropology, mammalian embryology, endocrinology; (d) experimental morphology, experimental embryology; (e) plant, animal, and human genetics, cytology, cytogenetics; (f) marine and fresh-water ecology, oceanography, experimental ecology, fisheries biology; (g) plant physiology, general physiology, photobiology, comparative physiology; (h) human and mammalian physiology; (i) bacteriology, immunology, filtrable viruses; (j) microbiology and protistology; (k) biochemistry, biophysics; (l) psychobiology.

The disciplines listed above are among those commonly pursued in universities by students looking toward teaching and research, and medicine. They may also serve, however, as an essential background and basic training toward desirable positions in various branches of applied science, especially in agricultural and industrial fields and in governmental agencies. Majors in the School of Biological Sciences who may be interested in such pursuits should confer with their staff adviser for assistance in the selection of courses in the School and adjacent fields best suited for training toward a chosen objective.
THE TEACHER'S RECOMMENDATION

Programs are provided for candidates seeking either (a) General Secondary Credentials, with a teaching-major or a teaching-minor in Biology, or (b) Junior College Credentials. Candidates holding the A.B. degree may satisfy the requirements for a General Secondary Credential by completing approved courses of study in biology and education in a minimum of three quarters of graduate study. Candidates who hold a degree of Master of Arts or Doctor of Philosophy may qualify for a Junior College Credential in Biological Sciences with a teaching-major or -minor in any one of the following fields: (a) Biological Sciences, (b) Botany, and (c) Zoology. In satisfying the requirements for a teaching credential the candidate may offer units transferred from other institutions, but at least one course of advanced character should be taken in this department. Some substitution may be made in courses in the second-year sequence of the foundation courses, with the approval of the adviser in the Department of Biology. For the details of these programs the prospective candidate should consult the Credential Requirement bulletin of the School of Education and his adviser in the Department of Biology.

ADVANCED DEGREES

Programs of graduate study and research leading to the degrees of Master of Arts and Doctor of Philosophy are offered by the various departments of the School.

In certain cases co-operative arrangements may be made for programs of graduate study and research leading to a degree in one department of the School to be supervised by one or more members of other departments, subject to general University regulations, the requirements of the department in which the degree is sought, and the approval of the departments concerned.

BIOLOGICAL LIBRARIES

The working libraries of the School afford access to current numbers and recent volumes of journals representative of all of the major biological fields. Certain books and journals devoted chiefly to anatomy and to bacteriology are kept, for the present, in the libraries of the respective departments. There are also special collections in the Natural History Museum and at the Hopkins Marine Station. At the latter, special attention is given to building up an extensive and valuable collection of books, journals, and reprints especially on marine biology. In addition to the main University Library, the departmental libraries of chemistry, physics, and paleontology, as well as the Lane Medical Library in San Francisco, are open to qualified students in the School of Biological Sciences.

BIOLOGY

CHARLES VINCENT TAYLOR, WALTER KENRICK FISHER, CORNELIS BERNARDUS VAN NIEL, TAGE SKOGSBERG, FRANK WALTER WEYMOUTH, Professors
ROLF LING BOLIN, Assistant Professor
ROBERT THOMAS ORR, GEORGE BOWYER ROSSBACH, Acting Instructors
The Department of Biology comprises the following divisions of advanced teaching and research: (a) General and Experimental Biology, (b) Natural History, (c) Marine Biology and Oceanography. The laboratories of these divisions are housed in Jordan Hall and the Natural History Museum on the campus, and in the Hopkins Marine Station in Pacific Grove. These laboratories provide first-rate facilities for instruction and excellent equipment for research in the various biological fields represented by members of the department. The marine, land, and fresh-water flora and fauna are abundant and interesting for field studies and in many cases are exceptionally suitable for experimental work. Brackish, marine, and brine organisms are within convenient reach of the campus in both the San Francisco Bay and the ocean, and are unusually numerous and available at or near the Hopkins Marine Station on Monterey Bay.

In addition to the foundation courses (24 units) and the cognate courses (chemistry, 12 units, and other physical science, 10 units), or their substantial equivalents, at least 25 units of other courses are required for graduation in Biological Sciences (Biology). These may be chosen from the courses announced below, including the courses offered in the Hopkins Marine Station and the Natural History Museum, or from courses offered in anatomy, bacteriology, chemistry, geology, paleontology, physics, physiology, psychology, and sociology, as approved by the department.

ADVANCED DEGREES

Graduate study and research leading to the degrees of Master of Arts and Doctor of Philosophy may be carried on in the biological laboratories on the campus or at the Hopkins Marine Station on Monterey Bay. Students properly qualified for advanced studies in any of the representative fields of investigation previously noted (see page 68) may find available exceptional facilities for research and adequate reference literature in the biological libraries.

A student who has fulfilled the requirements for the degree of Bachelor of Arts, or their approximate equivalent as determined by the department, may undertake graduate work. But before admission to candidacy for an advanced degree, a prospective candidate must conform to the regulations of the department stated below and of the University as outlined on pages 58–64.

The department requires of a prospective candidate for an advanced degree an adequate preparation for graduate study in his chosen field. Accordingly, his program of study and research must be duly formulated with the advice of the professor with whom he elects to work and the program approved by the department and by the Committee on Graduate Study of the University.

An accepted candidate for the degree of Master of Arts in Biology must fulfill the University requirements for that degree and prepare and present a Master's thesis. The thesis may comprise (1) the results of a satisfactory research project or (2) a critical review of the literature in some specified field with or without research. Upon approval of the thesis by the professor in charge and by the department, recommendation will be made to the Committee on Graduate Study that the degree be conferred.

Before being recommended for admission to candidacy for the degree of Doctor of Philosophy, the prospective candidate will be required to pass a qualifying examination in the subjects represented by the foundation courses and in other subjects appropriate to his chosen field. It is expected that all preliminary requirements, including the qualifying examination, will have
been met not later than the end of the second quarter of the year preceding that in which the degree is sought.

DIVISION OF GENERAL AND EXPERIMENTAL BIOLOGY

282. Special Problems.—For students who are properly qualified to undertake research or special study on some problem in the field of their special interest.
   (Staff) By arrangement

300. Research.—Prosecution of special studies by advanced and graduate students.
   (Staff) By arrangement

Fees.—Courses 282, 300, $1 per unit.

DIVISION OF NATURAL HISTORY

NATURAL HISTORY MUSEUM

ROBERT THOMAS ORR, GEORGE BOWYER ROSSBACH, Acting Instructors
ALBERT W. C. T. HERRE, Curator of Ichthyology
ROXANA STINCHFIELD FERRIS, Assistant Curator of the Dudley Herbarium

The Natural History Museum has for its general purpose the maintenance of provisions: (1) for proper housing and care of the systematic collections of animals and plants; (2) for furthering the growth and development of the collections through explorations; (3) for instruction, investigation and research in systematics, geographical distribution, ecology, and the general field of natural history. It is housed in the Museum Building, a fireproof structure, which provides, for the present, adequate space for the collections, and facilities for investigators.

DUDLEY HERBARIUM

The Dudley Herbarium, named in honor of Professor William Russel Dudley, is especially rich in material from Western North America and offers unusual facilities for critical systematic and distributional studies of the flora of that region.

Botanical exploration work is carried on each season by one or more members of the Herbarium staff, and properly qualified students are encouraged to participate in this work.

ENTOMOLOGICAL COLLECTIONS

The entomological collections are rich in material suitable as a basis for research, especially in certain groups. The collections of Mallophaga and Anoplura are almost unrivaled and that of Coccidae is one of the most important in existence, while smaller groups of ectoparasites are well represented. All of these collections contain large numbers of types and other especially important material. Much material of other insect orders, especially from the Western United States, is available to the research student.

ZOOLOGICAL COLLECTIONS

The zoological collections contain extensive series of littoral and bathybrial forms of the northern and tropical Pacific. The ichthyological collection is
especially important as it includes much of the material collected by Dr. David Starr Jordan to which numerous additions have been made. The marine and fresh-water fishes of North America are fully represented. There are extensive series of fishes of the deep waters of the Pacific and large collections from the West Indies, Hawaiian Islands, Samoa, the Philippines, Bering Sea, Japan, and the coasts of Mexico and Central America. The collection of marine invertebrates is rich in echinoderms and crustaceans and contains good working nuclei in other groups. The series of deep-sea forms is especially good. There is also a large representation of the amphibians, reptiles, birds, and mammals of the West.

**GENERAL COURSES**

112. **Flowering Plants.**—Lectures, laboratory, and field studies on the classification and ecology of the seed plants and ferns. The field studies will include excursions to the principal plant associations of the region for the purpose of observing and studying the living plants in their environment. Open to all students.

4 units (8 weeks) ( )

Th 1-4:30, alternating Saturdays (and 3 hours by arrangement)

122. **Birds.**—Classification and natural history, including studies in their habits and the geographical distribution of their species. The course provides field excursions and the study of prepared specimens in the laboratory. Open to all students.

4 units (8 weeks) (—)

W 1-4:30, alternating Saturdays (and 3 hours by arrangement)

**DIVISION OF MARINE BIOLOGY AND OCEANOGRAPHY**

HOPKINS MARINE STATION

**Walter Kenrick Fisher,** Director

**Charles Vincent Taylor,** Associate Director

**Rolf Ling Bolin,** Assistant Director

**Cornelis Bernardus Van Niel,** Tage Skogsberg, Frank Walter Weymouth, Professors

**Arthur Russell Moore,** Lecturer

The Hopkins Marine Station is located at Pacific Grove, on the south side of Monterey Bay, California. The ground area comprises seven and a half acres, consisting of the main portion of Cabrillo Point, with complete control of the Coast line of the Point and including an excellent sheltered landing place and harbor for boats.

The first unit, the Alexander Agassiz Laboratory, erected in 1917, is of reinforced concrete construction, approximately forty feet by eighty-three feet, and three stories in height. On the ground floor is an aquarium room; a concrete-floored room for the storage of collecting apparatus, etc.; a small museum room, a storeroom, furnace room, and two research rooms. The second floor, into which the main entrance opens, comprises three general laboratories and two private laboratories for instructors. The third floor contains a library, a laboratory for graduate students, and seven private laboratories for investigators. Fresh and salt water are provided.

The second unit of the Station, known as the Jacques Loeb Laboratory,
BIOL OGY

was completed in July, 1928. This building, intended for experimental biology, is of reinforced concrete construction and consists of a two-story central portion, with two flanking concrete wings of one story, enclosing three sides of a front court, the over-all dimensions being ninety-five by one hundred fifty-two feet. The eastern half of the first floor consists of a general laboratory, three advanced laboratories, four private rooms, two storerooms, and an office. The western half comprises a chemistry laboratory, two other large rooms for special work, a balance room, small storeroom, four special apparatus rooms, three small dark laboratories, a constant-temperature room, and a general office. The principal laboratories and workrooms are supplied with sea water, hot and cold fresh water, gas, direct and alternating current, compressed air, and vacuum outlets. The second story consists of a stack room, reading room, a laboratory, and two private rooms.

The adjacent boiler house, in addition to the central installation for the various systems of pipes, contains a storeroom and a workshop.

A sea-water tank has been constructed west of the building on an elevation of rocks, so that vibration from pumps will be eliminated. The pumping station is on the extreme western part of Cabrillo Point, where a supply of pure sea water is available.

The Station is open the entire year, and investigators and special students can be accommodated at any time. It maintains a permanent staff of research workers and technical assistants. Under exceptional natural advantages it provides for research and furnishes elementary and advanced instruction in biology. Regular classes are scheduled for the spring and summer quarters only.

ADMISSION AND FEE

Candidates for admission should make application to the Director, Hopkins Marine Station, Pacific Grove. The application should state in which of the following classes the candidate expects to register:

Class A. Special workers not expecting formal credit and not candidates for degrees.

Class B. Assigned students from institutions which have agreed to accept work completed at the Station in fulfillment of their requirements.*

Class C. Fully matriculated students in Stanford University.

(For detailed information regarding procedure and credentials necessary for admission, see the Announcement of the Hopkins Marine Station.)

A General Fee of $100 for the summer quarter of 1940 is payable by students taking regular courses or pursuing special work. Owing to limited laboratory space, reservation should be made in advance by payment of $10 of the General Fee. The balance will be payable on or before June 15. No refund of the General Fee will be made to students who leave before the end of the quarter.

Visiting investigators will be charged a minimum fee of $25 per quarter or fraction thereof; and for the use of larger rooms or more expensive equipment upward of $50 per quarter.

* Class B students should procure authorization to take the work desired from the Registrar of the institution from which they have been assigned. For these students, not fully matriculated, no records are kept on file at the Registrar's Office of Stanford University.
Late registration will be permitted only with the approval of the Director and of the instructors concerned. Students will not be accepted for half-quarter registration.

SUMMER CALENDAR

The calendar of the Hopkins Marine Station differs slightly from that of the University. Registration day is June 27, 1940. Instruction begins June 28 and ends August 31. Courses are scheduled three times weekly on alternate days, there being six full days of instruction weekly. In alternate weeks, Monday, Wednesday, and Friday courses are given Tuesday, Thursday, and Saturday; and vice versa.

COURSES OF INSTRUCTION

During the summer quarter, when there are numerous visiting investigators at the Station, major emphasis is placed on graduate work, and undergraduates will be encouraged to prepare themselves for advanced studies. The undergraduate courses scheduled below may form part of a program of graduate work, or, in the case of undergraduates, be taken with some special work (scheduled under Course 559).

501. Natural History of Marine Animals.—This course (501a and 501b) will provide a contact with varied aspects of the life of the ocean. It is intended for students who have not formally studied zoology and for biology students who desire a general survey rather than an intensive treatment of the subject. If desired, 15 units may be taken instead of 10.

501a. Similar in scope to Course 509, spring quarter: a field study of typical marine environments and of animal and plant communities; studies of adaptations and life activities of individual members of these communities in response to environmental factors.
5 units (BOLIN) MWF forenoons

501b. Concerned with oceanic invertebrate animals in respect to structure, classification and evolution.
5 units (FISHER) TThS afternoons

511. Marine Biology.—This course (511a and 511b) furnishes a survey of oceanic invertebrates, and their environment, as an essential part of the field of general biology. It is divided into two sections either of which may be taken independently. Open to elementary students.

511a. Ecology of organisms of the open sea; the fundamentals of biological oceanography; anatomy, taxonomy, and natural history of the more important phyla.
5 units (SKOGSBERG) TThS afternoons

511b. Ecology of shore and bottom animals; a study of classification and adaptations of one or more large phyla not covered by 511a. This course includes much of the field of Course 509, spring quarter.
5 units (BOLIN) MWF forenoons

530. General Microbiology.—An introduction to methods used in microbiological research. Elements of the morphology, taxonomy, and biochemistry of the major groups of micro-organisms with emphasis on saprophytic bacteria. Prerequisites: Chemistry 121 and 123.
7 units (VAN NIEL) TThS afternoons

538. Comparative Physiology.—A study of physiological processes as illustrated by living material from the chief animal groups. The work is
mainly experimental and it is essential that the student be familiar with the
structure of representative animals of the major phyla and have a working
knowledge of college chemistry.

5 units (WEYMOUTH) MWF afternoons

540. Marine Invertebrates.—An advanced laboratory course dealing with
the anatomy, classification, and development of certain groups of marine in-
vertebrates. Students may register for Course 501a if they desire field work.

5 units (SKOGSBERG) TThS forenoons

559. Individual Work.—Properly qualified Upper Division students may
undertake individual work in the fields indicated under Course 580. Such
studies are intended to introduce the serious student to methods of research.
Arrangements must be made by consultation or correspondence.

(DEPARTMENT STAFF) By arrangement

580. Graduate Work.—Problems involving original work may be under-
taken with members of the Staff in the fields indicated.

Marine Fishes.—Morphology, taxonomy, embryology, ecology.
(BOLIN)

Marine Zoology.—Problems connected with the anatomy, taxonomy, and
natural history of oceanic invertebrates.
(FISHER)

Experimental Embryology.—Studies in the chemical constitution of the egg
and the effects of ions on the development of the early embryo.
(MOORE)

Microbiology.—Morphology, taxonomy, and biochemistry of the various
groups of micro-organisms.
(VAN NIEL)

Oceanic Biology and Comparative Zoology.—Ecological problems pertaining
to open waters and comparative morphology and taxonomy of planktonic
organisms.
(SKOGSBERG)

Protoplasm.—Investigations on its elementary structure and differentiation as
related to cyclic and induced changes in the living cell.
(TAYLOR)

Comparative Physiology.—Problems involving the physiology of marine
organisms.
(WEYMOUTH)

ANATOMY

SHELDON K. WIRT, Instructor

COURSE OF INSTRUCTION

114. Human Anatomy.—A brief survey of the human body by means of
dissection and a laboratory study of anatomical preparations. Designed pri-
marily for students of nursing, hygiene and physical education, art, or others
properly qualified, except pre-medical and medical students.

5 units (WIRT) WThF 1-4, S 9-12
BACTERIOLOGY AND EXPERIMENTAL PATHOLOGY

Edwin William Schultz, Professor

The Department of Bacteriology and Experimental Pathology will offer no formal courses during the summer quarter of 1940. However, advanced students who are interested in continuing their research work may consult Dr. Schultz early in the quarter, so that arrangements may be made for supervision of their work.

PHYSIOLOGY

James Percy Baumberger, Professor
John Field II, Victor Ernest Hall, Associate Professors
Jefferson Martineau Crismon, Assistant Professor

During the summer quarter the Department of Physiology offers work both at the University and at the Hopkins Marine Station at Pacific Grove. The former includes a course in human physiology suited to the general student and a limited opportunity for independent work. Detailed information concerning the work at Pacific Grove will be found in the Announcement of the Hopkins Marine Station published in February.

COURSES OF INSTRUCTION

102. Elementary Human Physiology.—The structure and functions of the body with especial reference to maintenance, growth, and energy liberation. In this course, special attention is paid to circulation, digestion, excretion, and metabolism. Although designed to offer in connection with Course 101 a survey of the field of human physiology, this course is planned so that it may be taken independently of Course 101. Textbook: The Human Body, Martin, Advanced Course, Twelfth Edition. Open to Upper Division students and to Lower Division students who have had college courses in biology and chemistry.

5 units (8 weeks) (Crismon) Lec. MTWTh 10; Lab. MT 1-4

167. Undergraduate Readings.—Advanced exercises in physiology, for undergraduates, of a character to make the imposition of laboratory fees unnecessary. Among the topics at present available for study are: biological oxidation, oxidation-reduction potentials; animal metabolism; action of hormones; action of salts; muscle physiology; neurophysiology; physiology of the sense organs, etc.

1 to 3 units (Department Faculty) By arrangement

168. Undergraduate Problems.—Advanced exercises for undergraduates, involving laboratory work. Range of available topics as above.

(Department Faculty) By arrangement

207. Research (not involving laboratory).—An advanced non-laboratory course open to graduate students who have had one or more Upper Division courses in physiology. Designed to afford opportunity for the further study of selected subjects in physiology or the writing of theses. The work is planned for the individual student.

(Department Faculty) By arrangement
208. Research in Physiology.—Special problems for graduate students involving laboratory work.

(DEPARTMENT FACULTY)

By arrangement

Fees.—Course 102, $5; Courses 168 and 208, $2 per unit, maximum $10.

(For courses in Comparative Physiology given at Pacific Grove, see under Hopkins Marine Station, pages 74-75.)
GRADUATE SCHOOL OF BUSINESS

JACOB HUGH JACKSON, Dean
GEORGE WILLIAM DOWRIE, Professor of Finance
DAVID ERNEST FAVILLE, Professor of Marketing
H. KING HATHAWAY, Consulting Professor of Scientific Management
NORMAN JOHN SILBERLING, Professor of Business Research
HARRY RUDOLPH TOSDAL (Harvard University), Acting Professor of Marketing
PAUL ELIEL, Director of the Division of Industrial Relations
BARRETT FREDERICK McFADON, Associate Professor of Accounting
LILLIAN CAROLINE OWEN, Secretary

ORGANIZATION OF THE SCHOOL

The establishment of a Graduate School of Business had been under discussion at Stanford University for a number of years, when, through the action of the Honorable Herbert Hoover, a Trustee of the University, who brought the need of financial support for such a school to the attention of interested business men on the Pacific Coast, a small committee, composed of Messrs. Wallace M. Alexander, George M. Rolph, Paul Shoup, Thomas T. C. Gregory, and Milton Esberg, volunteered to secure the necessary funds. Mr. Harry Chandler, of Los Angeles, was especially helpful in cooperating with this committee. Through the co-operation of various firms and individuals the necessary funds were secured and the School was inaugurated with the beginning of the academic year 1925-26.

OBJECTIVES OF GRADUATE BUSINESS TRAINING

The purpose of graduate or professional training in business is to prepare men and women for effective service in business, and to develop in them habits of thought that make for continuing growth. The Graduate School of Business, which has as its main goal the training of students for junior executive positions, or for teaching positions in institutions of higher learning, emphasizes especially the following objectives:

1. The development of an appreciation and understanding of the human and material factors that make up the subject matter of business.
2. Intensive training in handling the records, tools, and technical aids by means of which business is administered and controlled.
3. The mastery of the basic principles of management, with practice in adapting and applying them to particular business situations.
4. The inculcation of the habit of basing all action on a careful and scientific analysis of essential data.
5. The stimulation of an aptitude for wise and timely action, which is the essence of executive leadership.

Business schools came into the system of higher education at a time when specialization in professional study was at its height. It was natural, therefore, for the scientific study of business to be directed largely toward the functional divisions of business—accounting, finance, production, marketing, advertising—rather than toward management as a whole. The manner in which management becomes a unifying and co-ordinating force, however, deserves special emphasis. Thus it is that the Graduate School of Business
emphasizes the essential unity of management throughout its two-year program of study.
Without neglecting the problems that arise in the several divisions of business, effort is made to develop those habits of mind whereby students instinctively think of a business as a unit. The School insists that they work out the solution of their problems with the requirements of the whole business in mind.

COURSE OF STUDY

The two-year course of study leading to the degree of Master of Business Administration is organized so as to include the following types of discipline:

A. Analyzing certain economic, geographical, legal, psychological, scientific, and technical aspects of management.

B. Developing an understanding of general management problems from the standpoint of a co-ordinated business unit. The first year's work under this heading centers around principles of organization and management which govern the structure and relationships within a business enterprise. The second year's work is concerned with major questions of business policy.

C. Acquiring a grasp of the chief functional or departmental fields into which business is divided for purposes of effective administration. Of these, accounting, finance, and statistics are given attention during the first year, while production and marketing are considered during the second year.

D. Specializing in a particular field.

(For detailed information regarding preparation and admission, requirements for the degrees of Master of Business Administration and Doctor of Philosophy, and the complete program of courses offered in the autumn, winter, and spring quarters, see the Annual Announcement of the Graduate School of Business. Inquiries should be addressed to the Secretary of the School.)

THE SUMMER QUARTER

The summer quarter courses in business are offered primarily for second-year students in the School. In the opinion of the faculty it is very advantageous to the student to begin graduate study of business in the autumn quarter; this summer program makes it possible, however, for the student to continue his work for six consecutive quarters in case he wishes to do so. Only students who have had the prerequisites indicated will be admitted to these courses.

It will be noted that the courses offered are complete in either the first half or the second half of the quarter. The first half will close on July 26 and the second half will begin on July 29.

COURSES OF INSTRUCTION

312. Accounting Control.—Further study is made in this course of the organization, personnel, and functions of the comptroller's department. Emphasis is given not only to those accounting problems which are common to nearly every business, but also to the special accounting methods and accomplishments of typical industries or groups. Each student makes a special study, for a chosen industry or line of business, of some of the more unusual
problems of cost accounting, budgeting, internal accounting control, and methods of internal auditing. The point of view is that of the executive accountant who supplies essential information to the management, and who assists in the interpretation and use of the data in the determination and execution of policies. Prerequisite: Business 213, or equivalent.

4 units, first half (8 recitations weekly) (McFadon) MTWTh 1–3

321. Investments and Investment Institutions.—Students in schools of business administration not only enter the employ of investment institutions in considerable numbers but, sooner or later, are all faced with the problem of investing their own funds. It is the purpose of this course, through the use of readings, conferences, and cases, to develop the principles of sound investment and to study and appraise critically the investment trust, investment management and counsel organizations, investment banking houses, stock brokerage concerns, and other investment institutions. Prerequisites: Business 213 and 221, or equivalents.

4 units, second half (8 recitations weekly) (Dowrie) MTWTh 8–10

331. Business Dynamics and Forecasting.—A study is made in this course of economic trends and cyclical changes, with special reference to methods of determining the most probable future course of developments. The subject of trend projection is analyzed with respect to statistical precautions and limitations and with respect to the non-economic factors involved. Attention is given to cyclical changes in industrial, commercial, agricultural, financial, and price phases of business, and the methods of anticipating major changes in the general and regional business cycle are examined. The course includes discussion of the application of long-term and short-term forecasts to specific problems of management and to the proper understanding of changing general forces which have a bearing upon business and investment. Prerequisite: Business 231, or equivalent. Business 233 is recommended but not required.

4 units, first half (8 recitations weekly) (Silberling) MTWTh 3–5

332. Research in Applied Forecasting.—Students preparing to enter the research field are given an opportunity in this course to investigate the practical bearings of the dynamic analysis of business processes, such as trends and cyclical changes. What actual and potential use can be found for such methods of measurement and forecasting as are now available? What are the specifications which forecasting technique must meet in order to provide a reliable instrument of management, of investment procedure, or of public policy? Should dynamic observations and conclusions be principally used to take advantage of situations or to serve as the basis for preventive and protective action? The course will be concerned primarily with supervision of individual research projects and experiments conducted by the class. Prerequisites: Business 233 and 331.

4 units, second half (8 recitations weekly) (Silberling) MTWTh 3–5

340. Marketing.—This course is a continuation of Business 248. It is designed to familiarize students with marketing methods and to give training in the analysis of selling problems through the discussion of cases taken from actual business experience. The following topics are included: merchandising policy, brands and trademarks, sales promotion, advertising, pricing, and market research. Prerequisite: Business 248, or equivalent.

4 units, first half (8 recitations weekly) (Faville) MTWTh 8–10

344. Sales Management.—By means of discussion of specific problems, this course aims to give a broad view of the important phases of sales ad-
ministration, planning, and execution, as applied to manufacturing and wholesaling concerns. It deals specifically with the structure and functioning of the sales organization and the correlation of its activities with those of the production and other departments of the business enterprise.

After a brief introduction to the field of sales management, problems of merchandising policy and merchandising research are discussed. Special attention is then devoted to methods of research and planning as applied to sales, including the various forms of market analysis and market research. A study is then made of sales promotion with special emphasis upon selling methods and planning of sales programs. The problems of sales organization both at sales headquarters and in the field, especially the operations of sales branches and the selection, training, and management of salesmen, are examined in some detail. The course concludes with a study of sales control, reflecting recent developments in the field of the control of sales operations and including discussions of the problems of the sales budgets, sales volumes, margins, and profits. The use of sales records and the application of statistical and accounting methods to sales problems are considered from the standpoint of the sales executive.

347. Management Problems of Export and Import Trade.—This course considers briefly the general principles of international commerce as a background for the more detailed study of management problems connected with the export and import trade of the United States. Though fundamentally similar to the problems of domestic buying and selling, the problems of export-import trade are complicated by factors peculiar to the international field. The rapid changes in economic and political environments during recent years have tended to obscure similarities and to accentuate differences.

Among the topics dealt with in the course are the nature and significance of foreign trade of the United States; the business problems and structure of the exporting organizations; the business problems and structure of the importing enterprise; merchandise planning and merchandise policy; foreign market analysis; sales and purchase channels; price policies in export and import transactions; foreign trade organization and the management of personnel; the extension and use of credit in international trade; financing of exports and imports; warehousing, packing, and shipping; ocean transportation and marine insurance.

350. Industrial Management.—This is a continuation of the course in which study is made of the operating problems of management. The purpose of the work is to give a further grounding in the scientific approach to management. Treatment of the subjects covered will be essentially through cases or situations drawn from actual business practice and experience. Approximately half of the time will be devoted to the broad field of employee relations. Phases of this subject which will be covered include: labor maintenance and control, employee representation, educational activities, pensions, guaranteed employment, wage determination, and wage payment.

The remaining half of the course will deal with the procurement function and the field of office management. In the case of the first of these subjects emphasis will be given to the principles of purchasing, the relationship of this function to other operation functions, the various methods of procurement, and the procedure by which buying activities of an enterprise may be conducted effectively. The treatment of the second subject will
translate into terms of office administration the various principles and tech-
niques of scientific management originally developed and practiced in the
field of factory operation. Prerequisite: Business 250, or equivalent.
4 units, second half (8 recitations weekly) (Hathaway) MTWTh 1–3

375. Principles and Policies of Industrial Relations.—This course ex-
amines current and recent developments in the field of industrial relations.
Trade unionism and employee representation plans are considered with special
reference to today's rapidly changing scene. Special attention is devoted to
the fundamental methods and devices inherent in such group relationships
with emphasis on their social and economic significance. The increasing
importance of governmental influence and intervention is taken up in some
detail, including the experience of the Federal government in the railroad
labor field, the labor provisions of the National Industrial Recovery Act,
and the National Labor Relations Act. Methods and procedures in arbitra-
tion and conciliation cases are discussed. Considerable attention is devoted to
federal and state social security legislation. Throughout the course emphasis
is placed on the fundamental causes that make for the existence of a labor
problem. In so far as these causes can be anticipated and met, the course
suggests methods of approach and possible solutions.
4 units, first half (8 recitations weekly) (Eliehl) MTWTh 1–3
SCHOOL OF EDUCATION

Grayson Neikirk Kefauver, Dean of the School of Education and Professor of Education
John Conrad Almack, Alvin Christian Eurich, Paul Robert Hanna, Jesse Brundage Sears, Professors of Education
Norman Fenton, Frank Waters Thomas (Fresno State College), Acting Professors of Education
Lewis Madison Terman, Professor of Psychology and Education
Walter Henry Brown, Helen Brenton Pryor, Thomas Andrew Storey, Professors of Hygiene and Physical Education
Reginald Bell, Walter Vincent Kaulfors, John Paul Leonard, Isaac James Quillen, Holland DeWitt Roberts, Associate Professors of Education
Maud Lombard Knapp, Associate Professor of Hygiene and Physical Education
Warren D. Allen, Associate Professor of Music and Education
Lucien B. Kinney (Oswego State Normal School), Acting Associate Professor of Education
Fred Anibal, Assistant Professor of Education
Daniel Marcus Mendelowitz, Assistant Professor of Art and Education
Ralph Raymond Fields, Gladys L. Potter, Acting Assistant Professors of Education
Robert Nelson Bush, Lawrence Gregg Thomas, Instructors in Education
Leo Francis Cain, Acting Instructor in Education
Rex Francis Harlow, Lecturer in Education and Public Relations
Neil Daniels, Lecturer in Music and Education
Lavone Agnes Hanna, Research Associate in Social Education

[Members of the faculties of other divisions of the University giving courses or cooperating in the offerings in Education are: Elwyn Bugge, John W. Bunn, Chilton R. Bush, Oliver E. Byrd, B. Paul Davies, Arthur A. Esslinger, Ernest P. Hunt, Margaret E. Jewell, Harold E. Jones, George S. Luckett, Henry W. Maloney, Marie Manchee, Helen Marshall, Charles E. Shepard, Craig L. Taylor.]

The School of Education carries large responsibility in the preparation of teachers, supervisors, administrators, and other educational specialists in the different types of educational institutions. The program of training leads to the degrees of Bachelor of Arts, Master of Arts, Master of Education, Doctor of Education, and Doctor of Philosophy. Also, courses or programs of study offered as a teaching-major or a teaching-minor by any department or school of the University, or any grouping of courses from different departments or schools intended to prepare students for teaching, lie within the control of the School of Education. Courses in education required for meeting the requirements for credentials are offered in the School of Education. (For full details concerning the teacher-training program, consult the Credential Bulletin published by the School of Education.)

NEW SCHOOL OF EDUCATION BUILDING

The School of Education is now housed in a new building erected by the generous gift of Dean Emeritus and Mrs. Cubberley. The three-story structure contains administrative and faculty offices, library facilities, administra-
tion, curriculum, and guidance laboratories, classrooms, cubicles for advanced graduate students, a social room, and an auditorium. Summer quarter students will find that these new facilities provide unusually favorable conditions for study.

**DISTINCTIVE PROGRAM EMPHASES**

To insure adaptation to present-day social and educational conditions and the needs of the students being served, the School of Education, in common with progressive schools, colleges, and universities elsewhere, is constantly reviewing its program, curriculum, prerequisites, and requirements. This review has resulted in the inclusion of a number of distinctive features in the Stanford curriculum.

First among these is stress upon the importance, for educators, of knowledge and understanding in certain basic sciences—biology, psychology, sociology, economics, history, and political science. Large recognition is also given to these fields in the graduate study program toward advanced degrees. Students are asked to present the equivalent of a full year of undergraduate work in these sciences as a prerequisite for entrance upon the program for a graduate degree in education. (See detailed references on page 86.) The School includes in the undergraduate major for the baccalaureate degree in education a full year of work in psychology and the social sciences.

A second major emphasis is upon student freedom, independence, and initiative. A student will be expected, with the aid of the faculty, to define his professional objective and to project a program which will best prepare him for it. There is a minimum of specific course requirements. Instead, the faculty has adopted certain general principles, leaving to the student the task of shaping the details of his program in conference with his adviser. This policy shifts the stress from the meeting of requirements to the securing of appropriate training which is recognized by the student as being important. Such a policy also makes possible recognition of individual differences. At the completion of the program, the student will be required to demonstrate scholarship and power in the field of concentration.

**TEACHER-DEVELOPMENT WORKSHOP**

Stanford University is one of five universities co-operating in the American Council on Education Teacher Education Project. This project was organized on a nation-wide basis under subsidy from the General Education Board for the purpose of improving the education of teachers. Each of the co-operating institutions will work with the central staff of the American Council project in an attempt to set up the best program of teacher education that can be devised in the light of present knowledge and experience.

As one effort in this direction Stanford University has set up for the summer of 1940 a special workshop in Teacher Development. This workshop will be open to experienced elementary, secondary, and college teachers, supervisors, guidance specialists, and administrators. Each individual registered will devote full time to his development, under the direction of a competent staff. He will have ample opportunity to work on his instructional, curricular, and guidance or administrative problems related to supervision and teacher and curriculum development. In addition, he will exchange views with representatives from other institutions and with members of the staff,
in an attempt to arrive at a common understanding of means by which the
schools can better serve the purposes for which they exist in a democracy.

The function of the workshop staff is to provide co-operatively an edu-
cational environment for each individual enrolled that will serve best his
needs and contribute most to his development. They will arrange library
facilities, laboratory materials, visual aids, special lectures, discussion groups,
social and other gatherings in terms of individual and group needs. From
the outset students will share in planning the experiences that will be most
useful to them.

The time of students will not be divided as under the usual summer-
session program of four, five, or more separate courses. However, if it is
clear to the student and staff at the beginning of the summer that it is de-
sirable for the student to follow through a particular course, an effort will
be made to include such a course as part of the student's experience. In other
words, all the facilities of Stanford and the surrounding community will be
utilized in setting up for each student and for the workshop group a stimu-
lating situation for development.

The registration fee for those enrolled in the workshop without credit is
$50. For twelve quarter credits that may be earned during a six weeks'
period, the registration fee is $90, which includes the regular University
community fee. For sixteen quarter units of credit that may be earned
during the full eight weeks' term, the registration fee is $115.

For additional information address the School of Education, Stanford
University. Application for enrollment should be made in advance.

DEMONSTRATION CLASSES

The facilities of the School of Education have been extended for the sum-
mer of 1940 through the addition of elementary and secondary demonstration
schools. The programs of these schools will include a senior high school
core course, a reading center, elementary school classes, and other features
arranged to demonstrate newer school practices. Students registered for
courses in the curriculum will find the work in the demonstration schools ex-
ceedingly valuable in supplementing class discussions.

INDIVIDUAL STUDY

Opportunity is provided by the individual study plan for students to study
in areas in which courses are not offered and to continue their study in fields
of interest beyond the courses available. This plan of study may be used
also to build up adequate background for the more advanced courses or
seminars in which students desire to work. This program makes it possible
for students to build a plan of study in harmony with their needs, supple-
menting the more formal course instruction. Members of the staff will assist
in planning a reading program, confer with students concerning problems
met in carrying out this program, and check upon mastery when the work
is completed. Permission to register on the individual study basis, and the
number of units of credit to be given, are subject to individual arrangement
with the faculty member concerned. In signing for study in any of the fields,
the field and the name of the instructor with whom the work is planned
should be written on the study card. Meetings of the different groups may be
arranged for from time to time, for reports as to progress, discussion, and
criticism. (For names of advisers in the various fields in which individual
study is offered, see course offerings.)
DEGREE OF BACHELOR OF ARTS

The program for the degree of Bachelor of Arts with the major in education places considerable stress on the social sciences and psychology. Fifteen units will be required in courses in education. Forty-five units will be taken in the social sciences and psychology (including human biology). About two-thirds of this forty-five-unit program will be given to one of these related fields—social sciences or psychology (including human biology)—and the remaining third to the other field, depending on the special interests and professional objective of the student.

ADVANCED DEGREES

Basis of Acceptance as Candidates for Advanced Degrees in Education.—Students who have graduated from a four-year course of training in a recognized institution of learning with a Bachelor's degree, or its equivalent, and have been admitted to graduate standing at Stanford University may pursue a graduate program in the School of Education. Admittance to graduate standing by the University does not in itself constitute admission to candidacy for advanced degrees.

Students working toward graduate degrees should follow the suggestions outlined under each degree. Students applying for either Masters' or Doctors' degrees will ordinarily find it easier to carry on their advanced degree programs if they present a preliminary program of study which includes considerable work in the social sciences and in psychology and human biology, as well as introductory work in education. The distribution of preliminary training should be somewhat in harmony with the field of specialization in the graduate program. Students planning to specialize in the history of education, for example, will be expected to present preliminary programs in which there has been a good deal of work in social sciences with emphasis on history. Those specializing in educational sociology will be expected to have a background of work in social sciences with emphasis on sociology and economics. Those specializing in educational psychology should present rather extensive preliminary work in psychology and human biology. Students preparing for the different educational positions should, early in their program at Stanford, consult with the faculty members advising in their fields of specialization concerning the adequacy of both the breadth and the depth of their preliminary programs.

In the undergraduate program it is desirable for students to have at least one course in the fields of educational psychology, educational sociology, and educational hygiene. Students who have not had such courses on the undergraduate level will be asked to take an undergraduate course in these fields early in their graduate study program.

Students will consult their advisers with regard to organizing their graduate programs within the limits described in this bulletin.

Students should make requests for dates for preliminary admission conferences and for written and oral examinations. Preliminary admission conferences will be held during the weeks beginning July 1 and 8; written examinations during the weeks of July 15 and 22; and oral examinations during the weeks of July 29 and August 5.

[Note.—Students who are candidates for the degrees of Master of Arts and Doctor of Philosophy should consult also pages 58–64 concerning the program and requirements for these degrees.]
Field of Concentration for Advanced Degrees.—Candidates for advanced degrees in education should plan to specialize in the field of their professional interest, preparing for some line of professional activity and at the same time securing mastery of an organized body of knowledge. Candidates will select one of the faculty advisers to serve them in planning their program of study and in projecting plans for investigation for the dissertation. Other members of the faculty of the School of Education may also be consulted with regard to the particular field chosen by the student. Each program as finally approved will designate one area of special interest as a major field of concentration.

The fields of concentration, together with their various subdivisions, are listed below. Members of the faculty of the School of Education who teach courses that fall within a particular subdivision may serve as advisers to students who have selected that field of concentration.

1. History of education and comparative education
   a) As a basic field of scholarship and research
   b) With career implications for teaching in colleges and universities

2. Educational psychology
   a) As a basic field of scholarship and research
   b) With career implications for
      (1) Teaching in colleges and universities
      (2) Applications in guidance, administration, teaching, and other school services

3. Educational sociology
   a) As a basic field of scholarship and research
   b) With career implications for
      (1) Teaching in colleges and universities
      (2) Application in educational practice
      (3) Social service occupations having educational implications

4. Educational hygiene
   a) As a basic field of scholarship and research
   b) With career implications in
      (1) Informational hygiene
      (2) Student health service
      (3) School health service
      (4) Hygiene of physical education activities
      (5) Service for prevention and care of physical education injuries
      (6) Health guidance

5. Administration and staff services
   a) With implications for careers in
      (1) Higher education, including colleges, universities, and state colleges
      (2) Secondary education, including junior and senior high schools and junior colleges
      (3) Elementary education, including kindergarten, nursery, and grade school education
   b) With implications for executive and staff careers such as
      (1) Chief executive, including president, state, county or city superintendent, or assistant superintendent
      (2) Other executive positions, including business manager, director of centralized activities such as adult education, principal, dean
(3) Manager of staff services, including director of research, supervision, curriculum development, evaluation, guidance, public relations
(4) Director of physical education, or similar executive, or staff career in physical education

6. The teacher
   a) With implications for careers in
      (1) Higher education
      (2) Secondary education
      (3) Elementary education
      (4) Adult education
   b) With implications for careers in the teaching of various subjects or areas of instruction
      Art; English; Modern Languages; Music; Physical Education; Science; Social Science

Students who have begun their work under former plans approved by the School of Education may proceed without modification, if they so desire, to the completion of their program as previously organized. Preliminary application for admission to candidacy for all advanced degrees is required. This application is to be obtained at the office of the School of Education, and comes before a committee of the faculty for consideration.

EIGHT WEEKS' TERM FOR SUMMER QUARTER

The School of Education, faced with the problem of so arranging its work as to offer a full quarter of instruction and at the same time enable an increasing number of teachers and school administrators to leave the University in time to open their schools, has been permitted to arrange its work so that all instruction in education courses will terminate by August 17. A full quarter of instruction will be offered in each course, and a full quarter of residence may be counted for degrees, but the credit for each course has been reduced proportionately to the number of weeks of instruction offered, and the number of units of work that may be registered for has also been proportionately reduced.

REGISTRATION REGULATIONS

Due to the character of the summer quarter, the work in the different courses is somewhat more concentrated, and the conditions surrounding registration for work are somewhat more restricted than in the other quarters. To this end the following regulations apply to registration for work in education:

1. All new students must file with the Registrar official transcript of all previous work of collegiate grade. This should be done at, or before, the time of registering.

2. Majors in education should file a duplicate transcript with the secretary of the School early in their first quarter of residence.

3. Registration in education courses will not be accepted after Monday, July 1, except where permission to register later has been applied for and granted in advance by the Dean of the School of Education. Such permission will be granted only in very exceptional cases.

4. The Registration Committee has approved the following limitations for registration for the eight weeks' term:
a) Maximum limit, 16 units in course work. More than 16 units will be allowed only if the program is composed of not more than 12 units of course work, and the remainder of thesis units.

b) If the student remains for the full quarter and carries 9 or more units in courses continuing to the end of the quarter, a total registration of 18 units may be allowed.

c) If one-fourth of the program is in courses continuing to the end of the quarter, and the student remains for the full quarter, he may carry 17 units.

UNIVERSITY APTITUDE TEST

The University Aptitude Test is required of all candidates for advanced degrees in education and for credentials. For the summer quarter of 1940, this test may be taken on June 18 or 29. Students who plan to take the test may make arrangements at the office of the School of Education for payment of the fee of one dollar. The payment of this fee, in advance, and presentation of the receipted bill upon entrance to the examination will exempt the student from payment of the regular five-dollar fee for this test.

UNIVERSITY APPOINTMENT SERVICE

The faculty of the School of Education and the staff of the University Appointment Service co-operate in providing placement service for students trained in education. This service is organized to help students secure desirable professional opportunities and to help employers secure well-qualified persons for educational positions. The members of the faculty with whom the candidates study contribute information concerning their characteristics and qualifications. The decision as to who should be recommended for administrative, supervisory, and college positions brought to the attention either of the University Appointment Service or the School of Education is made jointly by members of the faculty chiefly responsible for the line of specialization represented by the position, the Dean of the School of Education, and the Director of the University Appointment Service. The choice of teachers is ordinarily made by the School of Education advisers in the major and minor teaching fields, the representative of the faculty of the teaching field, and the representative of the staff of the University Appointment Service. This co-operation insures dependable service both to students and to employers.

APPLICATION FOR CREDENTIALS AND DEGREES

Students who plan to secure a teaching, guidance, administration, or other credential, or an advanced degree, should file application during the first quarter of residence at Stanford University. Early application is desirable so that bases can be secured for acceptance as a candidate and students can be helped in planning their sequence of courses for the credential or degree.

Admission to the University as a graduate student does not insure acceptance as a candidate for a credential or for an advanced degree. After one quarter of residence, applications will be acted upon by a faculty committee. This committee will base its decisions upon such items as scholarship, scores on the college aptitude test, personality, speech, etc.
PROGRAM OF TRAINING FOR THE GENERAL SECONDARY CREDENTIAL

[Intended for teaching in junior and senior high school and junior college.]

An applicant for a General Secondary Credential must present the following:

1. Completion of at least one full year of residence at Stanford in graduate standing (39 quarter units, 30 of which must be in courses numbered 100 or above. Two quarters of this work must be devoted to full-time study).

2. A certificate that he is mentally and physically fit to teach.

3. Fulfillment of the Constitution requirement, either by passing a county examination or by taking a satisfactory course. Any one of the following courses at Stanford will meet this requirement: History 120 and 121, American History; History 163, The American Revolution; Law 271, Constitutional Law; Political Science 1, American Government; Political Science 147, American Public Law. Information concerning dates of county examinations may be secured from the Credential Adviser.


5. Completion of a minimum of 27 quarter units in Education, including the following required courses:
   a) Introduction to the Study of Education (Education 130).
   b) Educational Psychology (Education 164).
   c) Educational Sociology (Education 140).
   d) Educational Hygiene (Education 191).
   e) Core Course in Principles and Methods of Secondary School Teaching (Education 198).
   f) Beginning and advanced curriculum and instruction courses in the field of the candidate's teaching major and a beginning curriculum and instruction course in the field of the candidate's teaching minor.
   g) Practice Teaching (Education 205). For a limited number of highly selected students practice teaching and internship may be combined in fulfilling this requirement.

   At least 9 units of work in Education must be taken in graduate standing.

6. Completion of the required work in at least one Teaching-Major and one Teaching-Minor, in subjects taught in high schools (see page 21 of the Credential Bulletin). If the Teaching-Major offered is in Education or Psychology, two Teaching-Minors will be required. Approximately nine quarter units of work in the candidate's teaching subjects must be taken in graduate standing at Stanford, in order that recent scholarship in the teaching fields may be demonstrated.

   Evidence of several years of successful teaching experience in a public secondary school and demonstration of teaching competence may be considered as being acceptable in lieu of student teaching. Students desiring such substitution must make application to the faculty committee which will decide whether or not such substitution may be made. Application should be filed with the general credential adviser. Students who have had undergraduate practice teaching in another institution, but no subsequent teaching experience, will be expected to enroll in student teaching for at least one quarter at Stanford University.
SUMMER QUARTER COURSES

The courses in education scheduled for the summer quarter are listed in groups, as follows:

I. Foundation Courses (Educational Hygiene, Educational Psychology, Educational Sociology, History and Comparative Education, and Statistics), page 91.

II. Curriculum, Instruction, Guidance, and Supervision, page 94.

III. Administration, page 100.

IV. Research, page 102.

V. Professional Courses in Hygiene and Physical Education, page 103.

I. FOUNDATION COURSES

[Educational Hygiene, Educational Psychology, Educational Sociology, History and Comparative Education, and Statistics.]

60. Introduction to Statistical Methods.—This course deals with the following topics: collection, reduction, and tabulation of data; tabular and graphic methods of presentation; measures of central tendency and dispersion; elementary notions of the normal probability curve and probable errors; comparison of groups in terms of overlapping and difference between means, medians, etc.; use and possible interpretations of proportions; introduction to correlations. Texts, lectures and discussion, and assigned problems.

4 units (8 weeks) (CAIN) MTWThF 9

140. Introductory Course in Educational Sociology.—The purpose of this course is broadly to interpret the sociological aspects of our evolving culture for beginning students in the field of educational sociology. The emphasis will be upon the interrelationships of various aspects of American culture and their significance for education. Such topics will be discussed as: (1) the nature of educational sociology; (2) education and culture; (3) the American heritage of ideas and ideals; (4) the nature and trends of contemporary American culture including a consideration of cultural adjustments and maladjustments; (5) competing ideologies and panaceas of various groups; (6) the place of the individual in a democratic society; and (7) the implications of social conditions for educational workers. The approach will be both extensive and intensive. The reading and discussion will cover broad problems while each student will concentrate upon the significance of those problems for his particular role in the educational profession.

4 units (8 weeks) (QUILLEN) MTWThF 3

163. Child Psychology.—A survey of child development. Special attention will be given to experimental and observational studies, to the child’s conception of the world, and to the basis and nature of the development of personality. Prerequisite: Psychology 51, or equivalent.

3 units (8 weeks) (JONES) TTh 2-4

164. Educational Psychology I.—A general course dealing with problems of learning, individual differences, mental development, and personality. Prerequisite: Psychology 51, or equivalent.

4 units (8 weeks) (CAIN) MTWThF 11
180. The American School System: Its Origin and Development.—This course describes the American school system of today and traces systematically the origin and rise of significant movements: elementary, secondary, higher; local, state, and national organization and programs; the background of outstanding modern trends in finance, organization, curriculum, methods, teacher-training, and child study. Period covered from 1600 to present.

3 units (8 weeks) (Almack) MTWF 10

187. Mental Tests.—An introductory course dealing with the history and principles of psychometric procedures and with the results of their application to school children, mental defectives, delinquents, the insane, the gifted, racial groups, and typical adult populations. Lectures, assigned readings, discussions, and demonstration tests. Prerequisites: Psychology 51 and 185, or equivalents.

3 units (8 weeks) (Marshall) MTWTh 11

190. Growth and Maturation of the Human Organism.—A study of the progression of changes by which the human organism passes from its embryonic condition to full maturity. Emphasis will be placed on all phases of the development of the individual, the essential unity of development, and the behavior normal to different age levels. Implication for the school and the home will be treated.

3 units (8 weeks) (Peyor) MTWTh 8

191. Principles of Educational Hygiene.—A course on the principles that ultimately determine and regulate the production, improvement, maintenance, and defense of somatic (bodily), mental, and social health. Open to students accepted by the instructor; not open to students who have had Hygiene 50 and 51.

4 units (8 weeks) (Brown, Byrd) MTWThF 8

194. Principles of Personality Development.—This course will emphasize the factors affecting the development of the wholesome personality and their implications for guidance, the curriculum, and school administration. The nature, causation, and treatment of disturbances in the personal and social adjustment of children will be considered. Case-history data and scientific studies in the literature will serve as the background for the discovery and interpretation of positive factors in development of the wholesome personality. Prerequisites: courses in education and psychology, or their equivalents.

4 units (8 weeks) (Fenton) MTWThF 8

[203. Advanced Statistical Methods I.—For description see Announcement of the School of Education.]

[Not given in 1940]

263. Educational Sociology II (Leisure).—From earliest times, whenever man has achieved a margin of freedom from the relentless necessity of providing for his immediate needs in food, shelter, and clothing, he has turned attention to defining and creating the good life—the life which permits contemplation, aesthetic creation and enjoyment, the artistic refinement of every-day activities, and the free expansion of essentially noneconomic interests. The utilization of modern opportunities for such leisure, which the Industrial Revolution has made possible to a greater extent and for more people than ever before in history, is, however, falling considerably short of what appear to be the possibilities. For the educator, this clearly demands a re-examination of contemporary possibilities for refined living
and a reformulation of the ideal of the good life so that it may be taught and lived in modern America.

With that aim in view, this course considers the following topics: (1) factors creating the modern problem of cultured living; (2) current facts on popular habits, tastes, and appreciations; (3) the range of cultural values in our society; (4) building the ideal of cultured living; (5) factors having the greatest formative influence on cultural habits and tastes; (6) the use and control of commercial influences on cultural habits and tastes; (7) the effectiveness of the present school program in developing cultural habits and tastes; (8) a reconstructed role for the school in educating for cultured living. Prerequisite: Education 140, or equivalent.

4 units (8 weeks) (Thomas)

280. Comparative Education.—A comparative study of education in European, Spanish American, and Oriental countries using education in the United States as a frame of reference. Special emphasis upon education in Great Britain, Germany, Italy, Russia, France, Denmark, Sweden, Mexico, and Japan from the viewpoint of national ideologies, educational conceptions and philosophies, psychological foundations, institutional organizations, and the implications of current educational developments abroad for education in the United States.

2 to 4 units (8 weeks) (Kaulfors)

293. Educational Hygiene II.—A course intended to show the influences of the home, community, and school groups upon the health and behavior of the individual child. Designed for graduate students in the School of Education working for degrees and credentials. Prerequisite: Educational Hygiene I (Course 191), or equivalent.

4 units (8 weeks) (Brown)

302. Seminar in Social Philosophy and Education.—Intended for advanced students in educational sociology, this seminar seeks to locate the critical philosophical issues underlying current sociological facts and trends, to make explicit the full range of consequent implications for educational theory and practice, and to achieve for each student a consistent, integrated perspective on education. To realize this purpose, the seminar will be guided by the following topics: (1) the individual, society, and education; (2) the assumptions and ideals of democracy; (3) freedom and the individual; (4) ethics and character in a democracy; (5) social values and evaluation; (6) the construction of educational aims; (7) representative issues in educational practice. Prerequisite: Education 140 or 282.

2 to 4 units (8 weeks) (Thomas)

304. Seminar in Modern Educational Movements.—A seminar course for teachers and administrators dealing with the purposes, development, methods, evaluations, and applications of modern educational movements in America and abroad, using the historical and comparative approach. Class reports and discussion. Open only by permission.

3 units (8 weeks) (Almack)

364. Psychological Problems of Education: Educational Implications of the Organismic Viewpoint in Psychology.—The course will be concerned with a critical study of the several trends in child research literature, psychology, and sociology which are merging in the so-called organismic viewpoint, especially with a view to discovering from them meanings and implications for school practices.

2 to 6 units (8 weeks) (Bell)
II. CURRICULUM, INSTRUCTION, GUIDANCE, AND SUPERVISION

299b. Curriculum Development.—This course will provide an opportunity for planning the most desirable form of a school curriculum in the light of contemporary social needs, present knowledge of the human organism, and appropriate educational theory. A broad conception of the curriculum will be followed in the course, which will take into account the experiences of the pupils, the elements of the school environment, guidance in school and out-of-school activities. The course will give the student an opportunity to deal with his own curriculum problems and to develop individually or co-operatively a plan for definite school situations.

The major divisions of the course follow: (1) What is involved in planning the educational program? (2) What is “sound” in the trends in the curriculum field and in curriculum developments in selected schools and school systems? (3) What constitutes a desirable educational pattern? (4) What constitute desirable instructional activities in the light of the educational pattern considered to be desirable?

Two features of the course are distinctive. The central task of students and staff is that of educational planning through curriculum development. Study and discussions are directed to that end. The second distinctive feature of the course is the co-operation of a faculty group with specialization in different fields. There will be specialists in educational psychology, educational hygiene, educational sociology, art education, English education, hygiene and physical education, modern language education, music education, science education, social education, and general curriculum specialists on the elementary and secondary school levels. This faculty group will work co-operatively as a team throughout the course, joining with students in seeking answers to the above basic questions. One member of the staff will give full time to work with individuals and groups on their individual and group planning.

6 units (8 weeks) (Leonard, assisted by Allen, Anibal, Brown, Fields, Kaulfers, Knapp, Mendelowitz, Quillen, Roberts)
MWF 1-3 (and an additional hour for group work)

111. Choral Music.—The fundamental principles of choral literature, its history and interpretation. The rhythms of musical speech and of declamatory music. The other phase of rhythm (body-rhythm) and metrical balance.

* For information concerning operation of Individual Study Plan, see page 85.
Pitch discrimination and ear training. Analysis and interpretation of the three general types of choral music—unison, polyphonic, and harmonic; secular, religious, and national. The social significance of various types of choral music.

2 or 3 units (Allen, Daniel) By arrangement

162. Music Education: Aims and Methods.—Seminar for teachers and graduate students in music education. Methods of presentation, psychological factors, the values and limitations of integrated studies, and other problems suggested by personal needs of those registered.

3 units (8 weeks) (———)


3 to 4 units (Allen) By arrangement

196. Diagnosis and Treatment of Behavior Problems.—An advanced course in the analysis of methods used in the examination and treatment of the problems of school children. The procedures now used in educational institutions for the handling of special problem cases will be studied. Case histories of children referred to the child guidance center from school systems will be utilized in the course. From the theoretical standpoint the development of the wholesome personality will be considered in relation to factors in the home, the school, and the community. This course should be preceded by Education 194.

4 units (8 weeks) (Fenton) MTWThF 10

198. Core Course in Principles and General Methods of Secondary School Teaching.—A basic course required of all candidates for the General Secondary and Junior College credentials. In this course attention will be centered on the various practical problems associated with secondary school instruction and guidance with which all teachers in the modern school must be able to cope. The role of the teacher-counselor charged with the inseparable responsibilities of guiding and instructing adolescent youth is the unifying or integrative element around which the course is organized. Modern methods and materials of diagnosis, instruction, counseling, and appraisal will be examined and evaluated. The role of the sponsor in student activities and the shaping and directing of homeroom programs will be considered. Education 140, 164, and 191, or their equivalents, must precede or accompany this course.

This course, a fusion of the two courses formerly labeled “Principles of Secondary Education” and “Methods and Management of Instruction,” may be taken for three instead of for four units by students who can demonstrate that they have previously taken the equivalent of one or the other of these offerings. (In all such cases the permission of one of the instructors must be secured at the time of registration.) Full class attendance will be required of all students, but reading and other requirements will be modified to meet the need of the individual student.

4 units (8 weeks) (Fields) MTWThF 9

207. Curriculum and Instruction in Graphic Art.—For intending teachers of art; discussion of aims and methods of drawing and art instruction in the public schools. A study of the development of the artistic expression in the child in the fields of drawing, design, crafts, and art appreciation. Theory and practice in organization of courses of study for the elementary and secondary schools. Open only to Upper Division students.

2 units (8 weeks) (Mendelowitz) TTh 10
208. Curriculum and Instruction in English in Secondary Schools.—
The theory and practice of the teaching of English in junior and senior high schools. Attention will be centered on the chief problems which teachers and supervisors face in developing pupil appreciation in literature, understanding in reading, and effective communication in oral and written composition. Incident to these major problems, specific study will be made of extensive and intensive reading, current usage and grammar, minimum essentials in composition, new texts and materials, selected courses of study, late research, methods and techniques that have proved their value to successful teachers of English, creative writing, verse-speaking and speech choirs, extracurricular activities, tests and measures, and the various new constructive relationships such as integration and fusion now developing between the English department and the social studies, sciences, foreign languages, and the arts. The study of special problems will be encouraged. For teachers and administrators.

2 to 4 units (8 weeks) (ROBERTS) MWF 11

209. Curriculum and Instruction in Foreign Languages.—A critical examination of current proposals for the reorganization of the foreign language curriculum. Analysis of learning activities appropriate for the realization of specific objectives at different maturity levels. Survey of the experimental literature on foreign language with some attention to textbooks, tests, and realia. Laboratory demonstrations of teaching and learning procedures constitute integral parts of the course.

2 to 5 units (8 weeks) (KAULFERS) MWF 4

212. Curriculum and Instruction in Secondary School Science.—A more intensive study of the problems encountered in organizing the science curriculum of the high school. Techniques of instruction including supervised and directed study procedures and laboratory practices will be considered in some detail. Opportunity will be afforded to groups interested in the special science fields to direct their investigations and study more particularly to the field of their choice. The class will be divided into sections for this purpose. This course must be preceded by Education 211.

2 units (8 weeks) (ANIBAL) MWF 11

215. Curriculum and Instruction in Journalism.—For students preparing to teach the course in journalistic writing in secondary schools, or to supervise student publications. Students who have not had practical experience in journalism or elementary courses in a journalism curriculum will be required to register in Journalism 117.

2 units (8 weeks) (Busk) TTh 3-5

221. Reading and the Language Arts in the Elementary Schools.—The techniques of teaching reading and the language arts at various maturity levels will form the basis of this course. Research and practices, class organization, the functional approach to the subject-matter fields, materials, and texts and practical problems of the elementary school classroom in relation to these subjects will be considered.

3 units (8 weeks) (Potter) MTWTh 11

223. Curriculum and Instruction in Business Education.—In this course the trends and problems in business education in relation to social trends and general curriculum development will be surveyed. Problems in organizing business offerings in harmony with community and student needs will be studied. Attention will be devoted to desirable aims, methods, materials, and tests in the various business subjects. Opportunity for special study on business curriculum problems and the teaching of the various fields
in business education will be a part of the course. For administrators and teachers.

2 to 4 units (8 weeks) (FIELDS) MWF 10

226. Evaluation and Diagnosis.—Evaluation refers to a new concept in education. A few years ago the emphasis was placed upon pencil-and-paper tests. With the extensive use of such specialized instruments their limitations have become more and more apparent. It is now clear that a broader concept of appraisal is needed in order to evaluate the development of a personality in an educational situation. A sound program of evaluation attempts to devise procedures by which pupil growth can be observed in relation to all the objectives of instruction. Such a program grows out of the curriculum, instruction, and guidance. It includes pencil-and-paper tests. It includes also direct observational records such as can be made with the time-sampling technique, anecdotal records, case studies, student self-appraisal, and other forms of observation designed for specific objectives of a school program or course. The major question to which attention will be given is: how can teachers and administrators observe the effect of educational procedures upon the growth and development of the individual? Each student will have an opportunity to study the basic principles of evaluation, to plan a program of evaluation which he may use in a practical school situation, to survey and judge available observational techniques, to prepare statements of objectives of the particular aspects of an educational program with which he is concerned, to collect illustrations of the meaning of each objective in terms of pupil behavior, and to devise means of observing pupil-progress in relation to each objective. Throughout, emphasis will be placed upon evaluating all directions of growth. Limitations of current practices will be fully reviewed. Prerequisite: one or more courses in educational psychology. A course on the curriculum should precede or accompany this course.

4 units (8 weeks) (KINNEY, THOMAS) MTWThF 1

231. Natural Science in the Elementary and Junior High School Curriculum.—Teachers and supervisors will have opportunity to become more familiar with the principles and materials of natural science suitable for the enrichment of the activities of elementary school children. Opportunity will be afforded for planning and organizing these activities suitable for interpretation of the science phenomena to children. The major emphasis of this course will be on science content. The examination of this content will be organized around science questions and problems typically raised by elementary school children. Training in the use of science materials needed in solving these science problems will be included. Some attention will be given to newer investigations and courses of study in the science aspects of the elementary school curriculum.

3 units (8 weeks) (ANIBAL) TTh 2-4

234. Guidance in Educational Institutions.—A comprehensive survey of the principles and techniques of guidance in educational institutions. Consideration will be given to the evidences of need for guidance; objectives; articulation of the different forms of guidance—vocational, social, recreational, and health; informing students about educational and vocational conditions and opportunities; gathering and using information concerning students; counseling with students; organizing the guidance service; contributions of teacher, homeroom teacher, principal, and specialists in guidance.

4 units (8 weeks) (BELL, assisted by EURICH, FENTON, KEFAUVER, SHEPARD) MTWThF 11
[238. Adult Education.—For description see Announcement of the School of Education.] [Not given in 1940]

242. Curriculum and Instruction in the Social Studies.—A comprehensive survey of the problems involved in the preparation and functioning of a social studies curriculum designed to equip individuals to assume dynamic roles in a changing, democratic society. The philosophy, objectives, content, techniques of teaching and learning, and evaluation of progress in the social studies curriculum will be studied and consideration will be given to problems of correlation and integration. Various approaches to curriculum reconstruction will be considered. Opportunity for individual research and creative thinking in the organization of the social studies curriculum and in the preparation of teaching materials will be provided.
2 to 4 units (8 weeks) (Bush, L. Hanna) MWF 1

246. Orientation Courses in Language Arts.—Evaluation of typical programs in the foundations of language, general language, and basic language from the viewpoint of objectives, content, and learning activities. Opportunity for the planning and construction of courses of study and units of work. This course may apply on teacher credential program for a major in foreign language.
1 to 3 units (8 weeks) (KAULFERS) TTh 4

[256. The Curricula of Modern Elementary Schools.—For description see Announcement of the School of Education.] [Not given in 1940]

259. Arithmetic Curricula for Elementary Schools.—A course designed for experienced elementary school teachers and supervisors. A survey of the theories, research, and practices in teaching arithmetic: arithmetic as a separate subject; arithmetic related to units of work; selection of content; organization and grade placement; methods of teaching; measurement and evaluation.
3 units (8 weeks) (HANNA) MWF 4

278. Teacher Development Workshop.—For description see page 84.

288. Reading in the Modern Curriculum.—A course designed primarily for teachers, supervisors, and administrators who wish to develop reading programs in the upper elementary and secondary levels of their schools, or to survey the developments in the field. The emphasis will be on the realization of theory in modern practice, either through established classes or special courses in reading. Systematic attention will be given to silent reading programs now in operation and selected phases demonstrated in class laboratory situations. New texts and materials will be examined at each teaching level, and case study, testing, the photographing of eye-movements, rhythm reading, and lighting demonstrated and discussed. Remedial reading will be considered in relationship to the total reading program. The course is aimed to meet the practical daily needs of the classroom. There will be opportunity for practical day-by-day work with children for qualified members of the course.
3 units (8 weeks) (ROBERTS) MTWTh 3

311. Seminar in Secondary Education.—In this seminar, opportunity is afforded for the study of the various problems with which curriculum workers, supervisors, instructors, guidance workers, and administrators in secondary schools should be concerned. Special attention will be accorded the problems of the curriculum, supervision, instruction, guidance, and the ad-
ministration of the secondary school. Students may, however, pursue any one of these three major lines of study or any pattern of study with regard to the problems of secondary education which appears most inviting and helpful to them. Assignments will be made on an individual basis after careful consideration of the training needs of each student. As already indicated, the problem approach will be utilized.

This seminar in all of its emphases presupposes basic training in and thoroughgoing understanding of the underlying social, civic, and economic backgrounds of present-day civilization as these relate to the task of the secondary school. Likewise, there should be basic training in the psychological and biological bases of learning. A course on the curriculum and either a course on guidance or secondary school administration required for admission to the seminar.

4 units (8 weeks) (Leonard) 4 units (8 weeks) (Leonard)

320. Seminar in Curriculum and Instruction in Secondary School Science.—This course is open to students who desire to make a critical study of the problems concerned with the teaching of secondary school science. Special attention will be given to the research studies in this field. Methods of educational research as they apply to the science organization and method will be surveyed and their application demonstrated. Teachers in some one science field may specialize in the program of that field. Education 211 or 212 should precede or accompany this course.

2 to 10 units (8 weeks) (Anibal) 3 to 5 units (8 weeks) (Hanna)

355. Seminar in the Education of Elementary Teachers.—A seminar for advanced graduate students who have had experience in or expect to work in the field of teacher education for elementary school workers. Such problems as the following are typical of those suitable for study in this seminar: a sound philosophy of teacher education; a curriculum of general education; the professional curriculum; the place and nature of clinical experience; follow-up of beginning teachers; problems of staff relations among members of a teacher education faculty.

2 to 10 units (8 weeks) (Hanna, Potter) 2 to 10 units (8 weeks) (Hanna, Potter)

385. Seminar in Junior College and College Curriculum.—This course is designed for advanced students of junior college and higher education. Members of the class will review recent experimental attempts to adjust the college curriculum so that it will meet more adequately the demand for gen-
eral education beyond the high school. The experimental curricula will be studied in terms of their basic philosophies, the extent to which they are adjusted to the needs of students being served, and any evidence regarding their effectiveness. Each student will work intensively on an individual curriculum project which he will report to the class for discussion and criticism. Prerequisite: Education 285.

2 to 5 units (8 weeks) (EURICH) MWF 11

   (Fenton, Kefauver, Leonard)

   (EURICH, KEFAUVER)

*452. Individual Study in Curriculum and Instruction in Science.
   (Anibal)

*453. Individual Study in Curriculum and Instruction in English.
   (Roberts)

*455. Individual Study in Curriculum and Instruction in Modern Languages.
   (Kaufers)

*456. Individual Study in Elementary Curriculum and Instruction.
   (Hanna)

*457. Individual Study in Curriculum and Instruction in Graphic Art.
   (Mendeowitz)

*459. Individual Study in Curriculum and Instruction in Social Sciences.
   (Quillen)

*461. Individual Study in Curriculum and Instruction in Language Arts.
   (Kaufers, Roberts)

III. ADMINISTRATION

299c. Administration and Supervision in Modern Education.—This course deals with the determination of the desirable administrative and supervisory programs in the light of modern social conditions and modern educational practice. Evaluations will be made of existing administrative and supervisory programs in terms of modern educational theory. Among the problems to be considered are administration and supervision as leadership, the problem and process of achieving improvement of the educational program, democracy in administration and supervision, supervisory procedures which contribute to teacher development, freedom accorded teachers and students in the life of the school and community, relationship of the school program to the community agencies and environment, contribution of students, teachers, administrators, supervisors, boards of education, parents, and social groups in the control of general educational policies and instructional activities, teachers' personnel problems, grouping and promotion of students, marks, records, reports, financing education, etc. The scope and emphasis of the courses will be influenced by a co-operative student and staff canvass of the

* For information concerning operation of Individual Study Plan, see page 85.
major administrative and supervisory problems of education at the opening
of the course.

The major task of the course will be the planning of an administrative
and supervisory pattern adapted to modern needs. This will involve a deﬁni-
tion and appraisal of trends, and an analysis and an appraisal of recent
developments in administration and supervision. The staff will join with
students in deﬁning the direction which the administrative and supervisory
features should move in the period ahead. This forward look will call for
creative thinking on the part of students and faculty. Groups of students
with common interests will work together in areas in which they desire more
intensive mastery. A group of the faculty representing different lines of
specialization in administration and supervision will work together as a team
throughout the course.

Courses in educational psychology, educational sociology, educational
hygiene, and the curriculum should precede this course.

4 to 8 units (Kefauver, in co-operation with Almack and Sears)

MTWThF 4 (and an additional hour each day for group work)

[232. Secondary School Administration.—For description see Announcement of the School of Education.

Not given in 1940]

254. Organization and Administration of Elementary Schools.—This
course is designed to acquaint the student with the problems most frequently
encountered by the elementary school principal in organizing and adminis-
tering American elementary schools. Intended for those preparing for the
principalship, or for those already in such positions, who desire to review
systematically the literature in this field by lectures, extensive reading, and
class discussion.

3 units (8 weeks) (Potter) MTWTh 9

270. Public School Finance.—A course on the ﬁnancing of public education in the United States dealing with the main problems of expenditures,
the cost of schools, education as an economic burden, revenues and their
control, and indebtedness.

4 units (8 weeks) (Sears) MTWThF 3

306. School Buildings and Building Programs.—An advanced course in
administration taking up such subjects as the following: determining needs
for buildings, school bonds, bonding campaigns, selecting and working with
the architect; planning classrooms, ofﬁces, auditoriums, laboratories, libraries,
etc.; school equipment and furniture, communication systems, depreciation
and repair, and school-building measurement.

2 to 5 units (8 weeks) (Almack) MWF 2

312. Seminar in General School Administration.—A seminar designed
for advanced students in the ﬁeld who already have a general textbook knowl-
edge of the various divisions of the subject of school administration. Oppor-
tunity will be provided for study within the ﬁelds of both state and local
school administration. Work will be handled on a problem basis and will in-
volve both wide reading and research. Studies may be undertaken by students
individually, or by groups. Emphasis will be placed upon extending the stu-
dent’s systematic knowledge of school administration, upon his thorough
understanding of controversial issues, upon his gaining some familiarity with
the range of institutional activities throughout the country, and especially
upon the development of ability to pursue independently scientiﬁc studies in
this ﬁeld. Problems in school legislation by legislatures, school boards, re-
gents, trustees; problems in organization of systems and of units within a
system; administrative procedures and techniques, and the principles back of them in directing and controlling school systems; and the types of investigation required in administration suggest the general divisions of subject matter to be covered. Students with major interest in the field of administration will be expected to carry out studies in various divisions of the field, including state school administration, city school administration, public school finance, public school business management, personnel work, and buildings.

2 to 5 units (8 weeks) (Sears) MWF 2

325. Public Relations for Education.—A course designed to acquaint the student with the basic factors which control in the operation of educational public relations. It deals with such problems as evaluating public opinion and propaganda, estimating the relative weight of competing interests in groups, and gaining insight into those forces which move human beings to action, as these affect educational administration. Consideration is given to the importance for public relations of reports, bulletins, and pupil, student and teacher periodicals; the newspaper, the radio, the motion picture, and governmental agencies; civic clubs, commercial bodies, trade associations, and industrial, fraternal, religious, and other groups; public exercises, bond issues, building programs, and public forums. Analyses of costs, discussions of administrative structure and procedures, and the study of selected programs, of public relations are featured. Open to all students with backgrounds of preliminary training or practical experience in the field of educational administration.

4 units (8 weeks) (Harrow) MTWThF 9

*443. Individual Study in School Survey Work. (Sears)

*445. Individual Study in State, County, and City School Organization and Administration. (Almack, Sears)

*446. Individual Study in School Finance and Business Management. (Sears)

*447. Individual Study in School Plant. (Almack)

*454. Individual Study in Elementary Administration. (Almack, Hanna)

*458. Individual Study in Junior College and College Administration. (Eurich, Kefauver)

*460. Individual Study in Secondary School Administration. (Kefauver, Leonard)

IV. RESEARCH

290a, b, c. Introductory Seminars for Master's Degree Candidates.—Seminars organized to deal with the problems arising around organization of program and initiation of research by candidates for the Master of Arts degree.

a) To be attended by all students who are in the first quarter of their program for the Master of Arts degree. Discussion of problems relating

* For information concerning operation of Individual Study Plan, see page 85.
to organization of program, selection of field of concentration, and initiation of research projects.

1 unit (8 weeks) (COMMITTEE) M 7:30-9 P.M.

b) To be attended by all second-quarter candidates for the Master of Arts degree. A continuation of 290a, devoted especially to training in carrying on research, and to organizing its presentation. Discussion of thesis problems under way.

1 unit (8 weeks) (COMMITTEE) T 7:30-9 P.M.

c) To be attended by all third-quarter candidates for the Master of Arts degree.

1 unit (8 weeks) (COMMITTEE) W 7:30-9 P.M.

291. Master's Thesis.—All students registering for work on the thesis for the Master's degree in education will use this number, designating on the registration card the professor under whose direction the work is to be done. Course 290 is a prerequisite.

3 to 6 units

292. Thesis or Individual Study for Master of Education Degree.—All students registering for work on the thesis or individual study requirement will use this number, indicating on the registration card the name of the professor under whose direction the work is being done.

3 to 15 units (SCHOOL FACULTY)

300. Thesis Seminar.—The thesis seminar will provide opportunity for critical consideration of investigations being made by graduate students as part of the program for the Ed.D. and Ph.D. degrees. The activities of this group will provide each student opportunity to submit his own activities for examination. It will also provide training in educational research by giving practice in analyzing problems and investigations at different stages of development. Some consideration will be given to the theory of principles of research when it contributes to an understanding of the investigation under examination. All candidates for the Doctors' degrees will enroll for this seminar.

No credit (8 weeks) (EURICH) T 7:30-10 P.M.

360. Doctor's Thesis.—All students registering for work on the thesis for the degree of Doctor of Philosophy or Doctor of Education will use this number, indicating on the registration cards the name of the professor under whose direction the work is being done. Course 300 should accompany this registration. As much as thirty units is allowed toward the requirements for the thesis. The registration for the thesis will be distributed over a number of quarters. The same registration number will be used for each registration, indicating on the registration card the number of units in each case.

V. PROFESSIONAL COURSES IN HYGIENE AND PHYSICAL EDUCATION

Descriptions of the following courses for which education credit is given will be found under the School of Hygiene and Physical Education, pages 113-115.

165s. Tests and Measurements
174s. Methods and Techniques of Minor Sports
184s. Education Activities
185s. Administration of Physical Education
202s. Mental Hygiene
209s. Physiology of Exercise
210s. Program of Physical Education Activities
214s. School Hygiene Programs
215s. Divergencies in Growth and Development
224s. Prevention and Emergency Care of Injuries
237s. Administration of Community Recreation
256s. Interpretations and Objectives of Physical Education
257s. Biology of Hygiene and Physical Education
260s. Problems of Physical Education
261s. Problems of Hygiene

Descriptions of the following courses for which education credit is given will be found under the Department of Hygiene and Physical Education for Women, page 117:

W108. Methods in Canoeing and Swimming
W131. Dance and Rhythmic Activities for the Secondary School
W280. Developmental Health Examinations
W281. Individual Study
W286. Administrative Problems
SUMMER QUARTER COURSES

Except for Civil Engineering 123, Summer Surveying, given during the four weeks immediately following the summer quarter, the School of Engineering does not offer courses in the summer but encourages students to obtain employment on engineering projects during the summer vacation.

ORGANIZATION

The School of Engineering has been organized to include Civil Engineering, Electrical Engineering, Mechanical Engineering, Mining Engineering, the Department of Military Science and Tactics, and such other engineering departments as may hereafter be established. The faculty of the School consists of the Dean and all members of the component engineering departments. The purpose of the School is to provide a four-year curriculum leading to the degree of Bachelor of Arts in Engineering, and two-year graduate curricula leading to the degree of Engineer.

The curriculum leading to the degree of Bachelor of Arts in Engineering is designed to give the student the broad fundamentals of an engineering education with opportunity for specialization in any particular branch of engineering; it recognizes the fact that the same general fundamentals are used by all engineers in the solution of their problems. It is planned to include such studies as, together with the high-school and Lower Division preparation, will give the student a wide experience among the different departments of knowledge to broaden his outlook, stimulate his interests, disclose the range of his aptitudes, and discover those lines of effort for which he is best fitted. This curriculum gives the student a large number of options which he can use to secure specialization in accredited four-year curricula in civil engineering, electrical engineering, or mechanical engineering; for broader general training; for military science and tactics leading to a commission; or for further specialized undergraduate training in preparation for graduate study in accredited curricula leading to the degree of Engineer in Civil Engineering, Electrical Engineering, Mechanical Engineering, or Mining Engineering.

Students desiring to take up civil, electrical, mechanical, or mining engineering, as a profession, will register in the Lower Division under the guidance of the Engineering School faculty members on the Lower Division Committee, and complete the curriculum for the first and second years as outlined in the Announcement of the School of Engineering. After the completion of the Lower Division requirements such students will register in the School of Engineering and upon satisfactory completion of the four-year curriculum will be granted the degree of Bachelor of Arts in Engineering.

The student is then eligible for registration in the Departments of Civil, Electrical, Mechanical, or Mining Engineering, and upon fulfilling the departmental requirements will receive the degree of Engineer in Civil, Electrical, Mechanical, or Mining Engineering.

The details of the two-year curriculum for the degree of Engineer are
prescribed by the faculty of the department concerned. Graduates with the
degree of Bachelor of Arts or its substantial equivalent from other insti-
tutions may be admitted to candidacy for the degree of Engineer, and may
be recommended for the degree of Engineer, when such candidates have
completed a course of study which is substantially equivalent to the course
provided for in the previous paragraphs. (Further information regarding
requirements for the degree of Engineer will be found on pages 59–60.)

The degree of Doctor of Philosophy is granted for advanced study,
research, and dissertation under regulations published in pages 62–64.
HOOVER LIBRARY ON WAR, REVOLUTION,
AND PEACE

RALPH HASWELL LUTZ (Chairman), HAROLD HENRY FISHER (Vice-Chairman), JOSEPH STANCLIFFE DAVIS, HERBERT CLARK HOOVER, ELIOT GRINNELL MEARS, EDGAR EUGENE ROBINSON, GRAHAM STUART, ROBERT ECKLES SWAIN, NATHAN VAN PATTEN, RAY LYMAN WILBUR, Directors

NINA ALMOND, Librarian and Consultant in Research
PHILIP TAGGART MCLEAN, Reference Librarian
DIMITRY M. KRASSOVSKY, Curator, Slavic Collections
SUDA LORENA BANE, Archivist, Herbert Hoover Archives
INEZ G. RICHARDSON, Curator, Ray Lyman Wilbur Collection on Social Problems, and Research Associate
XENIA JOKOFF EUDIN, KLARA FETTER, OLGA HESS GANKIN, GISELA B. JOSEPHSON, GL EN E. JOSEPHSON, MERRILL T. B. SPALDING, ELENA VARNECK, Research Associates

During the academic year 1938-39 it was considered desirable to change the name from Hoover War Library to The Hoover Library on War, Revolution, and Peace, thus more nearly expressing the character of the collection. Mr. Hoover originally founded the Library to cover not only the Great War but the political, economic, and social consequences of the War. As time has gone on, these consequences have become of more and more vital interest to the world. The collection has therefore been developed to preserve and make available these records. Of these movements flowing from the Great War the records of social revolutions and their causes are of the deepest import to the future of humanity.

The collection on Communism includes not only a very large donation by the U.S.S.R., but contributions of many other governments as to penetration and propaganda. Similar collections are being built up on Italian Fascism and German National Socialism. Other social and economic movements in the United States and abroad have especially been the subject of collections. Material is constantly being added on the decay of democracy and the growth of military despotsisms.

The Library's collections include government documents, files of newspapers and serials, manuscript memoirs and diaries of men and women important in world affairs, publications of ephemeral societies, publications of national and international bodies, both official and unofficial, and books and pamphlets.

The importance of the Library has now received general appreciation throughout the world and has lately been marked by the generous donations of $600,000, not only to house the collections in the Library, but to provide room for its continuous expansion.

The use of the unrestricted materials is open to graduate students and faculty of Stanford University, to faculty and graduate students from other universities and colleges, and to other qualified investigators approved by the Chairman and Librarian.

For only a relatively small part of the Library is there a dictionary catalogue. The uncatalogued section is represented in the reading room by an author's check list arranged in various alphabets corresponding to the arrangement of the materials on the shelves. For a complete record of the
materials in the Library the student must consult the check list, the small but slowly expanding dictionary card catalogue, the public shelf list, and the reference staff.

The Hoover Library on War, Revolution, and Peace offers seven courses of instruction, and several departments offer courses using its materials. Members of the faculty of the University engaged in active academic work in the social sciences are also directing research work in the Hoover Library on War, Revolution, and Peace in those fields in which they are concerned.

ADVANCED AND GRADUATE COURSES

204. Directed Research.—Austria Hungary; Hungarian policy and the nationality question.
5 units (FETTER) By arrangement

5 units (GANKIN) By arrangement

208. Directed Research.—Soviet policies and the Civil War, 1917–1921.
5 units (EUDIN) By arrangement

5 units (VARNECK) By arrangement

212. Directed Reading.—Housing in the United States.
3 units (8 weeks) (RICHARDSON) By arrangement

214. Directed Reading.—Economic aspects of public health and medical care.
3 units (8 weeks) (RICHARDSON) By arrangement

220. Directed Research.—Propaganda and censorship since 1914.
5 units (LUTZ) By arrangement
SCHOOL OF HYGIENE AND PHYSICAL EDUCATION

Thomas Andrew Storey, Professor of Hygiene and Physical Education, Medical Adviser of Men, and General Director of School
Alfred Richard Masters, General Manager, Board of Athletic Control

DIVISION OF INFORMATIONAL HYGIENE

Walter Henry Brown, Director, George S. Luckett, Charles Edward Shepard, Professors
Oliver E. Byrd, Assistant Professor
Richard Deidrich Cutter, Acting Assistant Professor

DIVISION OF PHYSICAL EDUCATION ACTIVITIES

Harry Wilfred Maloney (Minor Sports), Director
Edward M. Twiggs, Acting Director of Golf
Elwyn Bugge, Norton Dolph Thornton, Assistant Directors
Sherman D. Lockwood, Acting Assistant Director of Tennis

DIVISION OF MEN STUDENTS' HEALTH SERVICE

Thomas Andrew Storey, Medical Adviser of Men, General Director
Benjamin Paul Davies, Acting Director
Arthur L. Kaslow, Examining Physician

DIVISION OF UNIVERSITY HEALTH SERVICE

Walter Henry Brown, Director, George S. Luckett, Professors

DIVISION OF PROFESSIONAL EDUCATION

Thomas Andrew Storey, Chairman, Walter Henry Brown, John W. Bunn, George S. Luckett, Professors
Arthur Albert Esslinger, Ernest Paul Hunt, Associate Professors
Oliver E. Byrd, Assistant Professor
Craig Taylor, Instructor

ORGANIZATION

The School of Hygiene and Physical Education is composed of the following divisions:

1. Informational Hygiene, which is concerned with the analysis and presentation of scientific information relative to the production, improvement, maintenance, and defense of physical, mental, and social health, and the applications of that information for the health benefit of the individual, his family, his other groups, and society.

2. Men Students' Health Service, which is primarily a program of health examinations and instruction, and limited office treatment, set up to safeguard the student and the University, and to help the student understand his health needs and advise him concerning their care.

3. University Health Service, organized to maintain a favorable environment for the protection of the health of the University community, and
under the influence of which the student may more easily form and manage health-habits appropriate to his needs.

4. Physical Education Activities, which schedules courses in the practices of hygiene through such activities as gymnastics, games, play, and recreation, and in training and competition in intramural sports and in intercollegiate athletics. These courses provide rich opportunities for the formation and practice of habits that produce, improve, maintain, and defend the somatic, mental, and social health of the individual.

5. Professional Education, which furnishes (1) courses dealing with the principles and philosophy of physical education and hygiene, and (2) professional education courses for the preparation of teachers, directors, administrators, and supervisors of physical education and hygiene programs.

The activities within these divisions are carried on by directors or chairmen and their staffs. The organization as a whole is under a general director who is the executive head of the School.

[Note.—Further information regarding University health control, vaccination regulations, Student Health Service, and Hospital Fund will be found on pages 49—52.]

OBJECTIVES

The divisions of the School of Hygiene and Physical Education are the organized efforts of the University to protect the health of men students and women students and help them:

1. Form and understand wise physical, mental, and social health-habits;
2. Prepare themselves to meet their responsibilities for the health of their families, their other groups, and society;
3. Satisfy their interests in sports and athletics with benefit to their physical, mental, and social health; and
4. Prepare themselves for research or teaching in the field of hygiene and physical education.

RECENT DEVELOPMENTS IN THE PROGRAM IN HYGIENE AND PHYSICAL EDUCATION

The professional education program in hygiene and physical education which has been a part of the program of the School of Hygiene and Physical Education has been incorporated also in the program of the School of Education. The present offerings and those planned for the future on the undergraduate and graduate levels leading to the degree of Bachelor of Arts and all graduate degrees will serve the needs of students desiring to specialize in this field. The plan includes the games, play, sport, athletic, recreational, and special adjusted activities programs of physical education, their values to physical, mental, and social health; their associated character values; informational hygiene and health teaching programs; and programs of student health service and control of environmental hygiene. The undergraduate section stresses thorough training for men and women in the foundational sciences and in the primary educational and physical educational sciences that fulfill the prerequisites for the work of the graduate years. The graduate organization, building on these prerequisites, leads to a high level of competence in the analysis of individual differences and needs and in the analysis, evaluation, and adaptation of programs to the capacities and needs of classified groups. The graduate program will give opportunity through electives, individual study, and research work to achieve advanced specialization for any of the
functions of hygiene and physical education and for positions of large responsibility, either in the more advanced administrative positions or in the teaching and research positions in professional education in teacher-training institutions.

Inquiries concerning the program of professional education should be addressed to Dr. Thomas A. Storey, General Director, School of Hygiene and Physical Education, Stanford University, California.

TEACHERS' CREDENTIALS

The requirements for teaching credentials in Hygiene and Physical Education are described in the Credential Bulletin published by the School of Education. Students who satisfactorily complete these requirements will be appropriately certified for recommendation by Stanford University through the Stanford School of Education to the California State Department of Education for teaching credentials in the schools of the state.

SUMMER REGISTRATION

Students who register in the School of Hygiene and Physical Education for the eight weeks' course only are limited to sixteen units. This limitation applies to course work. If a student is carrying thesis and research work as well, the limit will be twelve units of courses, plus the thesis and research work.

COURSES OF INSTRUCTION

A. PHYSICAL EDUCATION ACTIVITIES (MEN)

The University has established requirements in physical education that apply to all men in the Lower Division, except those registered for military training.

All new Lower Division students are scheduled for Course 1, Applied Physical Education and Hygiene (see below). Those who demonstrate adequate capacities may, with the permission of the instructors involved, be transferred from Course 1 to the sport or athletic courses they select. Students who have good reasons for modifying the regular class programs of physical activity should report to their instructors, or to the office of the General Director of the School, for advice relative to their special needs. Courses 2, 3, and 4 are open to such students with the permission of the instructors in charge.

LOWER DIVISION COURSES

1. Applied Physical Education and Hygiene.—A basic course in physical exercise, games, and sports organized to help students form physical, mental, and social health-habit programs that fit their needs, and to give them opportunities to gain skills in the recreations and sports that interest them. On the basis of health examinations and proficiency tests, students are classified as to their eligibility to more advanced sport and athletic courses. Required of all men students for six quarters or until completion of the Lower Division requirement. Three periods a week.
   (BUGGE, LOCKWOOD, MALONEY, THORNTON, TWIGGS)

2-4. Special Applied Physical Education and Hygiene.—Health-habit programs adapted to fit the needs of the individual student for whom the
usual class activities are not indicated or suitable. Admission only on recommendation of the General Director or the Director of the Men Students' Health Service. May be used to satisfy Lower Division requirement. Three periods a week.

2. Modified Programs.—Admission on recommendation of the Director of the Men Students' Health Service.

3. Modified Programs.—Open to sick or injured students transferred from other courses in the department by their instructors to the Director of the Men Students' Health Service for counsel and help. Students who practice the health habits prescribed for them and report to the Health Service in accord with the program laid out for them by the Director will satisfy the objectives of the Lower Division requirement in Physical Education and Hygiene.

4. Adjusted Programs.—Adjustments of health-habit programs to meet the exceptional difficulties of the overloaded student. Admission on approval of the General Director of the School. Hours by arrangement.

UPPER DIVISION ELECTIVES

101, 101s. Applied Physical Education and Hygiene.—Elective course for general physical exercise, games, and sports. Habit-forming and skill-developing course open to men students who have satisfied the Lower Division requirement in Physical Education and Hygiene. Three periods a week.

101. 1 unit (full quarter)
101s. 1 unit (8 weeks)

102-104. Special Applications of Physical Education and Hygiene.—Miscellaneous programs adapted to fit the needs of individual students for whom the usual class activities are not indicated or suitable. Admission only on recommendation of the General Director or the Director of the Men Students' Health Service.

102. Modified Programs.—Admission on recommendation of the Director of the Men Students' Health Service.
1 unit (DAVIES, MALONEY)

113-121. Sports Courses, Advanced.—Courses for the development of special skills in various sports. Open to students whose qualifications satisfy the instructor in charge. Three periods a week.

113. Advanced Fencing.
1 unit (BUGGE)

115. Golf.
1 unit (TWIGGS)

120. Advanced Swimming.
1 unit (THORNTON)

121. Advanced Tennis.
1 unit (BUGGE)

B. DIVISION OF INFORMATIONAL HYGIENE

50. Principles of Constructive Hygiene.—This course is concerned with the determining and contributing causes of somatic and mental and social
PHYSICAL EDUCATION 113

health: heredity, nutrition, excretion, exercise, work, play, rest, favorable physical, biological, and social environment. Open to all students.

3 units (Cutter, Kaslow)

MWF 8, 11

C. DIVISION OF PROFESSIONAL EDUCATION

I. COURSES IN HYGIENE

200s. Hygiene I.—A course in the principles of hygiene as a basis for the preparation of the specialized teacher in this field. It will include a consideration of the important factors which determine and regulate the production, improvement, maintenance, and defense of health. Open to graduate and to specially qualified students.

4 units (8 weeks) (Byrd, Lucket, Taylor)

201s. Hygiene II.—An application of the principles of hygiene (presented in Course 200) to the individual and the family, occupational, and community groups. Prerequisite: Course 200, or its equivalent.

4 units (8 weeks) (Byrd, Lucket, Taylor)

202s. Mental Hygiene.—A graduate course on the principles and practices that produce, improve, maintain, and defend mental health. Open to qualified students. Prerequisites: Hygiene 200 and 201, or their equivalents. Admission through instructor only.

4 units (8 weeks) (Shepard) MTWThF 9

214s. School Hygiene Programs.—A presentation of the content necessary to construct an adequate school health program. Prerequisites: Hygiene 200, 201, or their equivalents, and 261.

4 units (8 weeks) (Brown, Byrd)

215s. Divergencies in Growth and Development.—A study of the structural and functional deficiencies and defects, and of the susceptibilities to injury and disease, characteristic of childhood, that handicap normal physical, mental, and social development, together with a study of the techniques, meanings, and purposes of the health examination. Prerequisites: Hygiene 200 and 201, or their equivalents.

4 units (8 weeks) (Lucket)

257s. Biology of Hygiene and Physical Education.—The biological origin of their principles and practices. The integration of favorable heredity, heritage, environment, and of the autonomic and voluntaristic behaviors of the individual that are essential to the production, improvement, maintenance, and defense of his somatic, mental, and social health. A basic course for graduate students in the fields of hygiene and physical education. Admission through instructor only.

3 units (8 weeks) (Storey)

261s. Problems of Hygiene.—The major problems of hygiene will be analyzed; the field of hygiene will be explored as a basis for specialization in this field or as a means of assuring the proper inclusion of hygiene in any related field.

4 units (8 weeks) (Brown, Byrd)

262s. Problems of Health Service.—The major socio-economic problems of providing adequate medical and preventive health service for the individual and the community will be analyzed and the various proposed plans will be evaluated. Open only to specially qualified graduate students.

3 units (8 weeks) (Brown)

270s. Seminar in Hygiene and Physical Education.—Required of all candidates for teaching credentials or advanced degrees in Hygiene and Phys-
ical Education. Planned to deal with problems of organization of programs, initiation of research, and consideration of current problems in the field of Hygiene and Physical Education.

1 unit (8 weeks) (FACULTY)

[Principles of Educational Hygiene.—See Education 191.]

[Educational Hygiene II.—See Education 293.]

[Growth and Maturation of the Human Organism.—See Education 190.]

II. COURSES IN PHYSICAL EDUCATION

162s. Analysis of Activities.—A teacher-training course, presupposing experience in, and knowledge of a variety of physical education activities; analyses of activities studied from the mechanical, anatomical, physiological, and psychological standpoint. Discussions, lectures by specialists, field study, and reports.

5 units (8 weeks) (HUNT)

165s. Tests and Measurements.—A review of tests and measurements as applied to the fields of physical education and hygiene. This will include a study of the methods of statistical treatment of results of tests of achievements in neuro-muscular strength and skill; evaluation of health programs. Applications of tests will be made to the problems of classification and rating of individuals and programs.

3 units (6 weeks) (BUNN)

174s. Methods and Techniques of Minor Sports.—Theory and practice in methods and techniques of swimming, tennis, tumbling, apparatus activities, boxing, wrestling, soccer, handball, speedball and volleyball. Open to Upper Division and other qualified students.

4 units (8 weeks) (HUNT AND STAFF) MTWThF 2-4

184s. Methods in Physical Education Activities.—A course that deals with principles in the correlation of all the special methods courses in physical education activities applied to the capacities and needs of different age groups with their sex and individual differences.

2 units (8 weeks) (HUNT)

185s. Administration of Physical Education.—An introductory course dealing with problems encountered in the administration of physical education in educational institutions. The five primary elements of administration (people, program, leadership, facilities, and schedules) will be emphasized.

3 units (6 weeks) (BUNN) MTWThF 1

209s. Physiology of Exercise.—A detailed consideration of the mechanism of muscular contraction; the metabolic, circulatory, and respiratory responses in exercise; and their integration by means of the nervous system. Primarily for students in hygiene and physical education. Prerequisites: Physiology 101 and 102 or equivalent.

3 units (8 weeks) (TAYLOR)

210s. Program of Physical Education Activities.—A course dealing with the procedures in adapting activities to the structural-functional traits of different age periods and to individual differences; the formulation of criteria for the scientific evaluation of activities and the evaluation of different groups of adapted activities; procedures in the organization of an activity program.

4 units (8 weeks) (ESSLINGER)

224s. Prevention and Emergency Care of Injuries.—Prevention and care of athletic injuries with special reference to first-aid bandaging and mas-
sage. A practical course for the advanced student in hygiene and physical education involving experience under instruction, and emphasizing the hazards and nonmedical responsibility. Preceded by Anatomy 114, Physiology 101 and 102, and Hygiene 50, 51, and 152. One classroom and two "clinical" periods of two hours each every week. Limited to an enrollment of six.
3 units (8 weeks) (DAVIES)

237s. Administration of Community Recreation.—The administrative organization of public recreation; administration of the social organization of recreation as an establishment; administration of functions.
3 units (8 weeks) (ESSLINGER) MWF by arrangement

256s. Interpretations and Objectives of Physical Education.—A consideration of: (1) the biological and psychological nature of play and its utility in education; (2) the objectives of physical education in relation to leadership, development, adjustment, and standards.
4 units (8 weeks) (TAYLOR)

257s. Biology of Hygiene and Physical Education.—See page 113.

260s. Problems of Physical Education.—An intensive review of the problem content of the sciences of education with special reference to physical education. The sciences are classified under nine general headings with subdivisions. A course for graduate students to give the problem content and the relationships between the problems and sciences in the educational sciences, and the relationships of these to the foundation sciences as the basis for the selection and study of a thesis problem; a consideration of the methodology in connection with each group problem.
4 units (8 weeks) (ESSLINGER)

270s. Seminar in Hygiene and Physical Education.—See page 113.

D. INDIVIDUAL STUDY

195s. Special Assignments, Physical Education.—Individual investigations of special subjects, problems of advanced degrees excluded. Open only to specially equipped students.
2 to 5 units (STOREY, ESSLINGER) By arrangement

196s. Special Assignments, Hygiene.—Individual investigations of special subjects, problems of advanced degrees excluded. Open only to specially equipped, selected students.
   a. Informational Hygiene Problems (STOREY, BROWN, LUCKETT)
   b. Student Health Service Problems (STOREY, SHEPARD)
   2 to 5 units By arrangement

265s. Individual Research and Study.—Open to students whose adequate preparation for the special problems selected has been approved and accepted by the staff member under whom the work will be carried on. Not for advanced degrees.
   a. Physical Education Problems (STOREY, ESSLINGER)
   b. Informational Hygiene Problems (STOREY, BROWN, LUCKETT)
   c. Student Health Service Problems (STOREY, SHEPARD)
   Minimum of 3 units By arrangement

[Master of Arts Seminar.—See Education 290.]
[Master of Arts Thesis.—See Education 291.]
[Thesis or Individual Study for Master of Education Degree.—See Education 292 and also statement of requirements for degree of Master of Education in the Announcement of the School of Education.]
[Thesis Seminar.—See Education 300.]
[Doctor's Thesis.—See Education 360.]
HYGIENE AND PHYSICAL EDUCATION FOR WOMEN

HELEN BRENTON PRYOR, Director of Physical Education and Medical Adviser of Women
RUTH TANGIER SMITH, Assistant Medical Examiner
MAUD LOMBARD KNAPP, Associate Professor of Physical Education
SYLVIA POTTER CAIN, MARGARET ELAINE JEWELL, MARIE MANCHEE, Instructors
MARY K. FERGUSON, Public Health Nurse, Student Health Service

Objectives.—The Department of Hygiene and Physical Education for Women is offering a number of courses designed (1) to meet the needs of physical education teachers in the field who desire additional work in the teaching of corrective and sport techniques; (2) to be of interest to students who are desirous of working for advanced degrees in hygiene and physical education; (3) to provide opportunity for all summer quarter students to participate in physical education activities. (Physical education is required of all women registered in the Lower Division.)

Degrees and Credentials.—The Department of Hygiene and Physical Education for Women in co-operation with the School of Education and the School of Hygiene and Physical Education offers a program leading to the degrees of Bachelor of Arts, Master of Arts, Doctor of Philosophy, and Doctor of Education, and to a general secondary credential. For a detailed statement concerning the requirements for degrees and credentials, see the Announcement of the School of Education or the Credential Bulletin issued by the School of Education.

Credit.—One unit of university credit is given for each activity class satisfactorily completed by Upper Division students and this is counted as a part of the 180 units required for graduation. For Lower Division students no credit is counted toward graduation until the Lower Division requirement of six quarters of activity is completed except as follows: Women planning to major in hygiene and physical education may be allowed credit in the Lower Division for activities taken in addition to the one necessary for fulfilling the Lower Division activity requirement.

Fees and Equipment.—A fee of $5 per quarter is charged for activity courses, W1-W100. From this fee the department furnishes to the student as needed: (1) the white gymnasium suit, the dance costume, or swimming suit; (2) towels; (3) balls, shuttlecocks, bows and arrows; and (4) locker with a combination padlock. Suits, dance costumes, and towels are laundered by the department.

The student provides her own (1) shoes (the type depends upon activity chosen); (2) golf clubs, tennis or badminton racket.

A fee of $1 is charged for each theory course. A $2 fine is imposed for needless late registration in required courses.

ACTIVITY COURSES

These courses meet four hours each week during the quarter. (A minimum enrollment of ten is necessary for an activity class to be offered.) All classes are open to graduate and undergraduate women.

W1. Individual Activities.
1 unit (8 weeks) (———) MTWTh, by arrangement
1 unit (8 weeks) (Jewell) MTWTh 4:15

W25. Folk Dance and Tap Dance.
1 unit (8 weeks) (Jewell) MTWTh 3:20

1 unit (8 weeks) (Manchee) MTWTh 11

1 unit (8 weeks) (Manchee) MTWTh 3:30

W52. Badminton, Elementary.
1 unit (8 weeks) (Knapp) MTWTh 1

1 unit (8 weeks) (Cain) MWTh 3:30; MWTh 4:30

PROFESSIONAL COURSES

W108. Methods in Canoeing and Swimming.—Methods of teaching canoeing in various environments (lake, river, open water); selection, care of, and technique in handling canoes as related to camp and recreation programs. A study of the techniques of teaching swimming, diving, and conduct of swimming meets. Prerequisite: for physical education major students, elementary canoeing; non-major students may register by permission of instructor.
2 units (8 weeks) (Manchee) MTWTh 9

W131. Dance and Rhythmic Activities for the Secondary School.—Techniques and materials used in teaching modern dance; how to organize and lead a group in dance technique and composition; development of movement progressions. Special emphasis will be placed upon methods and organization of dance and rhythmic activities for the junior and senior high school; rhythmic form and analysis; the rhythmic and creative approach to traditional material in folk and tap dancing; social dancing for large groups. Prerequisite: third-year standing, three quarters of dance activity, or consent of instructor, and Course W130.
4 units (8 weeks) (Jewell) MTWThF 11

W135. Dance Composition.—Experience and theory of dance composition; pre-classic forms; advanced technical progressions. Prerequisite: advanced dance, consent of instructor.
2 units (8 weeks) (Jewell) MWTh 5

W280. Developmental Health Examinations.—Techniques of study designed to recognize individual capacities and limitations.
4 units (8 weeks) (Pryor) MTWThF 9

W281. Individual Study.—Individual problems according to the interest of the student. For example: problems in administration, curriculum construction, organization of the corrective program, intramural program, integration of dance program with special reference to public performance tests in sports.
2 to 6 units (8 weeks) (Staff) By arrangement

W286. Administrative Problems.—Open only to students who have had teaching experience.
3 units (8 weeks) (Knapp) MTWTh 10
SCHOOL OF LAW

Marion Rice Kirkwood, George Edward Osborne, William Brownlee Owens, Harry John Rathbun, Professors
Jacob Hugh Jackson, Professor of Accounting (Graduate School of Business)
William Bailey Lockhart, Associate Professor
Harry Willmer Jones (Washington University), Acting Assistant Professor

ORGANIZATION

The School of Law was established, as a department of the University, in 1893. Its purpose is to provide a thorough legal education for students who are fitted by their maturity and their previous academic training to pursue professional study under university methods of instruction. The curriculum leading to the first degree in law (LL.B.) constitutes an adequate preparation for the practice of law in any English-speaking jurisdiction. In all courses, some attention is paid to problems of local law in the Western States.

By taking advantage of the four-quarter system, with its opportunities for summer instruction, students can complete the four-year curriculum in three calendar years and the three-year curriculum in two and one-fourth calendar years.

THE LAW FACULTY

The faculty of the School of Law is composed of fifteen members, eleven of whom are resident during the autumn, winter, and spring quarters, each year, and continuously engaged in the work of instruction. The lectures on Patent Law, and special lectures supplementing the courses in Practice and Legal Ethics, are given by active practitioners. Instruction during the summer quarter is given in part by members of the regular staff and in part by visiting professors from other law schools.

THE LOCATION OF THE SCHOOL

The School of Law occupies two buildings of the Inner Quadrangle, connected by an open arcade. In the first building are three recitation rooms; in the second, the Law Library stack room, the reading room for students, and the offices of the faculty.

THE LIBRARY

The Law Library contains over 48,000 volumes, including complete sets of the English, Irish, Scotch, Australian, and Canadian reports, the reports of all federal courts, a complete set of the reports of the American States, the Australian States, and the Canadian Provinces, the National Reporter system, the standard collections of cases, the standard English and American legal encyclopedias, the principal American, English, and Canadian digests and citators, sets of the leading American, British, Canadian, and Continental legal periodicals, together with a good collection of textbooks. There is also a somewhat complete collection of compiled laws, session laws, and other statutory material, both federal and state, as well as British, Canadian,
and Australian. The University Libraries are also available for use by students of the School of Law.

**ALTERNATIVE PROGRAMS OF STUDY**

The School of Law offers two programs of study leading to the first degree in law. In each the period of combined academic and law study is seven years. The student may, however, elect to divide this period into four years of academic and three years of law study, or three years of academic and four years of law study.

**THE PRE-LEGAL CURRICULUM**

Upon the completion of the Lower Division at Stanford, or the granting of advanced standing equivalent thereto, students expecting to pursue the four-year course in law will register in the pre-legal curriculum. Ordinarily only those applicants who have made a minimum grade-point average of 2.5 over their first two years will be accepted. During the first year in the pre-legal curriculum students will pursue additional academic work selected with the advice and approval of a committee of the faculty of the School of Law. In the second year they will pursue the regular first-year courses in law and upon satisfactory completion thereof will be recommended for the degree of Bachelor of Arts in the Pre-Legal Curriculum.

**ADMISSION TO THE SCHOOL OF LAW**

Admission, in regular standing, to the four-year program of law study leading to the first degree in law is granted only to students who have completed 135 units of academic credit with a grade-point average of 2.5 and who have met the academic requirements of the pre-legal curriculum. Students transferring from other institutions will be admitted only by special action based upon the merits of each case.

Admission, in regular standing, to the three-year program of law study leading to the first degree in law is granted only to students who have received the degree of Bachelor of Arts, or an equivalent degree, from this University or from some other institution of recognized collegiate standing, and whose previous scholastic record is satisfactory to the faculty of the School of Law. A grade-point average of 2.5 on the Stanford scale is considered satisfactory. Applicants whose undergraduate records are not of such quality will be admitted only by special action following a review of all the facts of the particular case.

In the discretion of the faculty, admission may be granted to a very limited number of students who cannot meet the foregoing requirements but who are eligible for admission to the University, who are twenty-five years of age, and whose previous experience is such as to justify the presumption of their ability to do the work successfully. Such students are termed "unclassified" and are not eligible for a degree.

It is advised that the matter of admission be settled in advance. For this purpose those seeking admission in regular standing should furnish a complete and official transcript of their college work, showing courses pursued, grades received, and degrees conferred. The necessary application blanks will be furnished upon request.

Advanced students are admitted at the beginning of any quarter, but first-year students can be accepted only at the beginning of the autumn quarter.
ADVANCED STANDING IN LAW

The adjustment of credit for law work done elsewhere is determined by action of the faculty of the School of Law upon the facts of each case. Students who contemplate transferring to this School are advised to have an official transcript of their law work sent in advance for a provisional statement of the amount of advanced standing that may be expected. Only students in good standing and eligible to return to the school from which they are transferring can be considered.

DEGREES

The degrees of Bachelor of Laws (LL.B.), Master of Laws (LL.M.), and Doctor of the Science of Law (J.S.D.) will be conferred, upon recommendation of the Committee on Graduate Study, on students who have satisfied the requirements of the University and of the School of Law as stated on pages 61-62.

THE SUMMER QUARTER

No first-year courses are offered in the summer. It will be noted that certain courses are given throughout the quarter, while others are complete in either the first or the second half of the quarter. The first half will close on July 27 and the second half will begin on July 29.

CHANGES

As it may occasionally become necessary to change the regulations and courses outlined herein, the right is reserved to make such changes without notice.

COURSES OF INSTRUCTION

SECOND- AND THIRD-YEAR COURSES

230. Mortgages.—The nature of a mortgage; equitable mortgages; restrictions upon the right to redeem; obligations which may be secured by a mortgage; general principles governing priorities; transfer of a mortgagee's interest; transfer of a mortgagor's interest; discharge of a mortgage; redemption from a mortgage; subrogation, contribution, and exoneration—marshaling assets. Parks, Cases on Mortgages.

4 units, first half (8 recitations weekly) (Osborne) MTWThF 11 and TWTh 3

232. Partnership.—Nature of a partnership, its purposes, and members, creation of partnerships; nature of a partner's interest; firm name and goodwill; mutual rights and duties of partners; actions between partners, at law and in equity; powers of partners; liability for acts of partners in contract and tort; general liability of partners; dissolution and notice; consequences of dissolution; dissolution agreements respecting debts; distribution of assets to creditors, and between partners; limited partnerships. Crane and Magruder, Cases on Partnership, shorter edition.

4 units, second half (8 recitations weekly) (Owens) MTWThF 11 and TWTh 3

246. Equity.—Historical introduction; specific performance of contracts; general scope of the remedy; fulfillment of conditions, express and implied; part performance and the Statute of Frauds; equitable conversion by con-
tract; misrepresentation, mistake, and hardship as defenses to specific performance; reformation. Cook, *Cases on Equity* (2d one-volume ed.)

4 units, second half (8 recitations weekly) (Kirkwood) MTWTh 8–10

247. Trusts.—The Anglo-American system of uses and trusts. Nature of a trust; other sorts of interests and relations distinguished; the creation, transfer, and extinguishment of trust interests, express, resulting, and constructive; validity of trusts; effect of statutes; charitable trusts; priorities and relative validity of competing equities; importance of the legal title to one claiming adversely to a trust or other equitable interest; remedies of creditors against the trust property; duties of the trustee. Prerequisite: Law 246, Equity. Scott, *Cases on Trusts* (2d ed.).

6 units (Rathbun) F 8–10, MTWTh 2

271. Constitutional Law.—The judicial function in constitutional cases. The federal system. Powers delegated to the national government: the power to regulate interstate and foreign commerce; the power to tax; the power to dispose of property belonging to the United States; the power to make treaties. Powers of the states as affected by the delegation of powers to the national government, particularly the commerce clause. Limitations on the powers of government: the due process clauses; the contract clause; the equal protection clause; the clauses relating to the privileges and immunities of citizens. Dowling, *Cases on Constitutional Law*.

7 units (Jones) MTWThF 10 and TTh 1

279. Trade Regulation.—This course deals with those aspects of governmental control over business intended primarily to preserve the benefits of competition and to suppress its evils. Control over monopoly and other devices for restraining competition by the federal anti-trust acts, their interpretation and application to industrial mergers, trade associations, contracts, exclusive dealing and tying arrangements, and other practices. Control by courts, legislation, and Federal Trade Commission over unfair methods of competition such as appropriation of competitor's trade values, misrepresentation of own or competitor's products, predatory practices and boycotts, misleading advertising and sales promotion, resale price maintenance, and price discrimination. Handler, *Cases on Trade Regulation*.

4 units, first half (8 recitations weekly) (Lockhart) MTWThF 11 and TwTh 3

281. Legal Accounting.—A treatment of those phases of accounting which are of special importance to the lawyer. After a general foundation in the subject has been laid, special attention will be given to financial statements, corporate, fiduciary, and tax accounting.

4 units, first half (8 recitations weekly) (Jackson) MTWTh 8–10
SCHOOL OF LETTERS

HARDIN CRAIG, Professor of English, Chairman of the Council.
FREDERICK ANDERSON, Professor of Romanic Languages, Secretary of the Council

SHAU WING CHAN, Instructor in Chinese Language and Literature

ORGANIZATION

The School of Letters includes the following departments and subjects: Classics, English, Germanic Languages, Religion, Romanic Languages, and Slavic.

The School is administered through the Council of the School of Letters, composed of those members of the staff of instruction who are also members of the Academic Council.

THE BACHELOR'S DEGREE

High-school students looking forward to entering the School of Letters are urged to begin as early as possible the study of one ancient or one modern language and also to consult the Chairman of the Council, either personally or by letter, at any time, with regard to meeting the conditions for entrance.

Students who have completed the work of the Lower Division and propose to make language and literature the principal element in their program for the junior and senior years may, upon furnishing satisfactory evidence of their fitness to do such work, be enrolled as candidates for the Bachelor's degree. Two plans of study are offered.

I. Degrees Administered by the Individual Department.—Those who plan to specialize will ordinarily elect one of the constituent departments in which to do their major work. Such students should consult the announcement of the department in question for prerequisites and requirements. On registration day they will present their credentials to the executive head of the department, or his representative, and will, if accepted as candidates, make out and file, with his approval, a list of studies for the ensuing quarter. On satisfactory completion of the requirements laid down in the announcement of the chosen department, these students will be recommended for the degree of Bachelor of Arts in, for example, English. Information concerning the conditions under which these degrees are granted will be found in the announcements of the various departments.

II. Degrees Administered by the School of Letters.—Students who prefer to range over a somewhat wider field of studies will be permitted, if duly qualified, to enroll as candidates for the degree of Bachelor of Arts in the School of Letters. Applicants for such candidacy will present their credentials to the Chairman or Secretary of the Council for approval, on registration day. They must possess a reading knowledge of one foreign language— or, if taking the degree by examination, two—represented in the School. Successful applicants will enroll with the Chairman or Secretary, choose an adviser from among the members of the Council, communicate such choice in writing to the Chairman, and file with him a copy of a program of studies bearing the adviser’s indorsement.

Candidates for the degree of Bachelor of Arts in the School of Letters will elect one of the two following schemes of study, either of which, when satisfactorily completed, will entitle the applicant to recommendation for the degree:
A. Degree in Course

The aim of the curriculum leading to this degree is to provide a broad culture with letters as its center. It emphasizes the appreciation and creation of literature rather than purely linguistic and historical studies.

Requirements for A.B. Degree.—(a) A reading knowledge of one foreign language, ancient or modern;

b) English 15 or its equivalent. This requirement may be met by taking an examination. The candidate must show some acquaintance with the outline of world literature and with the elementary vocabulary of criticism;

c) Fifty-five units of Upper Division work in the School of Letters.

B. Degree with Special Program in Particular Periods or Subjects

With the aid and approval of the program committee of the School of Letters, the candidate for the degree of Bachelor of Arts may select a particular period for concentration, such as the Middle Ages, the Renaissance, or the Age of Enlightenment, or a particular subject, such as Folklore, or Comparative Philology, and plan a program of study comprising chiefly courses offered in the School of Letters, with such other courses as may be desirable for such a program.

A program for the study of the Middle Ages which may be utilized as a model in planning special programs in particular periods or subjects will be found in the annual Announcement of Courses.

C. Degree by Examination

As an alternative to the program of study outlined above, students may take the degree of Bachelor of Arts by fulfilling the following requirements:

1. Two years' residence as Upper Division students.

2. At least 30 units of work in courses (freely elected).

3. Passing the following examinations:

   I. Language Examinations.—Examinations (1) in either Greek or Latin, (2) in one modern foreign language. These examinations are on books previously designated and on “unseens.” They will test the student’s ability to translate accurately and elegantly, and to interpret the passages given. The credit value of these examinations is twenty-four units. The following books have been designated for the language examinations for the academic year 1939–40:

   - Greek: Plato, Apology; Homer, Odyssey, Books VI–VIII.
   - Latin: Horace, Odes, Book III; Livy, Book II.
   - French: Montaigne, Selected Essays; Corneille, Horace; DeVigny, Selected Poems.
   - German: Goethe, Dichtung und Wahrheit; Lessing, Nathan der Weise; Hauptmann, Der Katzer von Soana.
   - Italian: Romances of Chivalry, edited by Ford; Leopardi, Canti and Pensieri.
   - Spanish: Cervantes, Don Quijote, Part I; Echegaray, El Gran Galeoto.

   II. Examination in Literature.—Examination on the history and literature of some well-marked period, such as English literature under Elizabeth. The credit value of these examinations is twenty-four units.
III. Special Papers.—Essays on three authors, one ancient and two modern, of whom only one shall be English. For the preparation of one of these essays the student will be given at least a month's time; the subjects of the other two will not be given out until three days before the essays are due. A list of the authors chosen must be approved at least one quarter before the examination is taken. The combined credit value of these papers is twelve units.

By the end of his junior year the candidate is expected to have completed enough work (either in courses or by passing examinations) to secure senior standing.

The examining committee will grade the candidates' papers in the usual way and submit the grades to the Registrar's office. Students taking the degree by examination may receive graduation honors.

Most of the work of preparation for the examinations can be carried on in connection with courses, by doing special reading, submitting essays, etc.; but it should be clearly understood that the examinations are on subjects, not courses, and may involve matters not discussed in any course. Further information describing the examinations in greater detail may be obtained from the Chairman of the Council.

TEACHERS' CERTIFICATES

No provision is made for granting teachers' certificates in the field of Letters as distinct from the fields covered by the constituent departments. For information regarding requirements students are referred to the Credential Bulletin published by the School of Education.

ADVANCED DEGREES ADMINISTERED BY THE SCHOOL OF LETTERS

Apart from the degrees offered by the several component departments, the School of Letters as a whole offers, in accordance with the regulations of the University, the degrees of Master of Arts and Doctor of Philosophy in the following subjects:

1. General and Comparative Literature
2. General and Comparative Linguistics

By General and Comparative Literature is understood the study of literary phenomena which are not limited to a single language. The field chosen by the candidate is not, therefore, a national literature, as in the various departments of the School of Letters, but may be: (a) a school doctrine, influence, or tendency (such as Classicism, Symbolism, etc.); (b) a genre or kind (such as the folk epic, the romance, etc.); (c) a period (such as the Renaissance, the Enlightenment, the Industrial Era, etc.); (d) the relations between literature and some other form of human activity (such as religion, art, science, economics, government, etc.).

By General and Comparative Linguistics is understood the study of general linguistic phenomena, or of comparative philology where it extends beyond the borders of a single department in the School of Letters.

Admission to Candidacy.—Candidates for advanced degrees in General and Comparative Literature will be required to have a reading knowledge of French and German, and, in addition, of such other languages as may be indispensable in their chosen field. Candidates for advanced degrees in General and Comparative Linguistics will be required to have, as a primary requirement, a reading knowledge of French, German, and Latin, and, as a secondary
requirement, an elementary knowledge of Greek and of Italian, or Spanish or Russian. All candidates must have pursued a course of undergraduate studies liberal enough to serve as a basis for the type of work in which they desire to engage. A committee of the School of Letters will pass upon the qualifications of each candidate. The work needed to make up deficiencies in the undergraduate preparation of admitted candidates will be in addition to the regular requirements for advanced degrees.

Registration.—Registration for advanced degrees will be in the hands of the Chairman of the Council. An adviser or major professor will be assigned to each candidate, and a special program will be drawn up in accordance with the ends sought.

Course of Study: Major.—For advanced degrees in General and Comparative Literature no specific course of study can be laid down in advance, but the program of each candidate will be made out in accordance with the principles stated in the preceding paragraphs. For the degrees of Master of Arts and Doctor of Philosophy in General and Comparative Linguistics, the scope of the work is generally indicated by the following list of subjects:

General Linguistics, General Phonetics, Sanskrit, Comparative Greek and Latin Grammar, Vulgar Latin, Mediaeval Latin, Old French, Old Spanish, Old Provencal, French Historical Grammar, Spanish Historical Grammar, Gothic and Comparative Germanic Grammar, Old High German, Middle High German, Old English, Middle English, Old Norse, and Old Saxon.

Minor (for the Ph.D. degree).—It is advisable that the minor be taken in any one of the departments of the School of Letters or of the School of Social Sciences; or, with the approval of the Committee on Graduate Study of the University, that it be distributed among various studies within the School of Letters and the School of Social Sciences.

General and Comparative Literature and General and Comparative Linguistics may be offered as minors in the departments of the School of Letters.

Dissertation.—The requirements as to thesis or dissertation for advanced degrees in the School of Letters are in accordance with those set down for the University as a whole. The theses or dissertations must be on subjects in the fields of General and Comparative Literature and General and Comparative Linguistics as above defined.

COURSES IN ART AND ARCHAEOLOGY

In compliance with a temporary arrangement, the School of Letters wishes to call attention to the following courses in Art and Archaeology offered in the School of Letters and in other schools of the University:

**Education**
- 162. Music Education: Aims and Methods
- 457. Individual Study in Curriculum and Instruction in Graphic Art

**Graphic Art**
- 68. Lectures on Painting

**History**
- 101. Renaissance, Reformation, and Counter-Reformation, 1300-1600.

**Speech and Drama**
- 169. Problems of Stage Design

CHINESE LITERATURE AND CIVILIZATION

105. The Chinese Novel in English.—An intensive study of well-known Chinese novels translated into English, with special emphasis on their social
and historical backgrounds as well as literary technique. No knowledge of
Chinese language required.
3 units (CHAN) MWF 10

106. Main Aspects of Chinese Civilization.—Discussions of Chinese phi-
losophy, ethics, government, social system, art, literature, music, etc. Out-
side reading and reports. No knowledge of Chinese language required.
4 units (CHAN) MTWF 11

CLASSICS

HAZEL DOROTHY HANSEN, Associate Professor

A13, A113, A213. Individual Work.—Reading in Greek suitable to the
needs of the individual.
1 to 3 units (HANSEN) By arrangement

B118, B218, D65.—The titles and contents of these courses, as well as the
name of the visiting professor, will be announced later.

G55. Excavations in Mediterranean Lands.—Illustrated lectures and
discussions of some of the chief sites, and their contribution to our knowl-
dge of classical civilization. The present work in the field of archaeology
will be reviewed. The course will serve as an introduction to the aims and
methods of field work, and some attention will be given to problems in ex-
ploration, excavation, and restoration. Open to all students.
3 units (HANSEN) MWF 10

ENGLISH

WILLIAM DINSMORE BRIGGS, Professor
ERNEST PETER KUHL (University of Iowa), Acting Professor
MARGERY BAILEY, Associate Professor
HERBERT DEAN MERITT, Assistant Professor
JAMES VINCENT CUNNINGHAM, Instructor

Detailed information regarding requirements for the degree of Bachelor of
Arts and for advanced degrees in the Department of English will be found
in the annual Announcement of Courses; students wishing to obtain certifi-
cates entitling them to teach in the junior high schools or the high schools of
California should consult the Credential Bulletin published by the School
of Education.

LOWER DIVISION COURSES

2c. English Composition: Exposition.
3 units (——) MWF 9

25. Shakespeare.—An introduction to Shakespeare, with rapid reading of
most of the plays in chronological sequence. Open to all students; continued
in Course 159. If registration is large the course will be given in two sections.
4 units (CUNNINGHAM) MWThF 10
ADVANCED COURSES

Unless otherwise specified, the following courses are open to third-year and fourth-year students of all departments.

130. Critical Writing.—Recommended for prospective English and School of Letters majors. The work for the course will consist in the definition of important critical terms and in exercises in the methods of literary criticism.

3 units (Cunningham) MWF 11

158. Chaucer.—An elementary course, including an outline of Middle English grammar. This course may be taken by graduate students in English for graduate credit, provided extra work be assigned by the instructor.

4 units (Meritt) MWThF 10

182. English Literature from 1557 to 1660, Exclusive of the Drama.

4 units (Kuhl) MWThF 11

GRADUATE COURSES

194. History of English Criticism.—A study of critical theory from the beginnings to the end of the sixteenth century.

4 units (Briggs) MTWTh 10

197. English Comedy, 1660-1780.—Lectures and reports on the comic spirit in English drama, from the plays of wit to the plays of sensibility and the return of humor in Goldsmith and Sheridan.

4 units (Bailey) MWThF 11

198. The Modern English Language.—A study of usage in pronunciation, grammar, etc., in the light of the more recent history of the language.

4 units (Meritt) MTWF 9

211. Shakespeare.—An introduction to the bibliography of Shakespearean literature, the history of the text, methods of critical study, special problems, and the study of several plays.

4 units (Kuhl) TTh 3:30-5

217c. Boswell the Romantic.

4 units (Bailey) M 1:15-3

223. Ben Jonson.

4 units (Briggs) MW 3:30-5

GERMANIC LANGUAGES

Hans Sperber (Ohio State University), Acting Professor
Kurt Frank Reinhardt, Friedrich Wilhelm Strothmann, Associate Professors
Anthony Eugene Sokol, Assistant Professor

The general policy of the department and the requirements for the various degrees and for the teacher's recommendation in German as a major or minor are set forth in the Announcement of Courses.

During the summer quarter the staff places its chief emphasis upon graduate work and seeks to offer a changing program that will meet the needs of candidates for the degree of Doctor of Philosophy who are able to attend the University for the summer only. The department welcomes correspondence on this subject from present or prospective candidates.
COURSES OF INSTRUCTION

A60. Viking Literature and Civilization. 3 or 4 units (SpERBER) MWF 11
A76. Germany, the Country and the People, with special emphasis on the needs of German teachers. 2 or 3 units (SOKOL) TTh 11
A81. German Literature from Luther to Goethe.—Survey course, with assigned readings of masterpieces in English. 3 or 4 units (STROTHMANN) MWF 11
B6. Elementary German.—A special course for beginners, designed primarily to develop a reading knowledge of German and having particularly in mind the University requirements for the Ph.D. degree. 5 units (SOKOL) MTWThF 8
B36. Rapid Reading.—Prerequisite: Course B6, or equivalent. 3 units (SOKOLO) MWF 9
B91. Free Reading.—Prerequisite: At least two reading courses from B21 to B23. Permission of the instructor is necessary before registration. Thirty-six hours of reading per unit, and a weekly conference with the instructor. This course may be taken for more than one quarter. 1 or 2 units (REINHARDT, SOKOL, STROTHMANN) By arrangement
C103. Literaturgeschichte von der Romantik bis zur Gegenwart. 4 or 5 units (REINHARDT) MTWTh 9
C151. Das moderne Drama. 2 or 3 units (REINHARDT) TTh 10
C181. Individual Study.—Prerequisite: six units from Courses B101 to B108. Courses of reading suited to special needs and desires. Three hours of reading per week per unit of credit, and weekly conferences with the instructor. 1 or 2 units (REINHARDT, SOKOL, STROTHMANN) By arrangement
C211. Bibliography. 1 unit (STROTHMANN) By arrangement
C231. Literarisches Seminar: Kleist. 2 units (REINHARDT) W 2-4
C251, D251. Master’s Thesis. 1 to 3 units (REINHARDT, SOKOL, SPERBER, STROTHMANN)
C252, D252. Doctor’s Thesis. 1 to 3 units (REINHARDT, SOKOL, SPERBER, STROTHMANN)
D162. Deutsche Wortgeschichte. 2 units (SPERBER) By arrangement
D204. Middle High German. 5 units (STROTHMANN) MTWThF 8
D231. Philological Seminar: Old Norse. 2 units (SPERBER) T 3-5

ROMANIC LANGUAGES

ALFRED COESTER, STANLEY ASTREDO SMITH, Professors
ALEXANDER E. A. NAUGHTON, Assistant Professor
RALPH JOHN MICHELS, Instructor

The undergraduate courses in the Romanic Languages are planned so as to give students an intimate acquaintance with the modern forms of the lan-
guages spoken in the principal neo-Latin countries. To this end systematic attention is paid to pronunciation, reading, syntax, and conversation. In the higher courses special emphasis is laid on the study of literature. In order to give students an opportunity to become familiar with the spoken idiom, the majority of the courses are conducted in the language which forms the object of study.

Graduation.—The following work should be completed prior to admission to the Upper Division in order that the department requirements for the degree of Bachelor of Arts may be completed within two years: A1–3 (or B1–3), A21–26 (or B21–26), or the equivalents. (Courses A1–3 and B1–3 are equivalent to the first two years of high-school work in French and Spanish, respectively. Courses A21–26 and B21–26 are equivalent to the third and fourth years of high-school work in French and Spanish, respectively.)

Either French or Spanish may be selected as a major subject. In addition to the elementary course, which does not count as a part of the requirement, majors in French or Spanish must complete the following courses for the degree of Bachelor of Arts:

1. Second-year course (15 units)
2. Advanced Composition and Conversation (9 units)
3. A minimum of twenty hours in literature or philology in the major subject chosen from courses numbered above 120.

Major students must register each quarter for at least one course in the major subject. This provision is intended to prevent students from crowding major requirements into certain quarters and from registering as French or Spanish majors in other quarters without taking any work in the major subject.

The total number of units required for the degree of Bachelor of Arts is 44 units, exclusive of the elementary course.

The Teacher's Recommendation.—The department accepts candidates for certification as high-school teachers of French and Spanish in California and provides courses to meet the special needs of such candidates. The requirements for the Teacher's Recommendation are to be found in the Credential Bulletin published by the School of Education.

Degree of Master of Arts.—The degree of Master of Arts in Romanic Languages is awarded only on satisfactory fulfillment of all requirements, and after at least three quarters of work in residence at Stanford University. In many cases, however, the candidate will find it necessary to devote more than three quarters to preparation.

Candidates are given a qualifying examination: (1) to determine their ability to use the language elected; (2) on a general knowledge of the literature (French, Spanish, or Italian). If accepted in spite of certain deficiencies, candidates will be advised what they must do to remove these deficiencies, and as to the probable length of time which will be required for preparation.

Candidates for the Master's degree must fulfill satisfactorily the following requirements:

1. Reading knowledge of one Romanic language, in addition to the one elected for graduate study.
2. A satisfactory completion of courses followed. A minimum of thirty units is required, including credit for the thesis. Of these, a maximum of nine units may be taken in other departments, in subjects closely related to the special field of interest of the candidate. Courses in the Department of
Romanic Languages bearing numbers above 129 count toward the Master's degree.

3. A thesis, prepared under the direction of a member of the department, for which six units of credit are granted.

4. A comprehensive oral examination on:
   I. The literature and cultural history of one of the following periods:
      A. For students of French literature either:
         1. French literature from the origins to 1600.
         2. Classical French literature (1600-1789).
         3. Modern and contemporary literature.
      B. For students of Spanish literature, either:
         1. Spanish literature from the origins to 1500.
         2. The "Siglo de Oro."
         3. Modern and contemporary literature.
      C. For students of Italian literature, either:
         1. Early Italian literature.
         2. Italian literature of the Renaissance.
         3. Italian literature since the Renaissance.
   II. Elementary philology.

Degree of Doctor of Philosophy.—Candidates should read carefully the general regulations governing the conferring of this degree, as described on pages 62-64.

They may specialize in one or more of the following fields of study:
(1) Romance Philology; (2) French Literature; (3) Spanish Literature; (4) Italian Literature.

An oral examination is required before admission to candidacy. A written examination is required by the department to determine whether the candidate is prepared to take his final University examinations.

The field covered by the final examination in Romance languages and literatures is defined by the following requirements. They apply to all candidates whatever their special field of investigation.

1. Acquaintance with the principal works on Romance philology and literature; the noteworthy histories of the Romance literatures; editions of great writers, etc.

2. The essentials of Romance philology; Vulgar Latin; characteristics of the principal Romance languages; history of the French, Spanish, or Italian language; Romance versification; General Linguistics.

3. History of Romance literature, and of the principal literary movements common to all European literatures.

4. A general knowledge of the history and geography of the Romance countries.

5. A reading knowledge of Latin and the principal Romance languages.

Minor in French, Spanish, or Italian.—A minor in French, Spanish, or Italian is equivalent to one year's graduate work in the subject. This is approximately equivalent to the work for the Master's degree without the requirement of the thesis. Students presenting a minor in one or more of these subjects must pass an oral examination for admission to candidacy and a written test previous to the final University examination.

Summer Quarter Courses.—The courses offered during the summer quarter are always of the same general character, but vary in content from year to year. In this way students who enroll in the summer quarters only are
provided with a continuous scheme of studies covering the requirements for the advanced degrees.

**FRENCH**

**A21. Second-Year French Reading.**—Reading and discussion of modern texts, with translation of difficult passages. Prerequisite: A3, A3a, or two years of high-school French.

3 units (NAUGHTON) MWF 10


3 units (SMITH) MWF 10

**A142. The Modern French Novel.**—Lectures in French on the history of the novel in France in the nineteenth century. Extensive readings. Prerequisites: A23 and A26, or equivalent.

3 units (NAUGHTON) MWF 2

**A163. French Literature in the Eighteenth Century.**—A study of the main ideas and tendencies of the period as illustrated by the lives and works of its most important authors. Outside reading and reports. Conducted in French. Prerequisites: A23 and A26, or equivalent.

3 units (NAUGHTON) MWF 9

**SPANISH**

**B21. Second-Year Spanish Reading.**—Reading and discussion of modern texts with translation of difficult passages. Prerequisite: B3, B3a, or two years of high-school Spanish.

3 units (MICHELS) MWF 10

**B131. Survey of Spanish Literature.**—From the origins to the end of the XVIIth century. Outside reading and reports. Prerequisite: B23, or equivalent. Lectures in English.

3 units (MICHELS) (8 weeks) MTWTh 11

**B156. Hispanic American Life and Literature.**—Open to majors in any department. Knowledge of Spanish not required.

4 units (COESTER) MTWTh 1

**B201. Introduction to the Study of Old Spanish.**—Lectures on Old Spanish phonology and morphology, with linguistic exercises based on *El Cántar de mio Cid.* Ford, *Old Spanish Readings.*

3 units (MICHELS) MWF 2

**ITALIAN**

**C104. Italian.**—A special course for beginners desirous of acquiring a working knowledge of the language as rapidly as possible. Open to Upper Division and graduate students.

5 units (SMITH) MTWThF 11

**GENERAL COURSE**

**E151. The Romantic Movement.**—Lectures in English giving a comparative view of romanticism in European and American literatures; assigned readings in English, French, or Spanish to meet the needs of the student. Open to graduates and undergraduates.

3 to 5 units (COESTER) MWF 9
SLAVIC LANGUAGES

HENRY LANZ, Associate Professor

COURSES OF INSTRUCTION

A105. Individual Work.  
(LANZ) By arrangement

C112. Russian Realism.—This is an attempt to present the literary history of Russia as an evolution of realistic forms. Special attention is paid to the literature of the nineteenth century. Knowledge of Russian is not required.  
5 units (LANZ) MTWThF 8

[Free Will and Determinism.—See Philosophy 132.]
NATHAN VAN PATTERN, Director of the University Libraries
ALICE NEWMAN HAYS, Associate Librarian
ELIZABETH HADDEN, Chief of Order Division
MINNA STILLMAN, Document Librarian
WILLIAM OWENS, Chief of Circulation Division
FLORENCE MARGARET CRAIG, Chief of Bibliography Division
LOUISE STOCKLE, Chief of Serial Division
NINA ALMOND, Hoover Librarian
KATHARINE BANWELL, Assistant Law Librarian
JEANNETTE McCORRY HITCHCOCK, Keeper of Rare Books
SOLON SHEDD, Curator, Branner Geological Library
RUTH L. STEINMETZ, Acting Chief of Bibliography Division
EDWIN T. COMAN, JR., Librarian, Graduate School of Business
MARGARET S. WELLS, Assistant Librarian, School of Education Library
LINDA TUM SUDEN, Assistant Librarian, Lane Medical Library

The University Library is open on week days during the summer quarter from 8:00 A.M. to 10:00 P.M., except on Saturdays, when it closes at 5:00 P.M. It is not open on Sundays. The stacks are open to members of the faculty and to a limited number of students engaged in advanced work. Books not on reserve or otherwise restricted may be borrowed by those entitled to library privileges.

The University Library may be used by all registered students. Alumni of the University may obtain library privileges upon securing the Director's approval and the payment of an annual fee of five dollars. Other qualified persons will be entitled to library privileges upon obtaining the Director's approval and the payment of an annual fee of ten dollars.

Including the Hoover Library, Lane Medical Library, Law Library, and the Charlotte Ashley Felton Memorial Library, the University Libraries contain upwards of 740,000 volumes.

The library building is well adapted to the needs of advanced and graduate students. It contains seven seminar rooms, and individual tables on each stack level make it possible for graduate students to work in easy reach of their material.

On the first floor—in the Hoover Library and in the Document Division—are collections of especial interest to research workers in the fields of history and economics.

The Document Division brings together the library's collection of municipal, state, and federal documents. It is especially strong in the publications of the United States, Great Britain, Canada, and Australia. Those of other countries are being added as fast as circumstances permit.

The Hoover Library contains approximately 150,000 printed and manuscript items relating to the World War and the period of reconstruction, including material from all nations, both combatant and neutral. It is rich in government documents, delegation propaganda at the peace conference, files of society publications, and newspapers. The Hoover Library has its own reading room.

The Hopkins Transportation Library.—A collection of approximately 10,000 volumes and pamphlets relating to transportation. Mr. Timothy Hop-
kins, in 1892, presented to the University his private library comprising about 2,000 books and personally provided for its maintenance and growth for many years. The collection is general in scope, including material relating to the history, economics, and engineering of rail, highway, water, and air transportation. It is especially rich in state and government reports, the reports of individual railroads, both in the United States and Europe, and historical material relating to railroads.

The Charlotte Ashley Felton Memorial Library.—Established in 1929 by Mrs. Kate Felton Elkins. The collection is devoted to first and other rare editions in American and English literature. The donor has provided liberally for its maintenance and development.

The Law Library.—A library of about 48,000 volumes, adequate for the study of English and American law. It contains practically complete sets of the reports of the courts of England, Scotland, Ireland, Canada, the United States, and the several states, together with a valuable collection of statutes, treatises, and periodicals.

The Lane Medical Library.—Founded by the directors of Cooper Medical College in accordance with the bequest of Mrs. L. C. Lane. It is located at Sacramento and Webster streets, San Francisco, adjoining the medical school. The library contains about 90,000 volumes, and is particularly rich in periodicals. Five hundred journals are currently received.

Important special collections are the Barkan Library of Ophthalmology and Otolaryngology, and the Medical History Collection, both endowed by Dr. Adolph Barkan.

The Jordan Library of Zoology.—A collection consisting largely of works on ichthyology, to a considerable extent made up of authors' separates, accumulated by Chancellor Jordan and members of the Department of Zoology, bound, indexed, and catalogued. The more voluminous publications such as the works of Cuvier, Lacépède, Bloch, Bleeker, Günther, and others are well represented. These, supplemented by the proceedings of various societies and institutions, make a collection of books of great value to advanced students and investigators. The library is conveniently located in the Natural History Museum, near the laboratories and collections.

The Biology Library.—Housed in Jordan Hall, the Biology Library is a combination of the former departmental libraries of botany, physiology, zoology, and entomology, with some works on general biology, and now comprises about 5,000 volumes, together with current files of 125 periodicals. Its aim is to further the efforts of students and research workers, and when complete, it should cover the literature of all phases of biological science represented in the courses and research activities of the University.

The Branner Geological Library.—The Geological Library (Room 333) is the result of twenty-five years of acquisition by Dr. John Casper Branner. It includes material relating to geology, paleontology, mineralogy, geography, mining, and metallurgy. Its files of journals, transactions of scientific societies, and state and government reports are exceptionally complete.

The Food Research Institute Library.—Although intended primarily for the use of the staff of the Food Research Institute, this library is now one of the University Libraries and available to properly qualified readers.

The Hopkins Marine Station Library.—This library is now being developed as an adequate working collection in the fields covered by the work of the station.
Postgraduate Review Courses for Practicing Physicians.—During September, 1940, a series of intensive review courses lasting five days will be offered to practicing physicians. The details of this work will be announced during the summer in a separate bulletin.

Summer Quarter.—During the summer quarter of 1940 there will be no required courses for undergraduate students at the School of Medicine, but special opportunities for study and research will be offered to properly qualified graduates in medicine and to medical students of this and other schools. These opportunities consist of work in the clinics, wards, and laboratories, for graduates and undergraduates.

For this summer work, students are registered as Special Workers. The workers are expected to assist in the practical work of the various departments. Their work will be supervised, but no set courses will be given. Opportunities to make special studies of clinical and laboratory problems will also be offered. There will be a registration fee of $3, and in some departments an additional fee for special instruction varying from $10 to $100 will be charged.

The minimum period of attendance will be four weeks. Participants are urged to devote their full time to one subject.

Applications, which should give an outline of the medical experience of the applicant, should be sent to the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco.

Following is the work offered in the various departments:

General Medicine.—Ward rounds with discussion of cases. Daily from 9:00 to 10:00 A.M. Medical staff. Work in medical specialties may be arranged with individuals properly qualified. No additional fee.

Laboratory of the Department of Medicine.—Dr. Thomas Addis. Charges will cover cost of animals and supplies only.

Chest Diseases.—Dr. P. H. Pierson. Daily work in clinic and hospital involving discussion and examination of tuberculosis and allied chest diseases, including both medical and surgical aspects. Students in this work preferred in August. Limited to three workers.

Skin and Syphilis.—Dr. H. E. Alderson and staff. Work in clinic, hospitals, and laboratory. Dermatology cases seen every morning and syphilis in afternoon. Special study of histopathology of the skin, illustrated by complete series of preparations. Practical experience in therapy (including X-ray and radium). Opportunities for research. Fee, $25 to $50 a month.

Radiology.—Dr. R. R. Newell and staff. Fee, $100 a month.

Obstetrics and Gynecology.—The Department of Obstetrics and Gynecology will offer special work to graduate students with Dr. L. A. Emge and his staff. There will be no set courses. Requests for special instruction will be considered, and will be assigned to individual members of the department on duty during the summer quarter. Because of the limited facilities, only a small number of applicants can be considered. Registration will be through the Dean's Office. Fee, $10.

Advanced Pathology.—Dr. A. J. Cox. Performance of necropsies, study of surgical specimens, and an introduction to technical procedures used in
histological pathology. Between June 15 and September 20, two or three courses of four weeks each are given. Not more than four students are accepted in each course. Prerequisite: Pathology 201.

**Tumor Pathology.**—Dr. D. A. Wood. Instruction in the frozen-section diagnosis of malignant and benign lesions. Fee, $25.

**Pediatrics.**—Drs. H. K. Faber, L. B. Dickey, and staff. Ward rounds, outpatient work including feeding clinics. Limited to three workers.

**Pharmacology.**—Research. Dr. P. J. Hanzlik and staff. Charges will cover cost of animals and supplies only.

**General Surgery.**—Opportunities will be provided for a limited number of students to assist in the care of patients in the surgical dispensary and in the surgical wards. Credit will be given on the basis of one unit for two hours' work.

Similar opportunities will also be provided by special arrangement with the divisions concerned in proctology, orthopedics, urology, otolaryngology, and ophthalmology. Instruction in the care of fractures and varicose veins will be available by special arrangement. Arrangements for dissection of the human body can also be made on the payment of a fee to cover material.
MEMORIAL CHURCH

DAVID ELTON TRUEBLOOD, Chaplain
WARREN D. ALLEN, Organist

The Memorial Church is the place of worship of Stanford University, occupying the central position in the Inner Quadrangle. Thus the founders sought to symbolize the educational ideal of Stanford, a university in which spiritual values are central to the educational process. Student attendance at public worship has ever been encouraged, but has never been required.

Since the Memorial Church belongs to the entire University it has no special membership, but seeks to serve all residents of the academic community. This means, in effect, that all students and instructors become members automatically. Stanford University has never had any denominational or sectarian connection of any kind. Accordingly the manner of worship is entirely unsectarian. It is broadly Christian but contributions of other faiths are appreciated and employed.

Leaders of spiritual insight, some of them laymen, are brought to the campus as special preachers at various times throughout each year to supplement the addresses of the Chaplain of the University, who speaks on a majority of the Sundays. The invited speakers frequently spend several days on the campus, when they are available for group meetings and personal conferences.

Visitors to the campus are invited to enter the Memorial Church for prayer and meditation.

The University Choir offers a liberal education in the different styles of liturgical music, and aims to acquaint students and community with masterpieces of sacred music inspired by all creeds.

The Memorial Church is of modified Moorish-Romanesque architecture, in the form of a cross with rounded ends. The extreme length is one hundred and ninety feet, the extreme width one hundred and fifty feet. The exterior finish is like that of the other quadrangle buildings except for the mosaics of the façade, the central feature being a striking representation of the Sermon on the Mount. The interior walls are buff sandstone, with tooled face, relieved by elaborate carved designs and fifteenth-century mosaics of great beauty. The features of the apse are the marble altar, the stained-glass windows representing the Nativity, the Crucifixion, and the Ascension, and the mosaics covering the wall surface. Behind the altar is a replica of Cosimo Rosselli's "Last Supper," from the Sistine Chapel at Rome. To the right and left, running to the arch of the apse, are long panels, a gloria dei angeli mounted by reproductions in mosaic of Michelangelo's "Prophets." The cove ceiling is also done in mosaics representing angels with trumpets. The nineteen stained-glass windows of nave, transept, and apse illustrate the life of Christ. The windows of the clerestory contain single figures of Old and New Testament characters, and the mosaics depict mostly Old Testament scenes. The seating capacity of the church, including galleries, is about eighteen hundred.

SERVICES

Divine Worship and Sermon, Sunday, 11 A.M.
Vesper Service, Sunday, 4 P.M., in the Laurence Frost Amphitheater.

ORGAN RECITALS

Sunday, 7:30 P.M.; Thursday, 4:15 P.M.
SCHOOL OF PHYSICAL SCIENCES

Eliot Blackwelder, Robert Eckles Swain (Chairman), Gabor Szegő, David Locke Webster, Executive Committee

The School of Physical Sciences consists of the Departments of Chemistry, Geology, Mathematics, and Physics. Its faculty includes all members of these departments and certain professors of Biology, Engineering, Medicine, and Philosophy, whose work is related to the physical sciences.

Programs of study are offered by the individual departments leading to degrees in their respective sciences. For the Bachelor’s degree these programs are supplemented by a general program offered by the School leading to the degree of Bachelor of Arts in Physical Sciences. Each candidate for the degree of Bachelor of Arts in Physical Sciences will be required to take forty-five units of work in the physical sciences while he is registered in the Upper Division, and to have or acquire a reading knowledge of French or German. His program of study must be approved by a special adviser appointed by the Executive Committee of the School of Physical Sciences. It is the policy of the faculty of the School that such programs of study must consist largely of advanced work.

For the degree of Master of Arts in the Physical Sciences, likewise, students interested in fields broader than any one of the individual sciences may register for special programs on the approval of the Executive Committee of the School of Physical Sciences.

CHEMISTRY

Francis William Bergstrom, Associate Professor
Hubert Scott Loring, Assistant Professor

In presenting the following courses for the summer quarter, the purpose has been to offer work which would best meet the needs of students now here who wish to make use of the summer quarter to push forward more rapidly in their University work, and also the needs of those who come from elsewhere to engage in work here. Those who contemplate pursuing work toward an advanced degree may find that the summer quarter presents a very favorable opportunity for meeting certain requirements and for getting the preliminary work on their theses under way. Most of the members of the department faculty who are not regularly on duty for the summer quarter will be in residence during most of the quarter, and available for occasional consultation and direction of research work.

Detailed information in regard to requirements for graduation, for the teacher’s recommendation, for advanced degrees, and in regard to available fellowships, scholarships, and assistantships will be found in the general Announcement of Courses.

COURSES OF INSTRUCTION

121. Organic Chemistry.—Lectures and reviews on the chemistry of carbon compounds. Open to students who have completed Course 12 or 4 or 20. 3 units (first half) (Bergstrom) MTWThFS 9
123. Organic Chemistry.—Continuation of Chemistry 121.
   3 units (second half) (BERGSTROM) MTWThFS 9

141. Biochemistry.—Lectures on the carbohydrates, lipoids, proteins, constituents of blood and urine, and the principal tissues and secretions of the animal body. Enzymes, the colloidal state, and biological oxidations and reductions are also studied. Open to students who have completed Courses 121 and 123 or their equivalent.
   2 units (first half) (LORING) MTThF 8

142. Biochemistry.—An introductory laboratory course designed to accompany Course 141, consisting of a qualitative and quantitative study of the carbohydrates, lipoids, and proteins, of the constituents of blood, urine, and the chief tissues of the animal body. The mode of action of enzymes, the colloidal state, digestion, and biological oxidations are also studied. Prerequisites: Courses 111, 112, 121, and 123.
   2 units (first half) (LORING) MTThF 1-4

143. Biochemistry.—Continuation of Course 141, with particular reference to such topics as the nutrition, metabolism, and the waste products of the human organism.
   2 units (second half) (LORING) MTThF 8

144. Biochemistry.—Continuation of Course 142. The work of this course is devoted chiefly to the quantitative analysis of blood and urine.
   2 units (second half) (LORING) MTThF 1-4

190. Introduction to Methods of Investigation.—For general character and scope, see under Course 200. Primarily for advanced undergraduates.
   (DEPARTMENT STAFF) By arrangement

200. Research and Special Advanced Work.—Properly qualified students may undertake work of research or other advanced laboratory work, along lines not covered by the courses already listed, under the direction of any member of the staff with whom arrangement is made.

For all such research and special work, students will register for Course 200 (or Course 190, if in undergraduate standing), giving the name of the member of the staff with whom the work is carried on and the number of units agreed upon.
   (DEPARTMENT STAFF) By arrangement

GEOLOGY

MALCOLM BRUS KILDALE, Assistant Professor, and Director of Field Geology
HOWARD A. COOMBS (University of Washington), Acting Assistant Professor
BEN MARKHAM PAGE, Acting Assistant Director of Field Geology

The summer quarter affords to both students and members of the staff the opportunity to carry on geologic studies in the field. Courses on the campus are reduced accordingly. For all professional students of geology, field work in as large measure as possible is essential. Mr. Kildale will direct the work of the student members of the Stanford Geological Survey, who will make a detailed study of a selected district in California (Field Geology 108 and 109). Advanced students may use the Stanford Geological Camp as headquarters for special work.
At the University, elementary and advanced courses in geology will be given. The advanced work will be adapted as far as possible to the needs of the individual students who appear. It will afford opportunity for such independent investigation as may be practicable.

Requirements for the various degrees will be found in the general Announcement of Courses.

COURSES OF INSTRUCTION

1. General Geology.—The earth, its materials, structure, and internal conditions; the processes which are at work upon and within it; a brief survey of its historical development. No prerequisites. Lectures, laboratory, and field trips.
   5 units (MTWTThF)

108. Field Geology.—Field work with the Stanford Geological Survey. Summer camps are established in California. During the first term of the summer quarter, the geology of the region reached from the camp is worked out and plotted upon topographic maps and sections. Geological mapping, controlled by instrumental surveying, is taken up during the second term (Course 109). Prerequisites: Geology 1, 101, 102, 121, and Civil Engineering 20.
   9 units (first term) (KIDDALE, PAGE)

109. Geologic Surveying.—During the second term, each student member of the Stanford Geological Survey prepares a detailed topographic and geologic map of an assigned area, controlled by accurate instrumental work.
   6 units (second term) (KIDDALE, PAGE)

112. Advanced Geology.—For students who are qualified by previous work done in geology and related subjects. The nature of the work will be arranged to meet the needs of individual students, after conference with the instructor.
   3 to 10 units (By arrangement)

MATHEMATICS

EMIL ARTIN (Indiana University), JACOB DAVID TAMARKIN (Brown University), Acting Professors

The courses in this department are so prepared that students who are registered in the University during summers quarters only, will be adequately provided for.

COURSES OF INSTRUCTION

114. Selected Topics from Elementary Mathematics.
   4 units (TAMARKIN)

119. College Algebra.
   5 units (By arrangement)

   4 units (TAMARKIN)
248. Algebraic Numbers.
4 units (ARTIN) By arrangement

260. Advanced Reading and Research.—When in the opinion of the department a student is prepared to undertake advanced reading or research not connected with a formal course, such reading or research will be directed by a member of the department.

By arrangement

PHYSICS

Felix Bloch, Professor
———, Acting Professor

The primary purpose of the summer quarter in the Department of Physics is to give teachers and other students enrolling only for this quarter an opportunity to keep in touch with modern developments through Courses 201, 237, and 340. The comparative freedom from interruption in the summer quarter makes it an especially good time for progress in research, though such progress may be combined with a limited amount of study on special topics other than those covered by the sequences of courses given in the other quarters.

COURSES OF INSTRUCTION

201. Literature of Physics.—An intensive study of the literature of any special topic in physics. This course is intended for two classes of students: (a) those who expect to engage in research and wish to become familiar with the present status of the subject of the proposed research; and (b) those who are preparing for the teaching of physics and wish to acquire facility in working up a subject for class use. The work consists chiefly in the preparation and presentation of reports upon the topics studied. Prerequisite: twenty-five units of college physics.

(ANY MEMBER OF DEPARTMENT) By arrangement

237. Theory of Collisions.—Collisions of molecules, atoms, and electrons. Scattering, excitation, and radiation due to collisions of alpha and beta rays. Prerequisite: Physics 235.
3 units (Bloch) By arrangement

250. Research.—Under this head may be included all work on experimental or theoretical problems in research, as distinguished from the independent study of non-research character listed as Course 201.
5 units (ANY MEMBER OF DEPARTMENT) By arrangement

340. The title and content of this course, as well as the name of the visiting instructor, will be announced later.
SCHOOL OF SOCIAL SCIENCES

MERRILL KELLEY BENNETT, HAROLD CHAPMAN BROWN, PHILIP WALENSTEIN BUCK (Secretary), CHILTON ROWLETTE BUSH, EDWIN ANGELL COTTRELL (Chairman), BERNARD FRANCIS HALEY, CHARLES NATHAN REYNOLDS (Adviser), EDWARD KELLOGG STRONG, JR., PAYSON JACKSON TREAT, Executive Committee

The School of Social Sciences has been formed (a) to facilitate the work of students who desire to study in several related fields without meeting the requirements for a degree in any one department; (b) to afford a convenient organization for the conduct of courses in subjects which do not lie wholly within the scope of any particular department; (c) to make possible a closer correlation of the work of the several departments included in the School.

The faculty consists of all members of the departments of Economics, History, Philosophy, Political Science, and Psychology, the divisions of Journalism and Sociology, and the Food Research Institute, and such representatives from other schools and departments as the faculty of the School of Social Sciences may elect.

UNDERGRADUATES

Major Students in the School.—A student may register as a major in the School or in any one of the constituent departments or divisions. If a student elects to become a major in one of the departments, he is not obligated to meet the requirements for graduation in the School (as stated on this page), but he is held for the requirements of the department only. In order to become a major student in the School of Social Sciences, one must have obtained ninety units of university credit.

To be recommended by the School of Social Sciences for the degree of Bachelor of Arts, a candidate must have earned an average grade of C in all Stanford courses for which the School allows credit toward satisfying its graduation requirements.

For the degree of Bachelor of Arts in this School seventy units are required in courses offered by the departments of Economics (including courses offered by the Food Research Institute), History, Philosophy, Political Science, and Psychology, and the divisions of Journalism and Sociology. A part of this requirement will, under existing regulations, be met while the student is in the Lower Division, although the course in Introduction to Social Problems may not be counted. Of this seventy units, at least twenty must be taken in each of three departments or divisions in the School. At least one Upper Division course must be passed at Stanford in each of these three departments or divisions. The courses in Human Heredity (Anatomy 141) and Elementary Human Physiology (Physiology 101) may be counted as part of the field in psychology.

A curriculum in International Relations has been established by the School. For information regarding this curriculum, consult the secretary of the School.

[A course in statistical methods is strongly advised. Such a course is provided by Economics 60 (4 units), Education 60 (5 units), or Psychology 60 (5 units). The modern-language requirements of the Lower Division must be satisfied as early as possible by all major students in the School who enter from other institutions.]
Undergraduates may enroll as major students in the Division of Journalism in the same manner as in a regular department of the University, subject to the condition that they shall satisfy the specific requirements of the School for graduation. The divisions of the School may arrange groups of courses constituting "Teaching Majors or Minors" in their respective subjects in the same manner as departments of the University, and "Teaching Majors and Minors" in Social Sciences other than History can be arranged. (See the Credential Bulletin issued by the School of Education for a detailed discussion of these requirements.)

GRADUATE STUDENTS

Graduate students who have completed the undergraduate requirements of the School of Social Sciences or of any one of the constituent departments or divisions, or an approximate equivalent of these, may be enrolled in the School as major students and may become candidates for the degree of Master of Arts or Doctor of Philosophy. Graduates of a constituent department or division or of another institution must have completed the specific undergraduate requirements of the School, or their equivalent, before an application for candidacy for an advanced degree can be approved. Candidates for these degrees shall comply with all the general requirements of the University specified for the degree sought. The entire time of candidates for advanced degrees will as a rule be devoted to studies within the constituent and allied departments of the School, but in particular cases courses or lines of study may be elected in other departments of the University when incidental to and comprised within the general plan of work constituting the candidates' "major in Social Sciences."

Prospective candidates for higher degrees in any of the social sciences should realize that they may advance to these degrees by meeting the requirements of the appropriate department or division of the School of Social Sciences and without reference to the requirements set by the School itself for candidates whose work is not within the limits of a single department. The primary function of the School, except in the case of students in the divisions of the School, is to assist students in the investigation of problems which may not admit of satisfactory treatment from the point of view of any one of the several social sciences. Accordingly, only such graduate students as are looking forward to the preparation of a thesis or dissertation upon a problem of the kind in question will be enrolled as major students in the School or approved as candidates for advanced degrees.

Provisional enrollment for the degree of Master of Arts or Doctor of Philosophy will be made with the Chairman of the Executive Committee, who will appoint a special standing committee of three, consisting in each case of representatives of the faculty of the School who are specialists in the fields in which the proposed problem of research lies. Each candidate for the degree of Master of Arts will be given a written examination by the special standing committee appointed in each case, not later than three weeks after the provisional registration in the School. This written examination shall cover at least three related fields in which the candidate proposes to work. The final approval of candidacy will be given after satisfactory completion of this examination, and the approval by the committee of a thesis subject and a program of work in course. The candidate will be recommended to the Committee on Graduate Study for the degree after the satisfactory completion of work in course and a thesis.
Each candidate for the degree of Doctor of Philosophy in the School of Social Sciences will be under the direction of the special standing committee of three which will be appointed by the Chairman of the Executive Committee. The members of this committee will be chosen from those specialists in the related departments with whom the candidate proposes to work. This special committee shall be responsible for the general oversight of the student's entire work. It shall pass upon the competence of the candidate, recommend the final approval of his application for candidacy, be responsible for his program of work in course and research, and set a suitable written examination prior to the oral examination conducted by the Committee on Graduate Study. The chairman of this special committee will approve the program of studies to be submitted to the Committee on Graduate Study in connection with the application for candidacy for the advanced degree. However, the written program of study shall ordinarily include nine fields which shall be designated by the committee, it being understood that all work in those fields in which the members of this committee are not specialists will be guided by specialists in those respective fields, and the committee will in each case consult with the specialist concerned before giving final approval to the program of study. Application for candidacy must have the final approval of the Chairman of the Executive Committee of the School. The completed program of studies will constitute a "major in Social Sciences" for the degree of Doctor of Philosophy. In view of the composite character of this major, candidates will not be permitted to enroll for a minor in a particular department of the University or division of the School, and the School will regularly recommend to the Committee on Graduate Study in behalf of its candidates for the Doctorate that the normal requirement of a specified minor subject, or subjects, be waived.

ECONOMICS

HOWARD PAUL BECKER (University of Wisconsin), FRITZ MACHLUP (University of Buffalo), Acting Professors
KARL FRANZ BODE, Assistant Professor
JOEL VAN METER BERREMAN, HERBERT GOLDSHAMER, Instructors

Nature and Purpose.—Instruction in the department is not confined to the subject of economics as commonly defined, but includes, in the Division of Accountancy, the basis for quantitative analysis of economic relationships in private enterprise, and, in the Division of Sociology, subject matter usually offered in departments of sociology. In the conduct of all the courses, the economic factors are emphasized and their importance to our social institutions is developed. The primary purpose of the instruction is to discover the element of a sound public policy rather than to train for a vocation.

Enrollment in the Department.—Students may qualify for enrollment in the department if they are included in one of the following three groups:

1. Students who have taken Elementary Economics at this University and have received an average grade of C or better in the course.
2. Students who have had, at some other institution, a course in elementary economics for which five or more quarter units of collegiate credit have
been given. Students in this group, however, must either take Economics 1 and 2, in which they may receive full credit with a grade no higher than plus, or they will be required to pass, with a grade of not less than C, a written examination given by this department in this subject. This examination will be given one week after registration day in each quarter. Students in this group may register provisionally in the department but will be expected to take the examination on the date indicated.

3. Students who, by reason of deficient grades, cannot enter under Group 1 or Group 2, but who have credit for not less than ten units of economics in courses completed at Stanford in one or more of the following groups: Economic Theory, Money and Banking, International Trade and Finance, and Labor Problems; provided (1) that such students shall have earned not less than four units in the Economic Theory group with grade of C or better and (2) that such students shall have earned an average grade of B or better in their Stanford courses in the groups specified above.

4. Students of Upper Division standing who have had no course in elementary economics may be provisionally accepted as major students. Such students will not be finally accepted as majors until they have completed Courses 1 and 2 with an average grade of C or better. Courses for which Economics 1 and 2 are not prerequisites may be taken concurrently with Economics 1 and 2.

Graduation.—To adapt his program of study to his special needs and interests the student should consult with his departmental and division advisers. To be recommended by the department for the degree of Bachelor of Arts the student must either:

1. Have completed forty-five units in courses in economics, business law, and the course offerings of the Food Research Institute, which courses shall include:
   (a) Courses 1 and 2 (Elementary Economics), or their equivalent; and
   (b) Except as noted below, three Upper Division courses in one of the course-groups A to L (see Announcement of Courses); or
2. Have completed the program of the Division of Accountancy.

He must have earned, in his Stanford courses in economics, business law, the course offerings of the Food Research Institute, and in specifically required subjects for which he has received definitive marks, a total number of grade points at least twice the total number of announced units of credit in these courses.

In connection with each group of courses in economics listed in the Announcement of Courses, the student will find a list of collateral courses recommended by the department for students concentrating in that group. With the assent of the executive head of the department one Upper Division course from such a collateral list may be substituted for one of the three courses required under 1(b) above. Students who look forward to becoming professional economists, statisticians, or accountants are advised to include courses in mathematics through elementary differential and integral calculus.

Students who wish to concentrate in sociology should major in Social Sciences—Sociology. (See requirements listed under Division of Sociology.)

COURSE OPEN TO LOWER DIVISION STUDENTS

1. Elementary Economics.—This is a brief study of problems involving the production, exchange, and use of wealth. An attempt is made to give
the student an approach to the economic issues of the day with an intelligent appreciation of the factors which make for sound policy. To become a major student in the department a student must have completed this course and Economics 2. Prerequisite: second-year standing.

5 units (BODE) MTWThF 11

COURSES OPEN TO UPPER DIVISION AND GRADUATE STUDENTS

[Note.—Courses numbered 200 and above are open to Upper Division students, only by permission of the instructor.]

115. Economic History of Modern Europe.—A consideration of the forces involved in the emergence of modern capitalism. The general economic development of Europe from the eighteenth century to the present. Prerequisites: Economics 1 and 2.

5 units (full quarter); 4 units (8 weeks) (BODE) MTWThF 9

125. Techniques of Monetary Control.—The elements of monetary and banking theory. Analysis of money creation, control of money volume, standards, etc. Prerequisites: Economics 1 and 2.

5 units (full quarter); 4 units (8 weeks) (MACHLUP) MTWThF 10

148. Theories of Economic Reform.—A study of the factors underlying the principal programs for economic reform and of the possibilities and techniques for the economic functioning of a collectivist society. Prerequisites: Economics 1, 2, and 75.

5 units (full quarter); 4 units (8 weeks) (GOLDHAMER) MTWThF 11

202. Advanced Theory.—A critical analysis of selected recent writings in general economic theory. The members of the class are expected to participate freely in discussion. Prerequisite: graduate standing and consent of instructor.

5 units (MACHLUP) MTWThF 1

DIVISION OF SOCIOLOGY

Purpose.—The purpose of the Division of Sociology is to provide opportunity for the analysis and understanding of society and social problems. A program of courses is offered which enables students majoring in sociology to secure a broad liberal background for later professional courses of study in law, medicine, social work, or graduate work in sociology.

Graduation.—To be recommended by the division for the degree of Bachelor of Arts in Sociology a student must have completed at least two of the following three introductory courses: (a) Economics 1 and 2 (Elementary Economics), (b) Political Science 1 and 2 (American Government), (c) Psychology 51 (General Psychology). In addition he must have earned at least thirty-five units of sociology, including Economics 75 (Introduction to Sociology). The total number of units earned in Sociology, Elementary Economics, American Government, and General Psychology must be at least fifty-five. When any part of these requirements is fulfilled in other institutions complete courses with corresponding objectives are required. He must have earned in his Stanford courses in Sociology, Elementary Economics, American Government, and General Psychology, taken together as a group and for which he has received definitive marks, a total number of grade points at least twice the total number of announced units of credit in these courses.
COURSE OPEN TO LOWER DIVISION STUDENTS

75. Introduction to Sociology.—An introductory study of social organization and institutions, the relation between society and the individual, some aspects of social disorganization and change, "human nature" and culture. Prerequisite: second-year standing.
5 units (Berreman) MTWThF 8

COURSES OPEN TO UPPER DIVISION AND GRADUATE STUDENTS

178. Social Thought from Lore to Science.—A survey of the range of man's social thinking from the earliest times to the present; analysis of contemporary ideas representing "folklore" thinking about matters social; an analysis of the factors giving rise to such "isms"; presentation of sociologically acceptable diagnoses of current social situations. Prerequisite: Economics 75, or consent of instructor.
5 units (full quarter); 4 units (8 weeks) (Becker) MTWThF 8

193. The Professions in Contemporary Society.—An analysis of: the characteristics of professional as compared with nonprofessional pursuits; the conditions under which professional groups arise; the control of professional-client and intraprofessional relations; educational and occupational selection in the professions; the role of professional and protective organizations; the commercialization of professions and the professionalization of commercial pursuits; the role of the specialist in contemporary society; the professions in relation to the political process. Special emphasis will be given to the medical, legal, teaching, and engineering professions, although some attention will be paid to "quasi-professions" such as the artists and journalists. Prerequisite: Economics 75, or consent of instructor.
3 units (full quarter); 2 units (8 weeks) (Goldhamer) MWF 9

198. Social Trends.—A study of the factors and forces involved in the organization and continual modification of society. The meaning of culture, the nature of social change, the development of institutions, and the possibility of progress are emphasized. Prerequisite: Economics 75, or the equivalent.
5 units (full quarter); 4 units (8 weeks) (Berreman) MTWThF 10

279. Personality, Conduct, and Culture.—Nature of human nature; rise of the self in and through social relations; differences in personality traceable to culture; contemporary schools of personality analysis; personality problems in the context of the modern world.
5 units (Becker) By arrangement

FOOD RESEARCH INSTITUTE

JOSEPH STANCLIFFE DAVIS, Director
MERRILL KELLEY BENNETT, KARL BRANDT, HOLBROOK WORKING, Economists
HELEN CHERINGTON FARNSWORTH, VLADIMIR P. TIMOSHENKO, Associate Economists

The Food Research Institute, organized in 1921 under a grant from Carnegie Corporation of New York for the purpose of research in the production, distribution, and consumption of food, will be in active operation during the
closing four weeks of the summer quarter. No courses of instruction are offered during this time.

The opportunity will be open, however, for a few properly qualified students to inaugurate a program of research, or to continue work on one lying within the field of the Institute. Students will be expected to devote at least half their time to the research problem chosen.

A general statement regarding the Institute will be mailed upon request to the Executive Secretary, Dr. M. K. Bennett, who will be glad to answer specific inquiries.

HISTORY

RALPH HASWELL LUTZ, Professor
MAXWELL HICKS SAVELLE, Associate Professor
LYNN TOWNSEND WHITE, Jr., Assistant Professor
ALBERT JOHNSON LYND, Instructor

For general statements of the work of the department, requirements for degrees, and the Teachers' Recommendations, students should consult the Announcement of Courses.

The work of the summer quarter is less extensive than that of other quarters, but the courses offered are of the same type, are conducted in the same manner, and carry the same University credit as in the rest of the University year.

Students majoring in education and registering for the eight weeks' term are asked to consult with the faculty in history before registering for courses in history. Special arrangements will be made for such students.

Graduate students qualified to carry on investigations in any of the fields covered by instructors in the summer quarter will be permitted to enroll for credit, if they so desire, without assignment to any particular class or course (see statement under Course 240).

I. ELEMENTARY COURSE

[Open only to freshmen meeting the requirement for History in the Lower Division.]

10. History of Western Civilization.—A survey of Western civilization from primitive man to the time of Charlemagne: the achievements of prehistoric man, the cultures of Egypt and Mesopotamia, the civilizations of Greece and Rome, and the early Middle Ages.

4 units (LYND) MTWTh 10

II. INTRODUCTORY COURSES

[Open to all students except freshmen]

101. Renaissance, Reformation, and Counter-Reformation, 1300–1600.—A survey of the way in which Western Europe, dissatisfied with the civilization inherited from the Middle Ages, was groping after new political, economic, and religious institutions, and after new expressions in literature and the arts.

5 units (WHITE) MTWThF 9
120. American History to 1789.—A survey of the discovery and colonization of America, the beginnings of a new nationality and the development of a new culture, independence, and the organization of the new state. 5 units  (SAVELLE)  MTWThF 10

III. ADVANCED LECTURE COURSE

[Open to Upper Division and Graduate Students]

140. The Transition from Medieval to Modern Times.—A study of the origins of capitalism and experimental science, of their impact on medieval thought and institutions, and of the historical roots of modern ways of thinking and acting. The course is especially designed for students who wish to explore the causes and nature of our present cultural chaos. 3 units  (WHITE)  MWF 11

IV. INTRODUCTORY SEMINAR COURSES

No courses in this group are offered by the Department of History in the summer quarter of 1940.

V. SEMINAR COURSES

207. Modern European History: The Paris Peace Conference.  5 units  (LUTZ)  T 2-4
212. American Colonial History: Studies of the Colonial Mind.  5 units  (SAVELLE)  W 2-4

VI. GRADUATE COURSE

246. Modern European History.  5 units  (LUTZ)  By arrangement

JOURNALISM

CHILTON ROWLETTE BUSH, Professor

Most of the undergraduate instruction in journalism will be in conjunction with the summer quarter edition of the Stanford Daily, which will be written and edited by members of the class in Practical Editing as a newspaper for the campus community.

The summer quarter program also has been formulated with a view to providing opportunity for graduate study by teachers of journalism who are candidates for higher degrees in this and other departments of instruction. In addition to the course work, opportunity is provided for earning thesis credit. The Main Library, the School of Education Library, and The Hoover Library on War, Revolution, and Peace contain excellent newspaper files and periodicals for certain types of investigation.

COURSES OF INSTRUCTION

117. Practical Editing.—The members of the class will be constituted the editorial staff of the summer edition of the Stanford Daily. In class-laboratory meetings, instruction and practice will be provided in the technique of
news writing, copyreading, headline writing, proofreading, and make-up for the Stanford Daily. As rapidly as their ability and effort warrant, the members of the class will be permitted to exercise their own judgment and initiative in planning and editing the paper.

4 units (BusH) MW 1-5 and MW 7-9 p.m.

140. History of Journalism.—A study of the changing character of the newspaper with emphasis on the contributions of outstanding editors, publishers, and inventors. The evolution of freedom of the press, editorial and business standards, mechanical production, and advertising practices.

3 units (BusH) By arrangement

142. Sociological Aspects of Journalism.—A study of the newspaper as a social institution with some attention to the problems of ethical professional conduct. The influence of the newspaper on morals, public opinion, taste, English style, and standards of living; influence on the newspaper of certain characteristics of American life; examination of proposed reforms of the press. The course is given on an independent study basis during the summer quarter.

3 units (BusH) By arrangement

199. Individual Work.—Journalism majors are permitted to undertake individual work for which they may be qualified along lines not covered by the courses already listed. Consent of the instructor under whom the work is to be done is required.

1 to 3 units (BusH) By arrangement

[Curriculum and Instruction in Journalism.—See Education 215.]

PHILOSOPHY

HAROLD CHAPMAN BROWN, Professor
ARTHUR MURPHY (University of Illinois), Acting Professor
HENRY LANZ, Associate Professor of Slavic Languages and Philosophy

Graduation.—The requirements for graduation in this department constitute an adequate preparation for advanced studies in philosophy and leave opportunity for the other elements of a general or liberal education. Major students are required to present for the degree of Bachelor of Arts thirty-five units in philosophy (in which Courses 1, 2, 100, 101, 102, and 200 must be included), the general course in psychology, and at least five units in a laboratory course in a natural science. The second-year courses in French or German are recommended as a part of the Lower Division work of intending major students. Each major student will be expected to devote to a subject other than philosophy sufficient time to gain a substantial knowledge of some one of its principal divisions or aspects.

Graduate Study.—The department will, as a rule, enroll students for one year only of graduate work, leading to the degree of Master of Arts or to a minor for the degree of Doctor of Philosophy, but a limited number of well-qualified candidates for the Ph.D. degree will be accepted. The department will require a general written examination on the history of philosophy of all candidates for the Master's degree and additional written examinations in the fields of logic, metaphysics, ethics, and history of philosophy of candidates for the Ph.D. degree to be taken at least one year before the granting of the degree.
Library.—The philosophical section of the General Library contains at present (1) complete sets of upwards of twenty of the leading philosophical journals—for most of which current subscriptions are carried, (2) the best available editions of the works of the principal philosophers, and (3) an extensive and constantly increasing collection of standard and contemporary literature—historical, critical, and constructive—covering the various fields of philosophical study.

ELEMENTARY COURSES

2. Ethics.—The important historical theories as to ethical criteria and an analysis of the basis of moral judgments in reference to contemporary situations.
4 units (MURPHY) TWThF 11

7. Introduction to Philosophy.—An introductory survey of the chief issues in contemporary philosophy. Emphasis is placed upon conflicts in points of view. Prerequisite: second-year standing.
4 units (BROWN) TWThF 9

INTERMEDIATE COURSES

121. The Philosophy of Language.—The origin, nature, and development of language, with special reference to meaning and the grammatical categories.
4 units (BROWN) TWThF 10

132. Free Will and Determinism.—This course is intended to promote discussion and further reflection, among the students of philosophy, upon the ethical issues connected with the problem of the freedom of the will and determinism. Special attention is called to the modern developments and contributions to determinism, such as the theory of conditional reflexes, psychoanalysis, historical materialism, and neo-vitalism. Outside reading, lectures, and discussions.
3 units (LANZ) Th 2-4

ADVANCED AND GRADUATE COURSES

[Special work for graduate students will be arranged in connection with the intermediate courses listed above.]

200. The Problems of Contemporary Philosophy.—A study of important problems and trends in twentieth-century philosophy. Prerequisite: Philosophy 102.
4 units (MURPHY) TWThF 8

(BROWN, MURPHY) By arrangement

POLITICAL SCIENCE

CHARLES EMANUEL MARTIN (University of Washington), Acting Professor
PHILIP WALLENSTEIN BUCK, Associate Professor

For general statements of the work of the department, requirements for degrees, and the teachers' recommendation, students should consult the Announcement of Courses.
The courses offered in the summer quarter give an opportunity for Lower Division students to begin their work in the department, and for graduate students to attend a seminar and continue investigation in the fields represented by the professors on duty.

COURSES OF INSTRUCTION

51. Comparative Government.—An introductory course providing a broad survey of the more important governments of the world. Approximately two-thirds of the course is devoted to the English, French, Swiss, and Japanese governments; the remaining third is directed to the political organization and the economic programs of the dictatorships of Russia, Italy, and Germany. Open to all undergraduates except freshmen.
5 units (BUCK) TWThF 10

125. American Constitutional System.—Formation and development of the American constitutional system; basic constitutional principles of the American system of government; relations between the departments of government; the states and the nation, and the individual and the state; recent constitutional controversies. Prerequisite: Upper Division standing.
5 units (MARTIN) TWThF 11

145. World Politics.—A general survey of the forces and conflicts operating in international relations and world affairs. The present national policies of the great powers as considered from the historical, political, and economic viewpoints. Prerequisite: Upper Division standing.
5 units (MARTIN) TWThF 9

212. Seminar in Comparative Government.—A comparative study of the party systems of the parliamentary states, with some discussion of the party systems in the dictatorships. Primarily a graduate course; open to undergraduates with the permission of the instructor.
5 units (BUCK) By arrangement

PSYCHOLOGY

Harold Ellis Jones (University of California), Acting Professor
Robert Trowbridge Ross, Acting Assistant Professor
Arthur Allen Lumsdaine, Helen Marshall, Acting Instructors

COURSES OF INSTRUCTION

51. General Psychology.—The point of view, methods, and the experimentally attested facts of the sciences are presented. The primary emphasis is on normal adult psychology, and applications to prediction and control of human behavior. Lectures, demonstrations, and one discussion period per week.
5 units (full quarter); 4 units (8 weeks) (LUMSDAINE) MTThF 9 (sections W)

60. Introduction to Statistical Methods.—This course deals with the following topics: collection, reduction, and tabulation of data; tabular and graphic methods of presentation; measures of central tendency and dispersion; elementary notions of the normal probability curve and probable errors; comparison of groups in terms of overlapping and difference between means,
medians, etc.; use and possible interpretations of proportions; introduction to correlations. Text, lectures and discussion, and assigned problems.

4 units (8 weeks) (Cain)  

153. Studies in the Psychology of the Theater.—A consideration of the psychological factors operative in various phases of the dramatic arts. Audience reactions, the personality traits of the actor, dramatic aptitude, the psychology of characterization, and the psychological factors in successful play production will be discussed.

5 units (full quarter); 2 units (8 weeks) (Ross)  

158. Social Psychology.—A study of the interaction of the individual and his society. Special emphasis will be placed on an understanding of social phenomena in terms of the psychological mechanisms which characterize the individual. Prerequisite: Psychology 51.

4 units (full quarter); 3 units (8 weeks) (Ross)  

163. Child Psychology.—A survey of child development. Special attention will be given to experimental and observational studies, to the child's conception of the world, and to the basis and nature of the development of personality. Prerequisite: Psychology 51, or equivalent.

3 units (8 weeks) (Jones)  

164. Educational Psychology I.—A general course dealing with problems of learning, individual differences, mental development, and personality. Prerequisite: Psychology 51, or equivalent.

4 units (8 weeks) (Cain)  

187. Mental Tests.—An introductory course dealing with the history and principles of psychometric procedures and with the results of their application to school children, mental defectives, delinquents, the insane, the gifted, racial groups, and typical adult populations. Lectures, assigned readings, discussions, and demonstration tests. Prerequisites: Psychology 51 and 185, or equivalent.

4 units (full quarter); 3 units (8 weeks) (Marshall)  

199. Reading and Special.—For graduate students and qualified undergraduates who, having had the pertinent introductory courses, wish to study independently along special lines not otherwise provided for. Ordinarily not more than 3 units.

(Departmental Faculty)  

216. Psychology of Personality.—An examination of the methods of testing in the field of interests, attitudes, character, and other personality traits. A historical and critical survey of the evidences for and against the existence of personality types. Prerequisites: statistical methods, one course in mental tests, and some knowledge of abnormal psychology.

4 units (full quarter); 3 units (8 weeks) (Ross)  

260. Research and Thesis.—Research of an advanced nature, whether or not to be used toward the Master's thesis or doctoral dissertation, may be undertaken with individual members of the departmental faculty.

(Departmental Faculty)
GRAPHIC ART

DANIEL MARCUS MENDELOWITZ, Assistant Professor

During the summer quarter the Division of Graphic Art offers laboratory and lecture courses selected from the regular curriculum and open to elementary and advanced students in all departments of the University.

For the student adopting art as a major, two undergraduate curricula are offered: the Graphic Art Curriculum and the Pre-Architectural Curriculum, both leading to the degree of Bachelor of Arts and both providing a substantial technical training in drawing, painting, and design for the student who intends to continue professional training in the field of art or architecture after his graduation.

UNDERGRADUATE WORK

Lower Division.—The Lower Division student intending to major in art should confer with the Graphic Art adviser at the beginning of each quarter to plan his course of study. Prospective art majors should plan to complete twenty or thirty units of work in art while in the Lower Division. Prospective graphic art majors are urged to select French or German and prospective pre-architecture majors are urged to select French to fulfill the Lower Division foreign-language requirement.

An average grade of not less than B— in the total list of required courses in either curriculum is a prerequisite to recommendation for graduate or professional work in graphic art or architecture.

Graphic Art Curriculum.—The Graphic Art Curriculum provides the basic courses in drawing, painting, design, and history and theory of art necessary as a foundation for advanced specialized training in any field of graphic art.

The requirements for the degree of Bachelor of Arts for students electing the graphic art curriculum are as follows:

1. A minimum of 60 units of work in art, including Courses 1, 2, 4, 5, 20, 22, 24, 25, 60, 61, 65, 106, and 128.
2. Of the 60 units of required work an acceptable number must be in advanced courses numbered 100 or over.
3. Of the 60 units of required work at least 15 units must be in drawing and painting, 15 units in design, and 15 in history and theory of art.

Pre-Architectural Curriculum.—The Pre-Architectural Curriculum provides the basic courses in language, mathematics, engineering, and art required by most graduate schools of architecture and for which credit may be expected toward advanced degrees in those schools.

The requirements for the degree of Bachelor of Arts for students electing the pre-architectural curriculum are as follows:

1. A minimum of 45 units of graphic art, including Courses 1, 2, 4, 5, 20, 22, 24, 25, 61, 65, and 126 (6 units).
2. Completion of second-year French reading (Romanic Languages A23).
3. A minimum of 30 units of mathematics and engineering, including the following: Mechanical Engineering 7 and 10; Mathematics 10 and 11; Civil Engineering 138, 180, and 182 (10 units).
GRADUATE WORK

Graduate work in graphic art may be undertaken by a limited number of students who wish to engage in creative work or research leading to definitely planned practical ends. Only such students will be accepted whose ability for original creative work or research is evident and whose study will lie within the fields in which the members of the faculty are working.

DEGREE OF MASTER OF ARTS

The requirements for the degree of Master of Arts are as follows:

1. Completion of three full quarters of graduate work in residence at Stanford University.
2. Completion of the equivalent of 45 units of selected Upper Division and graduate courses. At least 30 units of this work (including the thesis) must be in art.
3. Presentation of an approved thesis.
4. Completion of the equivalent of a two-year college course in one modern foreign language. French or German will usually be required though a substitution may be made with the authorization of the graphic art adviser. The student should complete this requirement before filing his application for the Master's degree.

No degree is offered beyond the Master of Arts, but work for a minor in graphic art will be provided when such work forms an essential part of the student's requirement for an advanced degree in another department.

TEACHING CREDENTIALS

Requirements for the General Secondary School Credential are: one graduate year at Stanford University of not less than 39 units of Upper Division and graduate courses, including at least 9 units of work in each of the candidate's teaching fields and at least 9 units in education; completion of the teaching-major in graphic art and of a teaching-major or -minor in at least one other subject. (See the Credential Bulletin of the School of Education for the requirements for all certificates.)

COURSES OF INSTRUCTION

Elementary courses, of both lecture and laboratory type, are numbered below 100. No elementary course may be repeated for credit except Courses 1, 2, 15, and 25. Advanced courses are numbered 100 or above and, with the approval of the instructor, may be repeated indefinitely for credit.

1. Elementary Drawing and Painting.—Freehand drawing and watercolor painting. Still life, architecture, and landscape to develop an ability to represent three-dimensional form on a two-dimensional surface. Elementary freehand perspective light and shade, and color in the representation of various forms, surface textures, and materials. Composition for clarity of presentation. This course should precede all advanced drawing and painting courses and may be repeated for credit. Open to all students.

2 to 5 units (full quarter or 8 weeks) (MENDELOWITZ) MTWThF 1-4

60. Lectures on Painting.—A general survey of the painting of Western civilization from medieval times to the present day. Discussion of the development of drawing, chiaroscuro, and color, and of the important movements
in the field of painting which contribute an understanding of the aims and methods of present-day painting. Special attention is paid to the composition and style of expression characteristic of the artist and his times. Lectures with slides. Open to all students.

5 units (full quarter); 4 units (8 weeks) (MENDELOWITZ) MTWThF 9

100. Individual Work.—Qualified Upper Division students with the approval of the teaching staff may arrange for study in subjects not listed in the regular curriculum.

(MENDELOWITZ) By arrangement

106. Advanced Painting and Composition.—Work in water-color, oils, or other usual media according to the student's needs. A study of pigments and methods of application for permanency. Selection and interpretation of subject matter in terms of line, form, and color composition. Painting from still life, architecture, landscaping, and the human figure. Prerequisite, satisfactory previous accomplishment in drawing or painting.

2 to 5 units (full quarter or 8 weeks) (MENDELOWITZ) MTWThF 1-4


(MENDELOWITZ) By arrangement

[Curriculum and Instruction in Graphic Art.—See Education 207.]
[Individual Study in Curriculum and Instruction in Graphic Art.—See Education 457.]
MUSIC

WARREN D. ALLEN, Organist, and Associate Professor of Music and Education
NEIL DANIELS, Lecturer in Music and Education
—- Lecturer in Dramatic Music

COURSES OF INSTRUCTION

1. Choir.—The University Choir sings for the Sunday morning services in the Memorial Church throughout the quarter. Candidates for teaching credentials who specialize in choral work will be expected to assist in this course and opportunities will be given them to conduct the group occasionally.
   No credit (ALLEN) Sun. 10:15 A.M., Th 7:15 P.M.

110. Bach and Beethoven.—Comparative studies of two composers and their differing styles of musical composition in relation to their times, in an effort to understand more fully certain phases of European culture in the early eighteenth and early nineteenth centuries. Illustrations for this course will be afforded with Bach recitals in the Memorial Church, and Beethoven programs in the Memorial Hall under the auspices of the Friends of Music. No previous musical training is necessary for admission to the course. Assignments will differ according to students' abilities.
   3 units (8 weeks) (ALLEN) MTWTh 9

111. Choral Music.—The fundamental principles of choral literature, its history and interpretation. The rhythms of musical speech and of declamatory music. The other phase of rhythm (body-rhythm) and metrical balance. Pitch discrimination and ear training. Analysis and interpretation of the three general types of choral music—unison, polyphonic, and harmonic; secular, religious, and national. The social significance of various types of choral music.
   2 or 3 units (ALLEN, DANIELS) By arrangement

113. Dramatic Music.—A workshop-seminar in opera and other combinations of music and drama. Open to singers who wish to study repertoire individually and in groups. Performances will be of an intimate, informal nature.
   (——) By arrangement

151. Advanced Fundamentals.—Ways and means of integrating various phases of music theory (harmony, counterpoint, form, orchestration, etc.) in order to meet the practical needs of students.
   3 or 4 units (——) MTWTh(F) 8

162. Music Education: Aims and Methods.—Seminar for teachers and graduate students in music education. Methods of presentation, psychological factors, the values and limitations of integrated studies, and other problems suggested by personal needs of those registered.
   3 units (8 weeks) (——) By arrangement

   3 to 4 units (ALLEN) By arrangement
199. Individual Work.—For individual students whose needs are not met by the above courses. A program for such study must be approved by the Chairman of the Division.

(STAFF)

By arrangement

Fees.—Courses 110, 111, 151, 162, 193, $5 each; 199, $20; 113, fee by arrangement.
Courses in the summer quarter are offered for students seeking training in various phases of speech, for teachers already in the field as well as those preparing to enter it, and for those intending to teach or participate in dramatics. Candidates for teachers' credentials with a major or minor in speech and drama should consult the Credential Bulletin issued by the School of Education. Information regarding requirements for the degrees of Bachelor of Arts and Master of Arts may be found in the Announcement of Courses, published annually in May.

COURSES OF INSTRUCTION

10. Essentials of Vocal Expression.—A basic course in thought process, in quickening of imagination and feeling, and in the oral communication of thought and feeling to others. Assigned general reading, class recitations, and personal conferences directed toward individual problems in interpretative reading and better vocal conditions for all speech purposes. Sections limited to twenty students in order of their application.

3 units (full quarter); 2 units (8 weeks) (BUCKINGHAM) MWF 9

15. Extemporaneous Speaking.—Practice in extemporaneous speaking on subjects of current interest and the student's choice with attention to content, the organization of speech material, and the essentials of effective oral presentation. Not open to first-year students. Sections limited to eighteen students.

3 units (full quarter); 2 units (8 weeks) (CHAPIN) MWF 10

20. Speech Clinic.—Corrective work in voice production and speech defects; group and individual conferences. Open to all students in need of corrective treatment.

No credit ( ) By arrangement

91. Stage Production.—The fundamentals of shop and stage-crew practice, stage management, and stage lighting. This includes the construction, painting, assembling, handling, and striking of scenery and properties. Members of the class comprise the various crews for the department plays. Open to Lower and Upper Division students. Prerequisite: Speech and Drama 90, or its equivalent.

6 units (full quarter); 4 units (8 weeks) (JOHANSEN) Lec. MW 11; Lab. M 1–3; Stage Crew M 3–5, W 1–5

132. Argumentation and Debate.—The theory of argumentation, with practice in the preparation of briefs and in the writing of arguments, together with a critical analysis of argumentative masterpieces. Open to all students who have made a satisfactory grade in English 2.

3 units (full quarter); 2 units (8 weeks) (CHAPIN) MWF 9
134a. Dramatic Composition.—A course in the composition of original plays, which stresses the uses of native materials. The course begins with a consideration of the technique and structure of the well-made one-act play. Students are admitted to the course only with the consent of the instructor. At least two acceptable one-act plays are required of each student registered in the course. Acceptable plays are presented in Studio Production from time to time. Open only to Upper Division and graduate students. With the consent of the instructor this course may be taken for graduate credit in Speech and Drama.

3 units (full quarter); 2 units (8 weeks) (HEFFNER) MWF 10

136. Methods of Organized Discussion.—This course will consider the symposium, the panel, and various types of debating such as the cross-question system, decision and nondecision debating. Designed especially for high-school teachers who have charge of public-speaking activities, but open to others who are interested in various types of speaking projects.

3 units (full quarter); 2 units (8 weeks) (CHAPIN) MWF 1

149. Voice Training.—Lectures on the voice, with class and group practice. Open to majors and minors in speech and drama, and to others by permission of the instructor.

3 units (full quarter); 2 units (8 weeks) (———) MWF 11

155. Teachers' Speech Training.—A study of the principles of expressive speech and training in reading aloud, with assignments adapted to the needs of individual members of the class. Designed particularly for majors or minors in English literature and for candidates for the teacher's credential.

4 units (full quarter); 3 units (8 weeks) (CHAPIN, LINTON) MTWF 10

157. Vocal Interpretation of Shakespeare.—Certain plays of Shakespeare are read with emphasis on voice quality, diction, interpretation of the lines, and characterization. Parts are frequently assigned for individual study. Prerequisites: Speech and Drama 10, 11. Limited to twenty students.

4 units (full quarter); 3 units (8 weeks) (BUCKINGHAM) MTWF 10

160. Technique of Acting.—Theories of acting studied in the classroom and by laboratory practice: individual and group pantomime, stage movement and presence, gesture, projecting, team-work. Prerequisites: Speech and Drama 9 and 10, or their equivalents.

3 units (full quarter); 2 units (8 weeks) F 1, W 4-6

162. Rehearsal and Performance.—Training of students through analysis of a part and the final presentation of the character. Students registered for this course are expected to be equipped with expressive bodies and trained voices. Prerequisites: Speech and Drama 9, 10, 149, 160, 161. Open to sophomores, juniors, and seniors by special arrangement with the instructor. This course may be taken more than once with the approval of the instructor, but credits are limited to a total of nine units.

3 units (full quarter); 2 units (8 weeks) (———) MTWTThF 2-4

163. Principles of Directing.—The development of a play through its various stages of preparation to the final production. Practical work in a college production: stage managing, prompting, etc. The completion of a production book. Opportunity to direct at least two one-act plays. Prerequisite: Speech and Drama 166.

3 units (full quarter); 2 units (8 weeks) (———) Lec. MWF 11; Lab. by arrangement

169. Problems of Stage Design.—Individual work in the field of stage design for the purpose of developing proficiency in technique. The student
carries his designs to the full completion on the stage. Prerequisite: Speech and Drama 168. This course may be taken more than one quarter but credits are limited to a total of nine units.

171. Stage Make-up.—A course in the principles of the art of make-up. Lectures and laboratory practice.

2 units (full quarter); 1 unit (8 weeks) (Green)  Lec. M 1; Lab. by arrangement

174. Problems of Stage Costume.—A course in the planning and making of costumes for stage productions and the use of inexpensive materials for the simulation of textiles, textures, and ornaments. This course may be taken more than once but credits are limited to a total of eight units.

4 units (full quarter); 3 units (8 weeks) (Green, Cannon)  By arrangement

175. Theater Costume.—A general survey of costume for the theater from primitive rituals and ceremonials to modern theatrical productions, illustrated with slides showing the symbolical and traditional costumes and their accessories for drama, opera, and ballet. Special attention is paid to the use of line and color for comedy and tragedy.

2 units (full quarter); 1 unit (8 weeks) (Green)  MW 11

176. Theater Costume Laboratory.—Open to students taking Speech and Drama 175.

2 units (full quarter); 1 unit (8 weeks) (Green)  MW 2-4

197. Clinical Practice in Speech.—Supervised diagnosis and treatment of cases in the speech clinic. Prerequisite: Speech and Drama 198. Registration by arrangement with the instructor. The course may be taken more than once but credits are limited to a total of four units.

2 units (full quarter); 1 unit (8 weeks)  By arrangement

200. Introduction to Graduate Study.—A course in bibliography and methods for students of speech and drama. This course begins with a general introduction to the uses of a reference library and continues through a consideration of the methods and techniques used in the investigation of specific types of problems. It includes some consideration of analytical bibliography and definite instruction on the communication of the results of research and the preparation of a scholarly manuscript. This course is open only to graduate students, is required of all graduate students in the Division of Speech and Drama, and is a prerequisite to seminar courses in the Division.

3 units (full quarter); 2 units (8 weeks) (Heffner)  MWF 9

207. Seminar in Interpretation.

3 units (full quarter); 2 units (8 weeks) (Buckingham)  T 4-6

220. Research.—Students who wish to investigate a special problem in the field of speech, drama, or theater under the supervision of some member of the division may register for this course with the approval of the instructor concerned.

2 to 3 units, any quarter  By arrangement
INDEX

Academic year, 39
Administration, officers of, 7
Admission for Summer Quarter:
   General requirements, 40
   Graduate Division, 41
   Limited groups, 40
   Lower Division, 42
   University Division, 41
   Upper Division, 42
Amount of work, 46
Anatomy, 75
Application fee, 47
Appointment Service, 53, 89
Approved preparatory schools, 45
Aptitude test, 40
Art and Archaeology, 125
Bachelor of Arts degree, 57
Bachelor of Laws degree, 61
Bacteriology, 76
Biological Sciences, School of, 66
Biology Library, 69, 134
Branner Geological Library, 134
Business, Graduate School of, 78
Business Library fee, 47
Calendar, 2
Changes in study lists, 46
Chemistry, 138
Chinese, 125
Classics, 126
Clubhouses, 64
College Aptitude Test, 40
Community fee, 47
Concerts, 65
Cost of living, 48
Courses of Instruction, 66
Credentials, teaching, 64
Degrees, 57
Demonstration classes, 85
Department executives, 5
Doctor of Education degree, 60
Doctor of Medicine degree, 62
Doctor of Philosophy degree, 62
Doctor of the Science of Law degree, 62
Dormitories, 48
Drama, 159
Dudley Herbarium, 71
Economics, 144
Education, School of, 83
Employment Bureau, 53, 89
Engineer degree, 59
Engineering, School of, 105
English, 126
Executive officers, 5
Expenses, 47
Experimental Pathology, 76
Faculty, 7
Fees, 47
Felton Memorial Library, 134
Food Research Institute, 147
Food Research Institute Library, 134
French, 131
General Secondary Credential, 64, 90
Geology, 139
Germanic Languages, 127
Graduation, 57
Graphic Art, 154
Health services, 49
History, 148
Hoover Library, 107, 133
Hopkins Marine Station, 72
Hopkins Marine Station Library, 134
Hopkins Transportation Library, 133
Hospital Fund, 51
Hygiene, 109, 116
Instruction, officers of, 7
Italian, 131
Jordan Library of Zoology, 134
Journalism, 149
Laboratory fees, 47
Lane Medical Library, 134
Law Library, 118, 134
Law Library fee, 47
Law, School of, 118
Lectures, 65
Letters, School of, 122
Libraries, 133
Library fee, 47
Living accommodations, 48
Lower Division requirements, 55
Major subject requirements, 56
Master of Arts degree, 58
Master of Business Administration degree, 58
Master of Education degree, 58
Master of Laws degree, 61
Mathematics, 140
Medical treatment, 51
Medicine, School of, 135
Memorial Church, 137
Music, 157
Natural History Museum, 71
Organ recitals, 137
Philosophy, 150
Physical Education, 109, 116
Physical Sciences, School of, 138
Physics, 141
Physiology, 76
Political Science, 151
Psychology, 152
Public School Service Credentials, 64
Recitals, 65, 137
Recreation, 65
Refund of fees, 47

163
INDEX

Registration, 46, 88
Religious services, 137
Romanic Languages, 128

Scholastic Aptitude Test, 40
Self-support of students, 53
Slavic, 132
Social Sciences, School of, 142
Sociology, 146
Spanish, 131
Speech and Drama, 159
Stanford Dames, 65
Stanford Union, 64
Student Employment Bureau, 53
Student Health Services, 49

Study-list card, 46
Syllabus fees, 47
Teacher-Development Workshop, 84
Teaching credentials, 64
Toyon Hall, 48
Trustees, Board of, 4
Tuition fees, 47
University Division requirements, 57
University health control, 49
University location, 39
University year, 39
Vaccination, 50
Vocational guidance, 52
Women’s Clubhouse, 64