

THE UNIVERSITY OF
OREGON

EUGENE



PORTLAND

THE GRADUATE
SCHOOL

ANNOUNCEMENTS
1926-1927

THE UNIVERSITY OF
OREGON



THE GRADUATE SCHOOL
ANNOUNCEMENTS
1926-1927

PUBLISHED BY THE UNIVERSITY
UNIVERSITY PRESS
EUGENE

CALENDAR 1926

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				1	2	3	1	2	3	4	5	6	7	
6	7	8	9	10	11	12	4	5	6	7	8	9	10	8	9	10	11	12	13	14
13	14	15	16	17	18	19	11	12	13	14	15	16	17	15	16	17	18	19	20	21
20	21	22	23	24	25	26	18	19	20	21	22	23	24	22	23	24	25	26	27	28
27	28	29	30				25	26	27	28	29	30	31	29	30	31				

SEPTEMBER							OCTOBER							NOVEMBER								
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						1	2							1	2
5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13		
12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	20		
19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27		
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DECEMBER							
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19	20	21	22	23	24	25	
26	27	28	29	30	31		

CALENDAR 1927

JANUARY							FEBRUARY							MARCH								
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S		
						1				1	2	3	4	5				1	2	3	4	5
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9	10	11	12	13	14	15	13	14	15	16	17	18	19	13	14	15	16	17	18	19		
16	17	18	19	20	21	22	20	21	22	23	24	25	26	20	21	22	23	24	25	26		
23	24	25	26	27	28	29	27	28						27	28	29	30	31				

APRIL							MAY							JUNE									
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S			
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3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11			
10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18			
17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25			
24	25	26	27	28	29	30	29	30	31					26	27	28	29	30					

JULY						
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24	25	26	27	28	29	30
31						

UNIVERSITY CALENDAR, 1926-27

SUMMER SESSION, 1926

June 21, MondaySummer session opens, Eugene and Portland.
 July 30, FridaySummer session closes.

FALL TERM

September 20, MondayPhysical examinations for entering students.
 September 21, TuesdayFreshman English examinations. Other entrance examinations.
 September 22, WednesdayRegistration material released.
 September 22, WednesdayFaculty meeting.
 September 23, 24, Thursday, FridayRegistration days.
 September 27, MondayUniversity classes begin. Late filing fees begin.
 October 8, FridayLast day for filing graduate cards.
 October 22, 23, Friday, SaturdayHomecoming.
 November 3, WednesdayFaculty meeting.
 November 11, ThursdayArmistice Day, a holiday.
 November 25 to 28, Thursday to SundayThanksgiving vacation.
 December 1, WednesdayFaculty meeting.
 December 17, FridayTerm examination period ends.

WINTER TERM

January 3, MondayRegistration day for new students. Attendance cards filed.
 January 4, TuesdayUniversity classes begin.
 January 5, WednesdayFaculty meeting.
 February 2, WednesdayFaculty meeting.
 February 22, TuesdayWashington's birthday, a holiday.
 March 2, WednesdayFaculty meeting.
 March 18, FridayTerm examination period ends.

SPRING TERM

March 28, MondayRegistration day for new students. Attendance cards filed.
 March 29, TuesdayUniversity classes begin.
 April 6, WednesdayFaculty meeting.
 May 4, WednesdayFaculty meeting.
 May 30, MondayMemorial Day, a holiday.
 June 1, WednesdayFaculty meeting.
 June 10, FridayTerm examination period ends.
 June 11, SaturdayAlumni Day, Flower and Fern procession, Failing and Beekman orations.
 June 12, SundayBaccalaureate sermon, School of Music concert.
 June 18, MondayCommencement exercises.

SUMMER SESSION, 1927

June 20, MondaySummer session opens, Eugene and Portland.
 July 29, FridaySummer session closes.

BOARD OF REGENTS

OFFICERS

HON. JAMES W. HAMILTON, *President*
HON. FRED FISK, *Vice President*
L. H. JOHNSON, *Secretary*

EXECUTIVE COMMITTEE

HON. JAMES W. HAMILTON, *Ex Officio Chairman*
HON. FRED FISK, *Acting Chairman*

MRS. G. T. GERLINGER
HON. VERNON H. VAWTER
HON. HERBERT GORDON
HON. G. F. SKIPWORTH

EX OFFICIO MEMBERS

HON. WALTER M. PIERCE, *Governor*Salem
HON. SAM A. KOZER, *Secretary of State*Salem
HON. J. A. CHURCHILL, *Superintendent of Public Instruction*Salem

APPOINTED BY THE GOVERNOR

<i>Name and Address</i>	<i>Term Expires</i>
MRS. G. T. GERLINGER, Dallas	April 15, 1927
HON. C. C. COLT, Portland	April 15, 1927
HON. HENRY MCKINNEY, Baker	April 15, 1927
HON. HERBERT GORDON, Portland	April 15, 1929
HON. G. F. SKIPWORTH, Eugene	April 15, 1929
HON. VERNON H. VAWTER, Medford	April 15, 1931
HON. WILLIAM S. GILBERT, Portland	April 15, 1933
HON. PHILIP L. JACKSON, Portland	April 15, 1935
HON. FRED FISK, Eugene	April 15, 1935
HON. JAMES W. HAMILTON, Roseburg	April 15, 1937

OFFICERS OF ADMINISTRATION

THE UNIVERSITY

*P. L. CAMPBELL, B.A., LL.D.*President*
GEORGE REBEC, Ph.D.*Dean of the Graduate School*
LOUIS H. JOHNSON*Comptroller of the University*
KARL W. ONTHANK, M.A.*Executive Secretary of the University*
CARLTON E. SPENCER, A.B., J.D.*Registrar of the University*
M. H. DOUGLAS, M.A.*University Librarian*
GERTRUDE BASS WARNER*Director, Oregon Museum of Fine Arts*

EXECUTIVE COMMITTEE FOR THE UNIVERSITY

HENRY D. SHELDON, *Chairman* LOUIS H. JOHNSON KARL W. ONTHANK

THE GRADUATE COUNCIL

GEORGE REBEC, Ph.D.*Dean, Philosophy*
WILLIAM P. BOYNTON, Ph.D.*Physics*
EDMUND S. CONKLIN, Ph.D.*Psychology*
RUDOLF H. ERNST, Ph.D.*English*
OLOF LARSELL, Ph.D.*School of Medicine*
FRIEDRICH G. G. SCHMIDT, Ph.D.*German*
HENRY D. SHELDON, Ph.D.*Education*
FREDERIC G. YOUNG, B.A., LL.D.*Sociology*

EX-OFFICIO

EARL L. PACKARD, Ph.D.*Geology*
(Chairman of Research Committee)

*Died August, 1925.

THE TEACHING FACULTY OF THE GRADUATE SCHOOL

*PRINCE LUCIAN CAMPBELL, LL.D.*President of the University*
A.B., Harvard, 1886; LL.D., Pacific University, 1911; University of Colorado, 1913. President, Oregon, from 1902.

GEORGE REBEC, Ph.D.*Dean of the Graduate School and Professor of Philosophy*
A.B., Michigan, 1891; student at Strassburg, 1893-94; Ph.D., Michigan, 1896; student in Florence, Italy, 1908-09; faculty, Michigan, 1894-1909; Oregon, 1912-18; director, Portland Extension Center, 1918-20; professor of education, Reed College, 1920-21; head of department of philosophy and dean of Graduate School, Oregon, from 1920.

FLORENCE D. ALDEN, A.B.*Professor of Physical Education*
A.B., Smith, 1904; graduate student, Wellesley, 1905-06; Missouri, 1906-08; Teachers' College, 1919-21; director of physical education for women, Missouri; faculty, Central School of Physical Education, New York City; Oregon from 1921.

ERIC W. ALLEN, B.A.*Dean of the School of Journalism and Professor of Journalism*
B.A., Wisconsin, 1901; editorial staff, Milwaukee Free Press, 1901-02; Seattle Post-Intelligencer, 1904-06; Printing, Photoengraving, Electrotyping, etc., 1906-09; Post-Intelligencer, 1909-12; correspondent, eastern papers, 1905-12; faculty, Oregon, from 1912.

WILLIAM F. ALLEN, Ph.D.*Professor of Anatomy, School of Medicine, Portland*
A.B., A.M., Stanford; Ph.D., Minnesota; assistant to E. P. Allis, Mentone, France, 1902-07; Dr. J. Loeb, California, 1907-10; faculty, Illinois, 1910-11; Minnesota, 1911-16; Oregon from 1916; head of department of anatomy in the School of Medicine, Portland, from 1917.

DONALD G. BARNES, Ph.D.*Assistant Professor of History*
B.A., Nebraska, 1915; M.A., Harvard, 1917, Ph.D., 1924; Harvard Scholarship 1915-16, Thayer Fellowship, 1916-17; Harrison Fellowship in History, Pennsylvania, 1917-18; Bayard Cutting Traveling Fellowship, Harvard, 1920-21, Parker Traveling Fellowship, 1921-22; London School of Economics, 1920-21; Sorbonne, Paris, 1921; Cambridge, England, 1922; present position from 1922.

MARY E. WATSON BARNES, M.A.*Professor of English*
B.A., Oregon, 1909; M.A., 1911; graduate student, Columbia, 1918-19; faculty, Oregon, from 1911.

WALTER CARL BARNES, B.A. (Oxon)*Professor of History*
A.B., Colorado College, 1912; graduate student, California, 1912-13; Rhodes scholar, Honour School of Modern History, Oxford University, England, 1913-16; B.A. (Oxon), 1916; faculty, British Columbia, 1917-18; California, 1918-20; Oregon, from 1920.

JAMES DUFF BARNETT, Ph.D.*Professor of Political Science*
A.B., Emporia, 1890; fellow in political science, Wisconsin, 1902-03; assistant in political science, 1903-05; Ph.D., 1906; faculty, Oklahoma, 1905-08; Oregon, from 1908; associate editor, National Municipal Review.

ROBERT L. BENSON, A.M., M.D.*Professor of Pathology, School of Medicine, Portland*
A.B., Michigan, 1902; A.M., 1904; M.D., Rush Medical College, 1910; graduate student with Dr. Warthin, Michigan, 1921; research fellow in pathology, Chicago, 1909-10; faculty, Oregon, from 1912.

JOHN FREEMAN BOVARD, Ph.D.*Dean of the School of Physical Education and Professor of Physiology*
B.A., California, 1903; M.A., 1906; graduate student, Harvard, 1914-15; Ph.D., California, 1916; faculty, Oregon, from 1906; dean of the school of physical education from 1920.

RAY PRESTON BOWEN, Ph.D.*Professor of Romance Languages*
A.B., Harvard, 1905; A.M., Cornell, 1915, Ph.D., 1916; University of Geneva, Switzerland, University of Grenoble, France, 1911-12; University of Paris, 1921-22. Faculty, Huron College 1909-14; Cornell, 1914-16; Syracuse, 1916-18; Earlham, 1918-19; Colorado College, 1919-20; Sorbonne (lecteur d'américain) 1921-22; Syracuse, 1920-25; Oregon, head of department from 1925.

WILLIAM PINGRY BOYNTON, Ph.D.*Professor of Physics*
A.B., Dartmouth, 1890; M.A., 1893; graduate scholar in physics, Dartmouth, 1893-94; scholar and fellow in physics, Clark, 1894-97; Ph.D., 1897; faculty, Southern California, 1890-93; California, 1897-1901; California College, 1901-08; Oregon, from 1903; head of department from 1906.

JULIA BURGESS, M.A.*Professor of English*
B.A., Wellesley, 1894; M.A., Radcliffe, 1901; faculty, Oregon, from 1907.

*Died August, 1925.

- GEORGE E. BURGET, Ph.D. *Professor of Physiology, School of Medicine, Portland*
A.B., Indiana State Normal School; Ph.D., Chicago; faculty, Oregon, from 1917.
- MERTON KIRK CAMERON, Ph.D. *Assistant Professor of Economics*
A.B., Princeton, 1908; A.M., Harvard, 1914; Ph.D., 1921; faculty, Harvard,
1915-16; Hibbing Junior College, 1917-20; Oregon, from 1920.
- ALBERT EDWARD CASWELL, Ph.D. *Professor of Physics*
A.B., Stanford, 1908; Ph.D., 1911; national research fellow, Princeton, 1919-20;
faculty, Purdue, 1911-13; Oregon, from 1913.
- DAN ELBERT CLARK, Ph.D. *Professor of History,*
Assistant Director of Extension Division
B.A., Iowa, 1907; Ph.D., Iowa, 1910; faculty, Iowa, 1909-1918; associate editor,
State Historical Society of Iowa, 1908-1918; various positions with American
Red Cross, 1918-1921; faculty, Oregon, from 1921.
- ROBERT CARLTON CLARK, Ph.D. *Professor of History*
B.A., Texas, 1900; M.A., 1901; scholar in history, Wisconsin, 1901-02; fellow,
1902-08; Ph.D., 1905; faculty, Oregon, from 1905; head of department from
1920; fellow, Texas Historical Association.
- TIMOTHY CLORAN, Ph.D. *Professor of Romance Languages*
B.A., Western Reserve, 1891; student, University of Berlin, 1897-98; University
of Strassburg, 1898-99; Ph.D., Strassburg, 1901; student, University of Paris,
1904-05; University of Madrid, 1905-06; faculty, Shurtleff College, 1893-97;
Idaho, 1899-1900; Vanderbilt, 1900-04; Oregon, from 1906; head of department,
1907-1925.
- EDMUND S. CONKLIN, Ph.D. *Professor of Psychology*
B.H., 1908, Springfield Mass.; A.M., Clark, 1909; fellow in psychology, Clark,
1909-11; Ph.D., 1911; faculty, Oregon, from 1911; head of department from 1913.
- PETER CAMPBELL CROCKATT, Ph.D. *Professor of Economics*
B.A., Oregon, 1915; M.A., 1918; graduate student, California, 1921; Ph.D., 1922;
faculty, Spokane, 1916-17; Oregon, from 1917.
- HAROLD RANDOLPH CROSLAND, Ph.D. *Assistant Professor of Psychology*
A.B., South Carolina, 1913; A.M., Clark, 1914; Ph.D., 1918; fellow in experi-
mental psychology, Clark, 1913-16; faculty, Minnesota, 1916-17; Arkansas, 1917-
18; Pittsburg, 1918-20; Oregon, from 1920.
- BURCHARD WOODSON DEBUSK, Ph.D. *Professor of Education*
B.A., Indiana, 1904; fellow, Clark, 1909-10, 1914-15; Ph.D., 1915; acting director
of psychology laboratory, Indiana, 1908-09; faculty, Teachers' College, Colorado,
1910-14; Oregon, from 1915.
- EDGAR EZEKIEL DECOU, M.S. *Professor of Mathematics*
B.S., Wisconsin, 1894; M.S., Chicago, 1897; graduate student, Chicago, 1899-
1900; graduate school, Yale, 1900-01; faculty, Bethel College, Kentucky, 1897-99,
1901-02; acting president, 1902; head of department of mathematics, Oregon,
from 1902.
- HARL R. DOUGLASS, M.A. *Professor of Education*
B.S., Missouri, 1913; M.A., 1918; supervisor, University of Missouri High School,
1913-14; superintendent of schools, Missouri and Oregon, 1914-19; faculty, Ore-
gon, from 1919; Stanford, 1923-24.
- FREDERIC STANLEY DUNN, A.M. *Professor of Latin*
A.B., Oregon, 1892; A.M., 1899; A.B., Harvard, 1894; A.M., 1903; faculty, Wil-
lamette, 1895-98; head of department, Oregon, from 1898; leave of absence in
Italy, 1918-19.
- RUDOLF HERBERT ERNST, Ph.D. *Associate Professor of English*
B.A., Northwestern College, Wisconsin, 1904; student, Theological Seminary,
Wauwatosa, Wisconsin, 1905-07; University of Rostock, Germany, 1908-09; Uni-
versity of Leipsig, 1909-10; Sorbonne, Paris, 1901; M.A., Harvard, 1912; Ph.D.,
1918; Thayer Fellowship, Harvard; faculty, Northwestern College, 1904-05, 1907-
08; Washington, 1912-23; Oregon, from 1923.
- ANDREW FISH, Ph.D. *Assistant Professor of History*
B.D., Pacific Unitarian School, 1917; A.B., Oregon, 1920; M.A., 1921; Clark,
1922-23; Ph.D., 1923; faculty, Oregon, from 1920.
- WILMOT C. FOSTER, M.A., M.D. *Assistant Professor of Anatomy*
School of Medicine, Portland
A.B., Oregon, 1916; M.D., 1920; graduate study, Minnesota, Rush Medical Col-
lege, and Chicago; M.A., Oregon, 1923; faculty, Oregon, from 1920.
- JAMES HENRY GILBERT, Ph.D. *Acting Dean of the College of Literature, Science,*
and the Arts, and Professor of Economics
B.A., Oregon, 1903; Ph.D., Columbia, 1907; faculty, Oregon, from 1907; head of
department from 1920; acting dean of the college, 1925-26.

- HOWARD D. HASKINS, M.A., M.D., *Professor of Biochemistry, School of Medicine, Portland*
A.B., Michigan; M.D., Western Reserve; M.A., Oregon, 1923; faculty, Western
Reserve, 1907-15; Oregon, from 1915.
- EDWIN T. HODGE, Ph.D. *Professor of Geology*
B.A., Minnesota, 1913; M.A., 1914; Ph.D., Columbia, 1915; William Bayard
Cutting traveling fellowship, Columbia, 1916; faculty, Minnesota, 1913-15;
Columbia, 1915-16; British Columbia, 1917-20; Oregon, from 1920.
- GLENN E. HOOVER, Docteur en Droit *Assistant Professor of Economics*
LL.B., Washington, 1912; B.A., 1919; M.A., 1922; Docteur en Droit, University
of Strasbourg, 1924; faculty, Oregon, from 1924.
- RALPH R. HUESTIS, Ph.D. *Assistant Professor of Zoology*
B.S.A., McGill, 1914; M.S., California, 1920; Ph.D., 1924; research assistant,
Scripps Institution for Biological Research, 1920-24; faculty, Oregon, from 1924.
- HERBERT CROMBIE HOWE, A.B. *Professor of English*
B.L., A.B., Cornell, 1893; graduate scholar in philosophy, Cornell, 1893-95;
faculty, Oregon, from 1901; head of department, 1906-1925.
- † J. E. AINSWORTH JOHNSTONE, B.A. (Oxon) *Assistant Professor of Greek and Latin*
Toronto, 1914-15, 1919-21; B.A. (Oxon), Oxford, 1924; traveling fellow, Ameri-
can University, Washington, D. C., 1921-24; faculty, Oregon, from 1924.
- JOHN J. LANDSBURY, Mus.D. *Dean of the School of Music*
Mus.B., Simpson College, Iowa, 1900; Mus.D., 1909; pupil Max Bruch, Berlin;
graduate student, University of Berlin; faculty, Simpson; Baker University;
Oregon, from 1914; present position from 1917.
- OLOF LARSELL, Ph.D. *Professor of Anatomy, School of Medicine, Portland*
B.S., McMinnville College, 1910; graduate student, Chicago; M.A., Northwestern,
1914; Ph.D., 1918; faculty, McMinnville, 1910-15; Northwestern, 1915-18, 1920-
21; Wisconsin, 1918-20; Oregon, from 1921.
- ELLIS F. LAWRENCE, M.S. *Dean of the School of Architecture and Allied Arts*
Professor of Architecture
B.S., M.S., Massachusetts Institute of Technology; Fellow, American Institute
of Architecture; present position, from 1914.
- EDWARD HIRAM McALISTER, M.A. *Professor of Mechanics and Astronomy*
B.A., Oregon, 1890; M.A., 1898. Faculty, Oregon, from 1891; dean, College of
Engineering, 1902-15; head of department from 1915; certified member
American Association Engineers.
- WILLIAM P. MADDOX, B.A. (Oxon) *Instructor in Political Science*
B.A., St. John's College, (Md), 1921; law student, Maryland, 1921-22; Rhodes
scholar in the Honour School of Philosophy, Politics and Economics, Oxford,
England, 1922-25; certificate d'étude, Université de Grenoble; B.A. (Oxon),
1925; present position from 1925.
- FRANK R. MENNE, B.S., M.D. *Professor of Pathology, School of Medicine, Portland*
B.S., Wisconsin; M.D., Rush Medical College; faculty, Oregon, from 1911.
- WILLIAM EDMUND MILNE, Ph.D. *Professor of Mathematics*
A.B., Whitman, 1912; A.M., Harvard, 1913; Ph.D., 1915; faculty, Bowdoin,
1915-18; Oregon, from 1919.
- GUSTAV MUELLER, Ph.D. *Instructor in Philosophy*
University of Bern, 1917-21; Heidelberg, 1921; Bern, 1921-23; Ph.D. 1923; Uni-
versity of London 1923-24; faculty, Oregon, from 1925.
- HAROLD B. MYERS, A.B., M.D. *Professor of Pharmacology, School of Medicine, Portland*
A.B., Wisconsin; M.D., Western Reserve; collaborator, Journal of Pharmacology;
faculty, Oregon, from 1915; assistant dean from 1917.
- WILMOTH OSBORNE, M.D. *Assistant University Physician and Medical*
Consultant for Women
A.B., Reed, 1918; M.D., Oregon, 1924; present position from 1925.
- EARL L. PACKARD, Ph.D. *Professor of Geology*
A.B., Washington, 1911; M.A., 1912; fellow in paleontology, California, 1912-
14; Ph.D., 1915; faculty, Washington, 1915-16; Oregon, 1916-17; Mississippi
A. & M. College, 1917-1918; Oregon, from 1919; acting head of department,
1920-22.
- MABEL HOLMES PARSONS, M.A. *Professor of English, Portland Extension Center*
A.B., Michigan, 1904; M.A., 1905; faculty, Oregon, from 1912.

† Resigned, March, 1926.

- PHILIP ARCHIBALD PARSONS, Ph.D. *Professor of Applied Sociology*
A.B., Christian University, Missouri, 1904; M.A., 1905; student, Union Theological Seminary, 1904-06; graduate student, Columbia, and research fellow, School of Philanthropy, 1908-09; Ph.D., 1909; faculty, Syracuse, 1909-20; director of University Settlement, Syracuse; lecturer, Department Immigrant Education, State of New York, 1912-18; director of Portland school of social work, from 1920.
- *MARY HALLOWELL PERKINS, M.A. *Professor of English*
B.A., Bates, 1898; M.A., Radcliffe, 1908; graduate student, Columbia, 1916-17; faculty, Oregon, from 1908.
- ALFRED POWERS, B.A. *Dean of Extension Division, Director of Portland Center, Professor of Journalism*
B.A., Oregon, 1910; faculty, Oregon, 1917; U. S. Army, 1918; director of public information and Junior Red Cross, Northwestern division, American Red Cross, 1919-20; University editor, school of journalism, 1920-22; assistant director, extension division, 1922-26; present position from 1926.
- HOMER P. RAINEY, Ph.D. *Associate Professor of Education*
B.A., Austin College, 1919; M.A., Chicago, 1923; Ph.D., 1924; faculty, Austin College, 1920-22; Oregon, from 1924.
- FRIEDRICH GEORG G. SCHMIDT, Ph.D. *Professor of German Language and Literature*
Student, University of Erlangen, Bavaria, 1888-1890; Johns Hopkins, university scholar and fellow, 1894-96; Ph.D., 1896; faculty, Cornell College, 1896-97; head of department of modern languages, Oregon, 1897-1905; head of department of German, from 1905.
- HARRY ALEXANDER SCOTT, M.A. *Professor of Physical Education*
B.S., Teachers' College, Columbia, 1920; M.A., 1921; faculty, Columbia, 1920; Oregon, from 1921.
- HARRY J. SEARS, Ph.D. *Professor of Bacteriology, School of Medicine, Portland*
A.B., Stanford, 1911; A.M., 1912; Ph.D., 1916; student, Chicago; faculty, Stanford, 1911-12, 1913-16; city bacteriologist and chemist, Berkeley, Calif., 1917-18; faculty, Oregon, from 1918; president, Oregon branch of Society of American Bacteriologists.
- HENRY DAVIDSON SHELDON, Ph.D. *Dean of the School of Education and Professor of History*
A.B., Stanford, 1896; A.M., 1897; Ph.D., Clark, 1900; student, Leipzig, 1911-12; faculty, Oregon, 1900-11; Pittsburg, 1912-14; Oregon, from 1914; chairman, administrative committee, from 1925.
- FREDERICK LAFAYETTE SHINN, Ph.D. *Professor of Chemistry*
B.A., Indiana, 1901; M.A., 1902; scholar, Yale, 1902; Ph.D., Wisconsin, 1906; faculty, Wisconsin, 1902-04, 1905-07; Indiana, 1904-05; faculty, Oregon, from 1907; acting head of department, 1918-22.
- S. STEPHENSON SMITH *Assistant Professor of English*
A.B., Reed college, 1915; B. Litt., Oxford, England, 1923; faculty Oregon from 1925.
- WARREN DU PRE SMITH, Ph.D. *Professor of Geology*
B.S., Wisconsin, 1902; M.A., Stanford, 1904; fellow in geology, Chicago, 1904-05; Ph.D., Wisconsin, 1908; head of department, Oregon, from 1914; geologist and chief of division of mines, bureau of science, Manila, 1920-22.
- ORIN FLETCHER STAFFORD, M.A. *Professor of Chemistry*
A.B., Kansas, 1900; A.M., 1902; graduate student, Nernst laboratory, Berlin, 1908-09; faculty, Oregon, from 1900; head of department from 1902.
- FRED L. STETSON, M.A. *Professor of Education*
A.B., Reed College, 1915; B. Litt., Oxford, England, 1923; faculty, Oregon, B.A., Mercersburg, 1876; M.A., 1879; Lit. D., Franklin and Marshall, 1913; Arts, 1899-1920; dean of men, 1920-1925.
- JOHN STRAUB, Lit.D. *Emeritus Dean of Men; Professor of Greek Language and Literature*
B.A., Mercersburg, 1876; M.A., 1879; Lit.D., Franklin and Marshall, 1913; faculty, Oregon, from 1879; dean of the College of Literature, Science, and the Arts, 1899-1920; dean of men, 1920-1925.
- *BERTHA S. STUART, A.B., M.D. *Medical Consultant for Women*
A.B., Michigan, 1903; M.D., 1908; faculty, Michigan, 1901-03; Oregon, 1900-15; Reed College, 1915-20; pediatrician with Children's Bureau, American Red Cross, Blois, France 1918; present position from 1920.
- ALBERT RADDIN SWEETSER, M.A. *Professor of Botany*
B.A., Wesleyan, 1884; M.A., 1887; graduate student, Massachusetts Institute of Technology, 1884-85; Harvard, 1893-97; faculty, Pacific University, 1897-1902; Oregon, from 1902; head of department, from 1903.

* Leave of absence 1925-26.

- H. G. TANNER, M.A. *Associate Professor of Chemistry*
B.S., Ottawa University (Kan.), 1916-17; A.M., Nebraska, 1916; graduate student, Cornell, 1916-17; research chemist, E. I. du Pont, 1917-19; chief chemist, U. S. Government Kelp-Potash plant, 1919-21; faculty, Oregon, from 1921.
- HOWARD RICE TAYLOR, A.M. *Assistant Professor of Psychology*
A.B., Pacific University (Ore.), 1914; A.M., Stanford, 1923; Cubberley fellow, Stanford, 1924-25; faculty, Oregon from 1925.
- W. F. G. TEACHER, M.A. *Professor of English*
A.B., Princeton, 1900; M.A., 1906; graduate student, Chicago, 1906; associate editor of Pacific Monthly, 1902-04; faculty, Oregon, from 1913.
- CLINTON H. THIENES, M.D. *Instructor in Pharmacology*
B.A., Oregon, 1918; M.A., M.D., 1923; faculty, Oregon, from 1920.
- HARRIET W. THOMSON, B.S. *Professor of Physical Education*
A.B., Michigan, 1904; graduate student, 1904-05; assistant to Dr. J. W. Lowman, Crippled Children's Clinic, 1922; faculty, Oregon, from 1911.
- EDWARD THORSTENBERG, Ph.D. *Professor of Scandinavian Languages and Literature*
B.A., Bethany College, 1899; scholar, Yale, 1900-08; M.A., 1902; Ph.D., 1904; faculty, Yale, 1902-1913; Oregon, from 1913.
- SAM BASS WARNER, S.J.D. *Professor of Law*
A.B., Harvard, 1912; LL.B., 1915; S.J.D., 1923; director of Committee on Criminal Records and Statistics of American Institute of Criminal Law and Criminology; faculty, Oregon, from 1919.
- ROGER JOHN WILLIAMS, Ph.D. *Associate Professor of Chemistry*
B.S., Redlands, 1914; M.S., Chicago, 1918; Ph.D., 1919; research chemist, The Fleischmann Co., 1919-20; faculty, Oregon, from 1920.
- LOUIS AUBREY WOOD, Ph.D. *Assistant Professor of Economics*
B.A., Toronto, 1905; B.D., Montreal Presbyterian College, 1908; Ph.D., Heidelberg, 1911; faculty, Robertson College, Alberta, 1912-13; University of Western Ontario, 1914-23; Oregon, from 1924; fellow, Royal Economic Society.
- HARRY BARCLAY YOCOM, Ph.D. *Associate Professor of Zoology*
A.B., Oberlin, 1912; graduate assistant in zoology, California, 1915-16; M.A., California, 1916; Ph.D., 1918; faculty, Wabash, 1912-13; Kansas Agricultural, 1914-15; Washburn, 1917-18; College of City of New York, 1919-20; Oregon, from 1920.
- FREDERIC GEORGE YOUNG, LL.D. *Dean of the School of Sociology and Professor of Sociology*
B.A., Johns Hopkins, 1886; University scholar, 1886-87; LL.D., Oregon, 1920; president, Albany College, 1894-95; head of department of economics and sociology, Oregon, 1895-1920; dean of the Graduate School, 1900-1920; present position, from 1920; member South Dakota Constitutional Convention, 1889; secretary, Oregon Conservation Commission, since 1908; secretary, Oregon Historical Society, since 1898; editor, Quarterly Journal of Oregon Historical Society, Commonwealth Review; Oregon section, Encyclopedia Britannica.
- KIMBALL YOUNG, Ph.D. *Associate Professor of Psychology*
A.B., Brigham Young, 1915; A.M., Chicago, 1918; University research fellow, Stanford, 1919-20; Ph.D., 1921; faculty, Clark, 1922-23; extension lecturer, Massachusetts department of education, 1922-23; faculty, Oregon, from 1920.

GENERAL INFORMATION

HISTORICAL

In the earlier years of the University, the degree of master of arts was frequently conferred "in course" upon bachelors of arts of three years standing who had met certain other conditions. This practice, which was at that time fairly common among colleges and universities all over the country, was apparently discontinued about 1893, as the members of the class of 1890 who received their master's degrees in that year appear to have been the last to enjoy that privilege. Catalogues of a later date inform us that beginning with the year 1897 the degrees of master of arts and master of science are offered for a year of resident graduate study under definitely specified conditions. Since that date these degrees have been conferred for such resident study, at first occasionally, but later with steadily increasing numbers. With the growth of the summer school, and the extension work of the University, the opportunity to earn these degrees has been given to many of the citizens of the state who could not well have met the conditions of a continuous year of residence at the University. Of recent years also the degree of master of arts in research and public service has been conferred upon men and women who have rendered conspicuous service to the state in ways that evidence high and fruitful scholarship, and in the production and publication of books and scholarly papers of value.

The catalogue of 1900 announced the willingness of the University to confer the degree of doctor of philosophy, and gave a statement of the conditions under which it might be earned. This offer was soon withdrawn as the resources of the institution and its prestige were at that time hardly such as to make possible the realization of such an ambition. More recently, with increasing financial resources, many times larger faculty, and material resources which have grown with the years, the University has again announced its willingness to undertake the training of students for this degree, and has enrolled students who are looking forward toward the doctorate. Later pages of this bulletin give detailed statements regarding both the requirements and the opportunities for this work.

The year 1899-1900, which was notable in the history of the University as the time of its organization into constituent schools, saw also the organization of graduate work by the appointment of a dean of the Graduate School, and of a graduate council, of which the dean was the chairman. To this council has been entrusted since that time the administration of the Graduate School, subject to the general supervision of the University faculty and the more immediate cooperation of the graduate faculty.

LOCATION

The University of Oregon is located in Eugene, a small but modern city at the head of the Willamette valley. Most of the work of the Graduate School is given on the campus, though a few graduate courses are given through the Portland extension center in the city of Portland. Eugene is conveniently placed on through lines of railroad and highway, and has a mild and equable climate.

FACILITIES FOR GRADUATE STUDY

The period since the organization of the Graduate School has been one of rapid growth and development in the University. Department personnels have grown from a single member to considerable groups representing the scholarship and training of many institutions, departmental equipments have been developed with expanding needs and expanding vision, and library collections have been gathered with a view to the needs of the graduate students and research workers of future years. The University is committed to the policy of encouraging graduate work, and undertakes to reserve a sufficient portion of the instructor's time for advanced instruction and research, and provide necessary facilities for this type of work as a means of maintaining the standards of its own scholarship. In furtherance of this purpose, considerable provision is made of special space in the library, and of special research rooms in the scientific laboratories.

RESEARCH FACILITIES

In his choice of a graduate school, the advanced student considers not only the cost and convenience of location, but also the quality of instruction, and the opportunities for scholarly research in advanced fields. The Graduate School at the University of Oregon offers substantial opportunities in the field of research. Alive to the vital importance of research in a graduate school, the administration of the University makes an annual appropriation devoted solely to the promotion of research to provide equipment, clerical help, and other assistance for members of the staff engaged in original investigations. The control of this appropriation is invested in a committee of faculty, the function of which is to aid in every way possible the production of scholarly work. Each year a creditable list of memoirs and monographs in advanced fields is produced by the faculty. Graduate students also are making original contributions to knowledge and their results are being published in scientific journals. The advanced student coming to Oregon will find the Graduate School imbued with the spirit of research, a faculty engaged in research, and a university officially promoting research.

THE UNIVERSITY LIBRARY

The University library is a well selected and rapidly growing collection of books, numbering now about 154,000 volumes. There is available each year from various sources for book-binding and periodicals about \$25,000.

The library is supplied with the best general and special reference books, and with files of the principal American and foreign periodicals of general and special scientific value. Periodicals currently received number something over 1,500, besides many of the daily and weekly newspapers of the state. About 100 Oregon newspapers are regularly bound.

The library is a depository for the public documents published by the United States government, and also for Oregon state documents.

Besides the new books of current interest that are being added continually, the library attempts to add each year some sets of important periodicals or other valuable collections of source material for advanced study and research.

Temporary quarters for conducting a part of the work of the reserve department have been located in the new science building, Condon Hall,

the main floor of which has been equipped for library purposes. Here are shelves for reserve books, with the exception of those for the departments of English and history, which are still cared for in the library building.

THE UNIVERSITY MUSEUMS

The University has no special museum building. It has, however, departmental museums, which are of considerable value for certain phases of graduate study.

The *Condon Geological Museum* includes the Condon cabinet, which represents the life work of the late Dr. Thomas Condon, the first professor of geology of the University and a member of its first faculty. This collection is especially rich in vertebrate fossils from the John Day valley. It also contains good working collections of minerals.

The *Botanical Museum* is well supplied with mounted specimens, especially those collected from Oregon and the Pacific northwest. It includes the Howell collection of 10,000 specimens, the Leiberg collection of 15,000 sheets, the Cusick of 7,000, as well as the Edmund P. Sheldon and Kirk Whitehead collections.

The *Zoological Museum* contains a considerable series of mounted and unmounted birds and mammals collected by Mr. Alfred Shelton as a beginning of a state biological survey; a collection of Oregon reptiles, made by Mr. J. R. Wetherbee; a series of fishes, mostly salmonidae from the Columbia river, donated by the United States government; a collection of food fishes of the Oregon coast, made by Mr. J. B. Bretherton, of Newport, Oregon, and presented to the University; and a collection of birds and mammals, made and presented by Dr. A. G. Prill, of Scio, Oregon.

The *Oregon Museum of Fine Arts*, housed at present in the Woman's building, includes the Murray Warner Memorial collection, given to the University in 1920 by Mrs. Warner, to which considerable additions have been made during the past years, and the Millican loan collection of Indian basketry and weaving.

The Murray Warner collection is especially distinguished by the rarity and the perfect preservation of the objects composing it. Included are about 250 Japanese prints of various periods; a group of rare Chinese wall paintings, paintings on silk, and tapestries; a number of ancient bronzes; armor, porcelains, china, embroideries, textiles and weavings; and carvings of wood, ivory, jades and turquoise. Especially interesting is the display of costumes on figures and in cases, which contains antique Manchu robes heavily embossed with gold and silver threads, several mandarin and imperial coats, rich in Chinese symbolism, as well as other interesting examples of ancient garments. A well selected library in connection with the museum gives special facilities for research.

THE UNIVERSITY LABORATORIES

The *Botanical Laboratory* is equipped with the necessary appliances for work in plant physiology, and on account of the number of mounted specimens is especially favorable to work in systematic botany. The equipment of the bacteriological laboratory is adequate for all phases of the work.

The *Chemical Laboratories* include rooms devoted to special branches of the science, such as analytical work and organic chemistry, besides a

number of smaller rooms available for research work. Other available requisites for effective work are the stock-room, well supplied with standard apparatus and necessary materials; the departmental shop for the construction of special apparatus for research; and a working library in the office of the department.

The *Geological Laboratories* provide facilities for various lines of work. For work in mineralogy and petrology there are good working collections and apparatus for preparing and studying thin sections of rock under petrographical microscopes. For work in paleontology, the Condon collection provides material especially from the more important fossiliferous regions of the state. The department also has the necessary equipment for work in economic geology and is adequately supplied with equipment for advanced work in geography.

The *Physical Education Laboratories* in the Physical Education buildings are supplied with special equipment for work in corrective and individual gymnastics. There are in addition extra facilities in the University Health Service where special attention is paid to physiotherapy. The laboratories of the zoology department are open to students for physiology and research along these lines.

The *Physical Laboratories* include a number of rooms devoted to advanced courses and research work. The seminar room contains a working departmental library. The department has special facilities for research in the thermal and electrical properties of metals, and the phenomena associated with electrical currents of high frequency and high potentials.

The *Psychology Laboratories* are located in the new science building, Condon Hall. Special rooms are reserved for advanced laboratory, and experimental work in general and applied psychology. Four additional rooms are reserved for research purposes only, besides those assigned to the members of the departmental staff. The laboratories are equipped throughout with 110 v. A. C. and 6 v. D. C., timed 6 v. circuit, and with gas and compressed air.

The *Zoological Laboratories* have equipment for advanced work and research in advanced zoology, comparative anatomy, physiology and genetics. Besides several research rooms for advanced students, the department possesses a research laboratory building, accommodating fifteen students for special lines of research, with excellent quarters for animals in detached buildings.

GYMNASIUM AND PLAYING FIELDS

The gymnasiums and recreational equipment of the University are open to graduate students, as to other students of the University, without extra fees.

HEALTH SERVICE

Graduate students have the benefit of the University health service, which includes dispensary and infirmary service. At the dispensary a trained nurse is in continuous attendance, and University physicians and assisting specialists keep regular office hours. The dispensary service is free to all students of the University, though there is a small fee for the medical supplies used.

The infirmary maintains a regular hospital service, and in case of sickness provides free care and attention for students for a limited period.

Beyond this the charges are very moderate. The dispensary and infirmary service does not extend, however, to cases requiring the services of outside specialists, or involving major operations or chronic diseases.

THE SUMMER SESSION

The University maintains two summer schools, one on the campus at Eugene and one in the Portland extension center. The session at Eugene is devoted primarily to advanced and graduate work, while the Portland summer session is chiefly under-graduate. Besides the retention of some members of the regular faculty on the campus for graduate courses, the summer sessions usually bring to their staffs eminent scholars from other institutions for advanced, professional and graduate courses.

In most of the departments, the courses at Eugene are designed in sequences so that a student may pursue a coherent program of work through a series of summer sessions, and the needs of faculty members of colleges and normal schools are definitely borne in mind. Work in the summer session counts as residence work for a degree. While the usual summer session is six weeks in length, arrangements have been made for 1926 for an additional session of four weeks in certain departments which have the largest number of graduate students.

Full information concerning the summer sessions may be obtained in the special bulletin published by the University, which is available upon application to the registrar of the University.

THE EXTENSION DIVISION

Certain courses given in the Portland extension center may be accepted toward a master's degree, either as major or minor work. These courses will be found under the heading of the department in which they are given, in the section containing the description of courses for graduates and advanced undergraduates.

GRADUATE WORK IN PROFESSIONAL SCHOOLS

In the professional schools, such as Business Administration, Law, and so on, the courses of which do not appear in the regular offerings of the Graduate School, certain courses are recognized as appropriate material for a minor toward the M.A. or the M.S. The student in these courses specializes in some phase of research in the field, as distinct from professional competency alone.

In the schools of Architecture and Music, the student of adequate ability may work either toward the master of arts or science, or the master of fine arts.

WORK FOR PROFESSIONAL DEGREES

Special professional degrees of advanced character are also given in certain of the professional schools of the University. The School of Architecture has a course leading to the degree of master of architecture; the School of Business Administration gives the degree of master of business administration to graduates for work of a special professional character; while the School of Law and the School of Medicine offer the degrees of doctor of jurisprudence and doctor of medicine for advanced technical work in their respective fields. Information concerning this work may be obtained from the deans of the various schools.

FINANCIAL

All graduate students not members of the instructional staff pay in three installments of \$8.50 each, the University registration fee for each year in which they do resident work. Members of the instructional staff, including graduate assistants, registering for graduate work, pay a registration fee of \$6.50 each term. Laboratory fees are given in detail in the schedule of courses published at the beginning of each academic year. Graduate students are exempt from the non-resident fee.

The fees for graduate work done in summer session or in the Portland extension center are ordinarily the same as for undergraduate courses, and are announced in their special bulletins.

ASSISTANTS AND FELLOWS

The University has established assistantships of several ranks for graduate students taking their major or minor work in various of the departments or schools.

The *graduate assistantship* in a department or school ordinarily pays \$500.00 a year on first appointment, subject to an increase to \$600.00 a year on re-appointment. The duties of a graduate assistant will require from sixteen to twenty hours a week of the student's time, in laboratory or quiz section supervision, correction of papers, or assistance in departmental research; the graduate council recommends that students holding these assistantships should not register for more than eight hours of class work and does not permit them to carry more than ten hours. Such students ordinarily seek re-appointment and take two full years of work for the master's degree.

Research fellowships pay \$500.00 a year. They are subject to the same restrictions as to amount of work required and the number of hours permitted in courses as the graduate assistantships. The research fellowship is awarded through the graduate council and the research committee; the duties of a research fellow are to assist in the research problem to which he has been assigned under the direction of the faculty member conducting the project.

Teaching fellowships commonly pay from \$750 to \$1,100 a year and are open to persons with some degree of advancement in their graduate work, preferably to those who have the master's degree.

Other minor positions, such as readers or assistants, are also open to graduate students, and those employed in such minor instructional work also have the benefit of a reduction in fees. Those interested in securing any of these positions should write to the dean of the Graduate School.

Applications for any of these positions should be accompanied by a transcript of credits from the institution where the bachelor degree was obtained, and of any graduate work taken by the applicant.

ADMISSION

Graduates of standard colleges and universities are admitted to the Graduate School by the registrar upon presentation of an official transcript of the credits upon which their bachelor's degree is based. But admission to candidacy for an advanced degree is determined only after a preliminary examination.

Graduates of other than standard colleges and universities are advised to obtain a bachelor's degree from a standard institution, before

proceeding to graduate work. Exceptions to this rule are made only by action of the graduate council after consideration of the individual case, and then only in the case of graduates of institutions closely approaching standardization. Such exceptions are always admitted conditionally.

Graduates of standard colleges and universities who desire to take additional work either of graduate or undergraduate character, without seeking an advanced degree may be admitted to the Graduate School, and enjoy the privileges and exemptions of that school.

DEGREES GRANTED

In all of the departments of the Graduate School the degrees of master of arts and master of science are offered. Students who have the bachelor of science degree will proceed to the degree of master of science unless they have fulfilled the language requirement for the bachelor of arts degree, in which case they may become candidates for the master of arts.

Students holding a bachelor of science or bachelor of arts who show a high measure of ability as creative artists in certain fields may be admitted to candidacy for the degree of master of fine arts.

Certain departments of the Graduate School are prepared to accept candidates for the degree of doctor of philosophy. It is not, however, the policy of the University to grant the doctor's degree to any student whose academic training, both undergraduate and graduate, has been exclusively in this institution.

DEPARTMENTS OF THE GRADUATE SCHOOL

The departments of the Graduate School authorized to accept candidates for the master's degrees, whose offerings appear in this bulletin, are as follows:

Anatomy (Medical School)	Mathematics
Bacteriology and Hygiene (Medical School)	Mechanics and Astronomy
Biochemistry (Medical School)	Music
Botany	Pathology (Medical School)
Chemistry	Pharmacology (Medical School)
Economics	Philosophy
Education	Physical Education
English	Physics
Geology	Physiology (Medical School)
German	Political Science
Greek	Psychology
History	Romance Languages
Latin	Sociology
	Zoology

Students may be accepted for the degree of master of fine arts in the following subjects:

Architecture	Design
Painting	Sculpture
Music	

At present the Graduate Council recognizes as prepared to accept candidates for the degree of doctor of philosophy the following departments:

Anatomy (Medical School)	Physics
Education	Psychology
Geology	Zoology
History	

PREREQUISITES FOR MAJOR AND MINOR WORK

Upon admission to graduate standing, the student chooses a major subject and a minor subject. For preparation the student should have in his major subject the fair equivalent of an undergraduate major of a standard college or university, and in his minor at least a substantial year-course of upper division grade.

Where the student's credentials do not show the normal preparation for major or minor work in the chosen field, the departments concerned are authorized to give the student an examination in specific subjects and certify as to the scope and adequacy of his preparation.

The special requirements of the various departments of the Graduate School follow:

Anatomy. (Medical School). An undergraduate major in zoology and comparative anatomy, or the courses in anatomy required of first year medical students, for those intending to major in anatomy.

Bacteriology and Hygiene. (Medical School). An undergraduate major in botany, zoology, or chemistry including a course (not less than six hours) in general bacteriology.

Biochemistry. (Medical School). Chemistry requirement for admission, i. e., not less than twenty-three term hours, including a complete course in elementary organic chemistry (not less than eight hours). A brief course in qualitative and in quantitative analysis is strongly advised. Those entering the Medical School without a bachelor's degree are required to take the regular course in biochemistry as a prerequisite to advanced work.

Botany and Bacteriology. Beside the preparation in the special field equivalent to an undergraduate major, the student in botany should have work in chemistry, physics, and zoology, and in bacteriology, biology, general and organic chemistry, and general bacteriology.

Chemistry. In addition to the direct requirement in chemistry, the student should have a working knowledge of calculus, college physics, and preferably, a year of upper division physics. A reading knowledge of French or German is almost indispensable.

Economics. Added to the regular requirements in economics, should be at least one year of work in political science, two years of work in history, and a course in principles of sociology. An elementary course in psychology and some work of university grade in mathematics is desirable.

Education. Along with the usual fundamental courses in education is required a general knowledge of psychology and sociology. Special requirements depend on the field of research selected; graduate students in educational psychology must be prepared in advanced psychology including laboratory; students in educational history must have a suitable foundation in history, etc.

English. For a major in English, the student should have the equivalent of an undergraduate major in English, including a broad general knowledge of English literature. The specific requirements will vary according to the special line of interest the student wishes to follow.

Geology. For a major in geology, foundational work in geology is, of course, presupposed, with advanced work in the special line of work proposed, i. e., paleontology, economic geology, geography, etc.

German. The student selecting a graduate major in German should have taken work of an advanced character in German, and have an adequate familiarity with one other foreign language.

Greek. The equivalent of an undergraduate major in Greek is presupposed for a graduate major. A considerable knowledge of Latin is highly desirable.

History. Those who desire to major in history for the master's degree should have the equivalent of an undergraduate major in history with specific requirements according to the field selected.

Latin. In addition to the general requirement of the equivalent of an undergraduate major in Latin, the student should have an adequate familiarity with some other foreign language.

Mathematics. The graduate student who expects to major in mathematics should have the equivalent of an undergraduate major in mathematics, including a thorough knowledge of differential and integral calculus.

Mechanics and Astronomy. For majors, calculus, the elements of differential equations, and the elements of the theory of functions of a complex variable, together with the basic courses in physics and chemistry. For minors, calculus is essential along with any special prerequisite carried by the courses.

Pathology. (Medical School). The courses required for admission to the school of medicine and the first five terms of the medical course.

Pharmacology. (Medical School). The courses required for admission to the school of medicine and the first four terms of the medical course.

Philosophy. An adequate acquaintance with the history of philosophy, and a knowledge of the fundamentals of logic, ethics and general philosophic theory.

Physical Education. A graduate student in physical education should have the equivalent of the undergraduate curriculum in the school of physical education including the biological and scientific fundamental courses.

Physics. In addition to the basic knowledge of physics generally acquired by an undergraduate major in the science, the graduate major should have a knowledge of general chemistry and the calculus, and the ability to read either French or German. The upper division courses in physics which are presented should be of a type requiring calculus as prerequisite.

Physiology. (Medical School). An undergraduate major in zoology or physiology or equivalent, together with the required medical courses in physiology.

Political Science. For a major in political science, the student should have the equivalent of an undergraduate major in that subject.

Psychology. A graduate major in psychology should have a thorough training in the fundamental facts of adult psychology, with considerable experience in laboratory procedure and practice. The advanced work presented will vary with the type of specialization anticipated. Students who expect to specialize in mental measurements should have a foundation in biology and mathematics; those choosing the social aspects of psychology should have history of philosophy and courses from economics and sociology.

Romance Languages. Knowledge of Latin is essential. For minor work, adequate training in one Romance language is sufficient; for major work, two are required.

Sociology. The graduate major in sociology should have the equivalent of an undergraduate major in sociology, and in addition a knowledge of the principles of economics, and at least one college course in history.

Zoology. An undergraduate major in zoology is essential for graduate work, and the student should also have a broad fundamental training in science.

CANDIDACY FOR ADVANCED DEGREES

Admission to formal candidacy for a degree does not commonly take place until the student has satisfactorily completed in residence the work of one term, or at least of one summer session.

Before the student is admitted to candidacy for a degree, he must pass a preliminary examination arranged by the head of the major department. When the department requires a reading knowledge of a foreign language, the student must also satisfy his adviser as to his ability in this respect before he may be admitted to candidacy.

Heads of the major or minor department may, at their discretion, require more than the minimum residence period.

REQUIREMENTS FOR THE DEGREES OF MASTER OF ARTS AND OF SCIENCE

Residence requirements. The standard residence requirement is one academic year. This does not mean that the work prescribed for each individual student can always be completed in the period of one academic year, since inadequate preparation or outside activities frequently make a longer period necessary.

In lieu of the standard residence requirement of one year, residence may be accomplished in three summer sessions when the student has completed a sufficient amount of acceptable work in another standard institution; but the transfer of acceptable graduate credits from other graduate schools may under no circumstances reduce the residence requirement below one year, or the credit earned in this University below 27 term-hours.

Work done in the Portland extension center of the University is counted as residence work.

Credit and scholarship requirements. The minimum credit requirement is 45 term-hours earned in courses approved by the graduate council for graduate credit. These are to be divided, approximately 30 to 15, between a major and a minor subject.

No credits are acceptable for an advanced degree which are reported with a grade lower than III, and at least one-third must be of the grades I or II (see general catalogue for grading system).

Amount of work. Graduate students are not permitted to register for more than 16 hours of work during the regular sessions of the academic year. Graduate students in the summer sessions are not permitted to carry more than three courses, or to earn more than 9 term-hours, unless the student arranges for a supplementary period of

study after the closing of the summer session under the supervision of either the major or the minor department.

Thesis. A thesis is always part of the requirement in the major subject. Nine of the hours required for the major work should be assigned to it. Not less than three weeks before the time set for the oral examination, the candidate must place on file in the registrar's office three copies of the thesis, these copies to become the property of the University, one for the major department and two for the library.

Final examination. A special committee of not less than three, including the heads of those two departments in which the student has done his work, conducts a final oral examination of the candidate. This committee is appointed by the head of the major department with the approval of the dean of the Graduate School, (who is himself an ex officio member of all examining committees), and reports its findings with recommendation to the graduate council.

REQUIREMENTS FOR THE DEGREE OF MASTER OF FINE ARTS

The degree of master of fine arts is a degree in full course, and ranks on a level with the degrees of master of arts and master of science. It is open to students who hold a bachelor of arts or of science, and who show a high measure of ability as creative artists.

Residence requirement. The residence requirement is one academic year of full-time work.

Amount of work. The student shall be expected to accomplish the full equivalent of the forty-five hours of work required for all masters' degrees in the University.

Arrangement of work. To meet the special and peculiar conditions of the work of the master of fine arts degree, the student's program may normally be distributed as follows, and thereby be considered to have met the requirements of major, minor, thesis, seminar and the term-hours of credit.

(a) Thesis (i. e., piece of creative work). Five hours of credit each term, throughout the year.

(b) Special study and research with the more immediate theoretical and technical backgrounds of the "thesis." Five hours, each term, throughout the year.

(c) General theoretical reading in the field of art in which the "thesis" lies. Five hours, each term, throughout the year.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Prerequisites. To enter upon work for the doctorate, the prerequisites are the same as for the master's degree, namely, the general preparation indicated by a bachelor's degree from a standard college, and substantial specific preparation in the lines of the major and minor subjects, as indicated in the departmental statements.

Amount of work. The minimum amount of work for the doctorate is three years beyond the bachelor's degree. Work done in satisfaction of the requirements for the master's degree, if of suitable character and quality, may be counted. Requirements of time, however, are wholly secondary. The degree of doctor of philosophy is based upon attainments and proven ability, and does not rest upon any computation of time or enumeration of courses, although no student may receive the degree until he has fulfilled the requirements of residence and study for the prescribed period.

Standards of scholarship. As in the master's degree, work of superior quality is required (see scholarship requirements for master's degree) but more importance is attached to the student's mastery of the general field of his major subject, his independent study of it, and especially to his promise of intellectual productivity.

Residence. Two years of resident graduate study beyond the master's degree is required, of which at least one year, usually the last, must be spent in residence at the University of Oregon.

Major and minor subjects. The student proceeding toward the doctorate registers for one major and one or two minor subjects, devoting approximately 60 per cent of his time to the major subject and 40 per cent to the minor subject. Beyond the requirements for the master's degree, the work must be taken exclusively from courses designated as primarily for graduates. Further, the work of the student should not be merely an aggregation of advanced courses of sufficient amount, but should constitute a coherent program of study and spontaneous activity on the part of the student.

Promotion to formal candidacy. Not later than one academic year before final examination for the doctor's degree, the candidate passes the preliminary examination to show his reading knowledge of French and German, the test being mainly upon the literature of the major subject. At the request of a major department, another language may be substituted for one of the specified. The examination is conducted by a committee of at least three, including representatives of both the modern language departments and of the major department.

When a student has successfully passed this examination, and has satisfied the graduate council that he has the necessary scholarly foundation and the intellectual characteristics requisite for productive scholarship, he may be promoted formally to candidacy for the degree. This promotion is not made until the student has established a title to it by work in residence.

Thesis. The general field, and if possible the subject of the research for the thesis, with such preliminary investigation as justifies an expectation of its fruitfulness must be selected before, and as one of the grounds for promotion to candidacy. The thesis must embody the results of the candidate's own individual investigations.

Three weeks before the date set for the final examinations, the candidate deposits at the office of the registrar three copies of his thesis in complete form for the use of members of the examining committee. The thesis, if approved, shall be printed in such form as the graduate council may approve, and not less than fifty copies deposited in the University library. The degree may not be conferred or the diploma delivered until these copies have been deposited, or a sufficient financial guarantee made to assure their printing and delivery.

Examinations. The final examination of the candidate is held before a committee of not less than five, appointed by the graduate council on the nomination of the head of the major department. One member of this committee is commonly some person from another institution, who is of high standing in the major department.

The dean of the Graduate School is ex officio member of all examining committees.

The final oral examination (which may be preceded by such written examinations as are prescribed by the department or the committee) is of three hours duration and covers the research work of the candidate, based upon his thesis, and his attainments in the fields of his major and minor subjects. The doctorate examination is open to interested persons.

Description of Courses

Following is the statement of courses in which graduate credit may be earned.

Lower division courses and those upper division courses habitually open to lower division students, are not listed in this bulletin, since no graduate credit may be earned through them.

Courses numbered between 100 and 199 are intended primarily for upper division students, but are often taken for graduate credit with further assignments of work in addition to that required of undergraduates. Courses numbered 200 and above are exclusively graduate work. Each program for the master's degree must contain at least one course of this character, and all of the major work for the doctorate must be taken from this group.

Not all of the courses here listed will be given in any one year, although many of the upper division and some of the graduate course are repeated each year. The work presented will, however, be open to the student during a reasonable period of residence, and the departments are prepared to offer any of the courses whenever qualified students need them.

Courses numbered a, b, c are year-courses which should be taken in the prescribed sequence.

Detailed information concerning the courses offered any one year, and the fees in laboratory courses will be found in the registration manual published at the beginning of the fall term.

ANATOMY

Professors ALLEN, LARSELL; Assistant Professor FOSTER

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101. *Gross Anatomy.* First year, each term; lectures and quizzes, 4 hours per week; laboratory, 8 hours per week; total, 396 hours; eighteen credits. Foster.

102. *Histology and Organology.* First year, fall term; lectures and quizzes, 3 hours per week; laboratory, 9 hours per week; total, 132 hours; six credits. Larsell and assistants.

103. *Embryology.* First year, winter term; lectures, 2 hours per week; laboratory, 6 hours per week; total, 88 hours; four credits. Allen and Larsell.

105. *Microscopic Technique.* Fall and winter terms; limited to 12 students after consultation with instructor; laboratory, 3 hours per week; total, 33 hours; one credit. Larsell and assistants.

PRIMARILY FOR GRADUATES

201. *Neurology and Organs of Special Sense.* Second year, fall term; prerequisite, Anatomy 101-103; lectures, 2 hours per week; laboratory, 6 hours per week; total, 88 hours, four credits. Allen.

202. *Advanced Histology.* Winter and spring terms; prerequisite, Anatomy 102 and 105; laboratory, 6 hours a week or less; credits to be arranged. Larsell.

203. *Topographical Anatomy.* Winter term; prerequisite, Anatomy 101; limited to 15 students; lectures, 1 hour per week; laboratory, 3 hours per week; total, 44 hours; two credits. Foster.

204. *Special Dissections.* Limited to available material; prerequisite, Anatomy 101; hours and credits to be arranged. Foster.

205. *Applied Anatomy.* Third year, spring term; prerequisite, Anatomy 101; lectures and demonstrations, 1 hour per week; laboratory, 2 hours per week; total, 33 hours; two credits. Foster.

206. *Applied Osteology*. Lectures and demonstrations, 1 hour per week; laboratory, 3 hours per week; total, 44 hours; two credits. Foster.

207. *Mechanism of the Central Nervous System Studied from Lesions*. Spring term; prerequisite, Anatomy 104; laboratory, 3 to 6 hours per week; credits to be arranged. Allen.

208. *Seminar and Journal Club*. Each term; includes anatomical staff and advanced students; hours and credits to be arranged. Allen.

210. *Research* in any branch of anatomy is open to qualified students upon approval of any of the instructors. Hours and credits to be arranged. Allen, Larsell and Foster.

BACTERIOLOGY AND HYGIENE

Professor SEARS: Dr. LIVINGSTON

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101. *Medical Bacteriology*. First year, spring term; lectures, 4 hours per week; laboratory, 12 hours per week; total, 176 hours; 8 credits. Sears.

102. *Principles of Public Health*. Third year. The general principles underlying public health activities. Control of communicable diseases. Organization of federal, state, local and other health agencies. Elements of infant, school and industrial hygiene and vital statistics. Lectures, recitations and discussions. Three hours per week, second term. Three credits. Sears.

PRIMARILY FOR GRADUATES

201. *Public Health Laboratory Methods*. Winter term; laboratory and quizzes, 6 hours; total 66 hours; two credits. Sears.

204. *Seminar in Bacteriology and Immunity*. Meetings of the departmental staff and assistants with a number of specially qualified students to discuss the newer developments in the science as they appear in the current periodical literature. Topics are assigned and individual reports read at meetings of the class. Open to a limited number of students. Meetings held once each week. Sears.

207. *Parasitology*. A brief course in general parasitology consisting of lectures presenting the clinical and hygienic importance of human parasites, and laboratory studies of morphology and diagnostic technic. Fall term; laboratory, 6 hours per week; lectures, 1 hour; three credits. Livingston.

210. *Research in Bacteriology and Immunity*. Hours and credits to be arranged. Sears.

BIOCHEMISTRY

Professor HASKINS

The following courses given in the Medical School in Portland are accepted toward the master's degrees.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101. *Biochemistry*. First year; fall term, 3 lectures, 6 hours laboratory per week; winter term, 3 lectures, 9 hours laboratory per week; total, 231 hours; eleven credits. Haskins.

PRIMARILY FOR GRADUATES

202. *Advanced Biochemistry*. Winter term; lecture 1 hour, laboratory 3 hours per week; two credits. Haskins.

204. *Laboratory Diagnosis*. Second year, spring term; 3 lectures and 6 laboratory hours a week; five credits. Haskins.

210. *Biochemistry Research*. Haskins.

BOTANY

Professor SWEETSER

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101-102. *Plant Histology*. A study of plant tissues.

Three hours, fall and winter terms.

103. *Algae*. Study of the morphology of types of the four groups, with taxonomy of our local forms.

Three hours, spring term.

105. *Plant Physiology*. A study of life phenomena as manifested in the plant. Prerequisites, general botany. Lectures and laboratory.

Three hours, fall term.

106. *Bacteriology*. Two lectures and two laboratory periods a week. Prerequisite, general chemistry. Sweetser.

Four hours, winter term.

107. *Bacteriology*. Continuation of Bacteriology 106. Two lectures and two laboratory periods a week. Sweetser.

Four hours, spring term.

108. *Sanitation*. The study of diseases, their causes and prevention; pure food, pure water, pure milk. Desirable as prerequisite for Botany 106.

Three hours, fall term.

109. *Technique*. Killing, embedding, sectioning, staining and mounting of plant tissues.

Two hours, fall and spring terms.

110. *Botanical Problem*. The taxonomy, ecology, physiology, or economy of some group or groups of plants. Hours and credit to be arranged.

111. *Research*. Thesis. Hours and credit to be arranged.

112. *Pedagogy*. Practical study of methods of instruction in botany.

Three hours, winter term.

113-114-115. *Seminar*. One hour, each term.

116. *Advanced Laboratory*. Work in bacteriology. A continuation of Courses 106 and 107. Two laboratory periods.

Two hours, any term.

117-118. *Paleobotany*. History of paleobotany and studies of the Oregon fossil flora.

Two or three hours, fall and spring terms.

PRIMARILY FOR GRADUATES

213. *Research*. Botanical problem.

214. *Research*. Bacteriological problem.

215. *Graduate Seminar*.

216. *Graduate Thesis*.

Nine hours.

CHEMISTRY

Professors STAFFORD, SHINN; Associate Professors WILLIAMS, TANNER

Graduate work in chemistry for the year 1926-27 will be limited as heretofore to the year of study required for the master's degree. With an enlargement of teaching facilities now under way there is the possibility that beginning the following year candidates for the higher degree may be accepted.

NOTE—For the year 1926-27 all work in course for graduate credit is to be selected from the upper division section of departmental course offerings. The formal credit requirement for the degree of master of arts in chemistry is the completion of 30 hours of work in chemistry (9 of which may be for the thesis) and 15 hours of work in the minor subject.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

105-107-109. *Advanced Inorganic Chemistry*. The chemical elements are first discussed as regards their practical and theoretical importance. Finally, such topics as radio-activity, the periodic table, and atomic structure are taken up. A minimum of two years' work in chemistry is prerequisite. Three lectures per week. Tanner. *Three hours, each term.*

106-108-110. *Advanced Inorganic Laboratory*. To accompany, optionally, courses 105-107-109. Tanner. *One hour, each term.*

125-126-127. *Advanced Analytical Chemistry*. Special analytical procedures adapted to those enrolling. Tanner. *Hours to be arranged.*

130. *Microchemical Analysis*. *By arrangement.*

132. *Toxicology*. *By arrangement.*

140a,b,c. *Organic Chemistry*. The chemistry of the compounds of carbon. Deals with compounds which are important from the theoretical and biological standpoints. The first two terms are devoted to aliphatic compounds and the third term to those of the aromatic series. Prerequisite, two years of college chemistry. Three lectures and one laboratory. Williams. *Four hours, each term.*

150a,b. *Advanced Organic Chemistry*. The theoretical aspects of the subject are emphasized by discussion of theories of valence, chemical reactivity, free radicals, catalysis, etc., as these are related to particular groups of compounds. (Not given in 1926-27).

Two hours, fall and winter terms.

155-156-157. *Advanced Organic Laboratory*. Largely individual laboratory work, with stress on laboratory technique in the preparation of organic chemicals. Organic elementary analysis is also given after the student has had some experience in preparation work. Course may be entered any term. One to four laboratory periods. Williams.

One to four hours, each term.

160a,b. *Biochemistry*. To serve as a background, the chemistry of carbohydrates, lipins and proteins is reviewed and extended. Following this, such topics as the digestion of foods, alcoholic fermentation, photosynthesis, chemistry of the blood and urine are discussed. Not designed for medical students. (Not given in 1926-27).

Three hours, fall and winter terms.

165. *Colloidal Chemistry*. *By arrangement.*
- 180a,b,c. *Physical Chemistry*. Three lectures and one laboratory period. Shinn. *Four hours, each term.*
- 183-184-185. *Advanced Physical Chemistry*. *By arrangement.*
188. *Chemical Energetics*. *By arrangement.*
190. *Electro-chemistry*. *By arrangement.*
199. *Senior Thesis*. *By arrangement.*

PRIMARILY FOR GRADUATES

201-202-203. *Research*. Students are assigned to suitable problems for investigation under supervision of a member of the staff.

Hours to be arranged.

204-205-206. *Thesis*.

By arrangement.

210-211-212. *Seminar*. The staff.

One hour, each term.

ECONOMICS

Professors GILBERT, CROCKATT; Assistant Professors CAMERON, HOOVER, WOOD

Candidates for the master's degree with economics as the major subject select from the following courses, according to the special interest or purpose in pursuing graduate study. Such students will be expected to attend economics seminar, and will enroll for research work in the preparation of a suitable thesis.

It is recommended that the minor work of a student who chooses economics as his major subject should be done in one of the following departments: business administration, sociology, education, psychology or political science.

The student majoring elsewhere and carrying minor work in economics may choose any of the courses listed below, but should be governed by his special interest and by the question of contact with his major work.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

105. *Labor Problems*. Treats of the conditions under which laborers have worked since the advent of the industrial revolution. Topics especially emphasized are: trade union policies; strikes and lockouts; trade agreements; conciliation and arbitration; immigration; unemployment; women and children in industry; prison labor; industrial education; etc. Open to students who have studied the principles of economics or the principles of sociology. Wood. *Four hours, spring term.*

106. *Organized Labor*. Study of the history of the labor movement, the aims, methods, and policies of trade unions, conservative and radical. Students are required to interpret the philosophy of unionism and evaluate the significance of the labor movement. Prerequisite, 105. Wood. *Four hours, fall term.*

107. *Labor Legislation*. A detailed study of some problems facing the employee, employer and the public, which call for regulation through public authority. The course considers how far such legislation is consistent with the interests of all classes concerned. Wood.

Four hours, winter term.

108. *Modern Theories of Social Reform.* Lectures present various suggested theories involving more or less radical changes in the economic order and these theories are subjected to criticism. Prerequisites, Economics 105 and 106 or 107. Wood. *Four hours, spring term.*

110. *International Trade.* The theory of international trade; nature and effects of governmental interference in the form of bounties, subsidies, import and export duties; the commercial policies of the more important nations. Prerequisite, Economics 3a,b. Hoover.

Four hours, fall term.

111. *Economics of Population.* Economic causes and effects of the increase, decrease and movements of population as shown in colonial and imperialistic expansion and emigration and immigration policies; social attempts to influence the natural rate of increase; economic aspects of the population problem in some of the leading nations. Prerequisite, Economics 3a,b. Hoover.

Four hours, winter term.

112. *International Economic Policies.* Economic problems originating in or aggravated by the world war and the remedial policies proposed. The economic clauses of the treaty of Versailles; reparations; inter-allied debts; economic activities of the League of Nations. Prerequisite, Economics 3a,b. Hoover.

Four hours, spring term.

113. *Money, Banking and Economic Crises.* The principles of money, the laws controlling its value, methods for measuring price levels and devices for stabilizing the purchasing power. The monetary history of the United States and the present monetary system. Principles underlying sound banking and the use of credit, with the history, causes and remedies for crises and panics. Prerequisite, Economics 3a,b. Gilbert.

Five hours, spring term.

115a,b. *History of Economic Thought.* The evolution of economic doctrines from the Greek and Roman period to the age of Adam Smith. Special emphasis is placed on the relation between economic thought and contemporaneous economic conditions. The connection between economic doctrine and current political and philosophical speculation is pointed out. Prerequisite, Economics 3a,b. Cameron.

Four hours, fall and winter terms.

116. *Modern Economic Thought.* A critical study of the English classical school and subsequent writers. The classical doctrine as transmitted and criticized is studied in the light of recent economic theory. Cameron.

Four hours, spring term.

118a,b. *Public Finance.* Aims to ascertain sound principles affecting public expenditure, the raising of revenue, budgetary legislation, financial organization and the use of the public credit. Various forms of taxes and a constructive plan for fiscal reform. Special consideration given to Oregon problems. Prerequisite, Economics 3a,b. No credit for one term. Gilbert.

Four hours, fall and winter terms.

123. *Modern Industrial Tendencies.* Recent changes affecting the organization of big business, and the economic influences, as well as the limits of the movement toward concentration and integration in the industrial world. Cameron.

Four hours, fall term.

124. *Trusts and Industrial Combinations.* The evolution of industrial combinations, the economics of concentration and the evils of combination from the standpoint of investor and the public. The attempts at regulation by state and federal authority and plans for safeguarding the public interest. Prerequisite, principles of economics. Cameron.

Four hours, winter term.

125. *Government Control of Public Utilities.* Sound lines of policy in regulating, controlling or owning natural monopolies or public utilities other than steam railways. Municipal ownership in America and Europe and the economic and political problems incidental thereto. Prerequisite, principles of economics. Cameron.

Four hours, spring term.

135. *Railway Economics.* The study of transportation by land as a factor in modern economic life, the tendency toward combination and the problems of discriminating rates. Prerequisite, principles of economics. Crockatt.

Four hours, fall term.

136. *Water Transportation.* Transportation agencies by water in both the domestic and foreign trade. The evolution, services and organization of these carriers and the relationships to the railways. The problems of combination and competition, the history and effect of subsidies and forms of indirect aid by governments. Prerequisite, principles of economics. Crockatt.

Four hours, winter term.

137. *Control of Carriers.* The characteristics which determine whether a carrier is a common carrier or not. The problems of regulation of rates, combinations and monopolies, relations between rail and water carriers, obtaining and use made of capital, relations of carriers to labor. Special attention to the work of the Interstate Commerce Commission and United States Shipping Board, and other government boards dealing with the problems of regulations. Prerequisites, principles of economics, and 135 and 136. Crockatt.

Four hours, spring term.

141. *Conservation of National Resources.* An inventory of our resources in mineral wealth, water, soil, timber, etc., is taken and practices which lead to waste and extravagances considered. Discussion of sound lines of public policy which will arrest needless waste, promote restoration and encourage conservation. Prerequisite, principles of economics. Gilbert.

Three hours, spring term.

152. *Economics of Public Utilities.* An analysis of the economic nature of public utilities followed by a critical study of their history, organization, financial problems and the trend toward large scale enterprise, consolidation, system building; attention also given to the creation and development of specialized public relations organization. Prerequisites, 123, 124, 125. Cameron.

Four hours, winter term.

153. *Railway Commissions.* This course aims to consider railway commissions, state and federal, especially with reference to organization, power and achievements. Prerequisite, course 135. Crockatt.

Four hours, winter term.

154. *Labor Bureaus and Commissions.* This course includes a survey of state and federal bureaus and commissions and the machinery for investigating labor problems and enforcing labor legislation. Types of

commissions will be studied and their problems analyzed. Prerequisites, courses 106, 107, 108. Wood. *Four hours, fall term.*

166. *Labor and Remuneration.* A survey is made of the course of real wages in Europe and America during several centuries. Successive wage theories evolved in the modern period are examined. Present day wage statistics in the United States are analyzed and correlated, systems of wage payment described. The influence of trade unions for wages is considered. Prerequisite, Economics 105. Wood. *Three hours, each term.*

167. *Labor and Agrarian Movements.* Deals in an historical and critical way with various labor and agrarian movements in the United States and Canada. Efforts to secure closer cooperation, economic and political, between organized labor and the farming class are considered and results appraised. Prerequisite, 105. Wood. *Three hours, winter term.*

178. *History of American Fiscal Policy.* At basis this course purports to be a history of the treasury department of the United States. An examination is made of federal policy since early days on subjects of coinage and paper money, public borrowing and national debts; local and centralized banking, the tariff and other forms of taxation are considered. Prerequisite, 3a,b. Wood. *Three hours, each term.*

PRIMARILY FOR GRADUATES

201-202-203. *Research in Economics.* Original work for thesis purposes. Gilbert. *Each term.*

210-211-212. *Economics Seminar.* *Each term.*

213-214-215. *Thesis.* *Nine hours.*

EDUCATION

Dean SHELDON; Professors DEBUSK, DOUGLASS, RAINEY, STETSON

FOR GRADUATES AND ADVANCED UNDERGRADUATES

150. *Education Club.* Reports of current educational meetings, book reviews, discussions of special topics investigated by members. Sheldon and staff. *One hour, each term.*

151-152-153. *History of American Education.* Lectures, reports, and discussions treating the intellectual development of America with special reference to education. Knowledge of American history a requisite. Colonial period, 1607-1775; fall term. Early national, 1775-1860; winter term. Recent period, 1860-1920, spring term. Open to seniors and graduates who have met the practice teaching requirement. Rainey. *Two hours, each term.*

154-155-156. *History of Education* (with special reference to modern educational ideas). Includes a study of the educational writings of Plato, Aristotle, Quintillian, Renaissance educators, Comenius, Locke, Rousseau, Pestalozzi, Froebel, Herbart, Herbert Spencer, Dewey, and Madam Montessori. Sheldon. *Two hours, each term.*

157. *Social Education.* A study of education in its social aspects, including primary social groups, the schools as a social group, psychology of leadership, etc. Students will be asked to observe, describe, and

diagnose school situations arising in the field of discipline, school societies, playground, and amusement problems. Open to seniors and graduates who have met the practice teaching requirements. Prerequisite, consent of instructor. *Three hours, fall term.*

158-159. *Advanced Principles of Education.* A study of the broad fundamental principles and problems of education, with some attempt at their solution. The meaning of philosophy; the philosophy of education; principal rules, formulae; the value of a correct philosophy of education for the teacher and school administrator. How it may be made to function in all phases of school work. *Two hours, each term.*

161-162-163. *Psychology of Childhood.* First term, the psychology of normal children; second term, the learning of children; third term, exceptional children—delinquent, subnormal, and superior—with special reference to the problems involved in their education. Prerequisites, education or psychology. DeBusk. *Three hours, each term.*

164-165. *Mental Tests.* First term, the mental test movement. The history and technique of giving and scoring, underlying psychological principles, consideration of some of the more important individual and group tests. Second term. Application of mental tests to schoolroom problems. Prerequisites, education or psychology. DeBusk. *Two to three hours, fall and winter terms.*

166. *Individual Differences.* Study of the individual differences in mental traits. Correlation of abilities and the educational problems involved. Prerequisites, education or psychology. DeBusk. *Two to three hours, spring term.*

167-168-169. *Educational Hygiene.* First term, hygiene of the school plant. Construction and sanitation, with special reference to the provision of a healthy school environment; second term, hygiene of the child. Consideration of those factors which effect the adjustment of the child to the school and its work; third term, hygiene of learning. Study of the problems of mental economy and control, fatigue, rest, play, organization of work, interference of association, etc. Open to qualified upper division students. DeBusk. *Three hours, each term.*

171. *School Administration.* The organization of the state, county, town, and district units. The financial organization for the support of public education. Principles of state and federal aid—the need for a new administrative unit. Equalization of educational opportunities; taxation for the support of public education; increasing cost of education; educational control and support. Better administration and supervision of rural education; consolidation of rural schools. Rainey. *Three hours, spring term.*

172. *Educational Tests and Measurements.* School achievement tests for various school subjects, and the application of quantitative measurements to the solution of school problems. Diagnostic testing for the improvement of classroom instruction. Tests for general survey purposes. Simple statistical methods applied to education. Open to juniors and seniors. Rainey. *Three hours, winter term.*

173. *The Teaching Staff.* Selection and organization of the teaching staff; teacher training; teachers' salaries, promotion, salary schedules; pensions and retirement funds; organizations; rating and the improve-

ment of teachers in service. Professional study and development; professional ethics, standards, and ideals; professional leadership. Rainey.

Three hours, one term.

174. *Organization of Common School Curricula.* Principles underlying the development of the course of study; its content. The scientific determination of what shall be taught in spelling, reading, United States history and arithmetic. Evolving curricula from the functional point of view; from other points of view. Quantitative determination of materials of instruction. Rainey.

Three hours, fall term.

175. *City School Administration.* The organization and duties of the Board of Education, city superintendent, and other members of the staff. Principles of city school administration. Plans of organization. Departmentalization of instruction; departments of research and efficiency. Given alternately with 171. Rainey.

Three hours, one term.

176. *School Surveys.* This course deals with the development and technique of the survey movement in education; study of the current problems in school administration as they are revealed through school surveys; analysis of the methods of studying these problems, and of the current tendencies in school administration as they are indicated through the recommendations. An intensive study of several surveys; extensive reading in this literature, required. Rainey.

Three hours, one term.

181. *High School Administration and Supervision.* An analysis of the work of a high school principal. Organizing and equipping the school; teacher and pupil assignments; standardizing and administering routine; school records; supervision of instruction and of socialization; teachers' meetings; school morale; publicity and community relations; school finance; measuring school efficiency, and other significant topics. Stetson.

Three hours, one term.

182. *Measurement in Secondary Education.* A study of the construction and desirable uses of various standard tests and scales for measuring achievements in secondary school subjects. Such elements of statistical method will be given as are necessary for intelligent use of the tests. Stetson.

Three hours, one term.

183. *Advanced Course in High School Teaching.* Planned for students with teaching experience and for those who may later become supervisors or administrators. Deals critically with recent tendencies in technique of teaching. Classroom organization, pupil participation; teaching how to study; project teaching; standardized grading; use of community resources in instruction; the experimental attitude in teaching. Stetson.

Three hours, one term.

184. *The Junior High School.* The causes leading to the development of the junior high school; the special purposes and opportunities of this type of school; problems of organization and administration; curriculum building; provisions for individual differences; instruction; exploration and guidance; school activities. Typical junior high schools will be studied. Stetson.

Three hours, one term.

190-191. *Education and Ethics.* A consideration of education from the view of the highest individual development. Includes a study of systems of moral instruction in France, Japan and elsewhere. The function of various social institutions in molding character. This course continues and supplements 157. Sheldon.

Three hours, winter and spring terms.

194-195-196. *Statistical and Experimental Methods in Education.* Technique of quantitative and experimental methods: applications of statistical methods to educational problems; experimental methods in problems of teaching and the high school curriculum; advanced statistics including methods of determining relationships where data is curvilinear, categorical, or ungraduated; use of the properties of the normal probability curve; statistical methods involved in achievement and psychological tests; partial and multiple correlation methods. For graduate students and seniors. Admission after first term only by permission of the instructor. Douglass.

Two hours, each term.

PRIMARYLY FOR GRADUATES

252a,b,c. *Problems in History of 19th Century Education and Civilization.* A special course for students in history and education. Each student will prepare paper based on source material. The library is equipped with a collection of source material covering the English, German, and American portions of the subject. Sheldon.

Two hours, each term.

261-262-263. *Educational Psychology.* A discussion of the experimental material which seems most useful and relevant to educational psychology. Open to graduate students with preliminary training in education and psychology. DeBusk.

Two hours, each term.

264-265-266. *Advanced Course in Mental Tests.* The history of the test movement; principles of test making; the application of tests to school problems; the definition of intelligence; average mental age of adults; the variability of the IQ; uses of tests in diagnosis. Open to graduate students only. DeBusk.

Two hours, three terms.

271-272-273. *Research in School Administration.* Special problems selected with reference to the previous training and future plans of the student, who is expected to work at some phase of school administration with a view to becoming an authority in that field, as well as making a contribution to the facts and data now extant. Open to graduate students who have had courses 171-175, or their equivalents. Rainey.

Two hours, each term.

274. *Educational Finance.* A study of the major problems of financing public education. State systems of financing education, computing the cost of education, unit costs. The problem of school revenues, the capital cost of education. Budget making. Open only to graduate students. Rainey.

Three hours.

280-281-282. *Secondary School Curricula.* Problems of curriculum making in the modern high school. Historical, philosophical, social, psychological and administrative factors involved. Experimental studies in this field. Stetson.

Two hours, each term.

283-284-285. *Comparative Secondary Education.* Secondary school organization and practice in representative foreign countries. Varying conceptions of aims and functions, comparative efficiency, suggestions for American education. Stetson.

Two hours, each term.

286-287-288. *Research in Secondary Education.* Open only to qualified students who wish to do constructive work or carry on investigations of selected problems in the secondary field. Due emphasis will be given to methods of procedure in research. Stetson.

Two hours, each term.

290-291-292. *Experimental Problems of Teaching*. Experimental investigation of problems and methods of teaching. Open only to graduate students with experience in teaching and in connection with M.A. thesis. Douglass. *Two hours, each term.*

293-294-295. *Research in Theory and Practice of Teaching*. Historical and psychological foundations of the philosophy of educational methods; investigation of the development and status of present teaching. Douglass. *Two hours, each term.*

ENGLISH

Professors MARY BARNES, BURGESS, HOWE, *PERKINS, THACHER
Associate Professor ERNST; Assistant Professor STEPHENSON SMITH

ADMINISTRATIVE COMMITTEE

Dr. ERNST, *Chairman*; Mrs. BARNES, Mr. THACHER

Candidates for the A.M. majoring in English literature must present, before coming up for the master's examination, in addition to the usual general undergraduate courses in literature, at least one specialized course each in the novel, the drama, poetry, the critics, and the history of literature. As with the thesis required of candidates for the A.M. this totals a minimum of 54 term hours, as against a minimum of 30 term hours assigned to the major subject in the graduate work, it is apparent that candidates for the A.M. in English literature cannot well be accepted with less than 24 hours of specialized upper division courses in the subject.

Candidates for the A.M. majoring in written English must present, before coming up for the A.M. examination, specialized written English courses in at least two of the following fields, short story, novel, drama, poetry, criticism, and courses in literature giving specialization in the literary background of these written English courses.

Candidates for the A. M. in English should have a background in such fields as philosophy, history, sociology, economics, and education.

LITERATURE

FOR GRADUATES AND ADVANCED UNDERGRADUATES

131. *History of the English Language*. The development of the English language from the Anglo-Saxon period to the present. The historical basis of the English grammar, spelling, pronunciation and usage. Perkins. *Three hours, fall term.*

132. *Middle English*. Grammar and translation of selected passages, with special attention to the development of the language during the middle English period. Perkins. *Three hours, winter term.*

133. *Chaucer*. As much of Chaucer's work is read as time permits, with careful attention to his sources, poetical forms, pronunciation, and grammar. Perkins. *Three hours, fall term.*

134a,b,c. *Anglo-Saxon*. Grammar and translation of selected passages. Bright's Anglo-Saxon reader will be used in fall term. Wyatt's Beowulf in the winter and spring terms. Two years of German is prerequisite for graduate credit. Perkins. *Three hours, winter and spring terms.*

140-141-142. *American Novel*. A general survey of American fiction, with detailed study of important authors from Melville, Howells, James, and Twain to the present day. Burgess. *Three hours, each term.*

143-144-145. *American Poetry*. Brief survey of earlier poets; Whitman and his influence; transition and contemporary poets. Burgess. *Two hours, each term.*

146-147-148. *American Prose Writers*. Fall term; Emerson, Thoreau, Melville, Lowell, Holmes, with some readings from historians. Winter term; William James, Dewey, Santayana, Henry Adams and others. Spring term; American literary criticism. Burgess. *Two hours, each term.*

149a,b,c. *Seminar in American Literature*. Burgess. *One or two hours, each term.*

150. *Browning*. The Ring and the Book, and the important shorter poems. The aim is to give the student facility in reading Browning, and to acquaint him with the author's work. *Three hours, winter term.*

151. *Shelley*. His most important works are read, with attention to the author's significance as thinker and as poet. Howe. *Three hours, spring term.*

154-155-156. *Living Writers*. Kipling, Bernard Shaw, H. G. Wells, Arnold Bennett, Galsworthy, Chesterton, Gordon Bottomley, Dunsany, Kaye-Smith, May Sinclair, and others as they appear. Howe. *Three hours, each term.*

157-158-159. *Contemporary European Literature*. This course covers European literature of the last fifty years, with special emphasis on Ibsen and the Russians. Howe. *Three hours, each term.*

170a,b,c. *History of English Literature*. Planned for honor candidates, intending teachers, and graduate students. Ernst. *Three hours, each term.*

180a,b,c. *English Drama*. Ernst. *Three hours, each term.*

185-186-187. *The English Novel*. From Richardson and Fielding to the present. Mrs. Barnes. *Three hours, each term.*

190-191-192. *English Prose Writers*. Nineteenth century writers who are not novelists. DeQuincey, Hazlitt, Lamb, Carlyle, Mill, Huxley, Arnold, Pater. Mrs. Barnes. *Three hours, each term.*

195-196-197. *Literary Treatment of Social and Economic Problems*. The literature of the economic and social changes in the period 1760-1870. The literature growing out of the enclosures, the poor laws, the factory system, and the industrial revolution. In the latter part of the course attention is given to the socially significant essays of Carlyle, Ruskin, and Arnold. *Three hours, each term.*

PRIMARILY FOR GRADUATES

201. *Survey of the English Critics*. Required of candidates for the master's degree who major in English. Howe. *Three hours, each term.*

205. *Seminar*. Grouped research problems. Howe.

210-211-212. *Philosophical Foundations of English Literature*. Bacon, Hobbes, Locke, Berkeley, Hume, the deists, the economists, the evolution-

* Leave of absence, 1925-26.

ists, the utilitarians, and the pragmatists. Mrs. Barnes.

Three hours, each term.

218. *Shaftesbury and the Romantic Revolt.* Shaftesbury's relation to English and continental writers of the romantic movement, in particular to Rousseau, Diderot, Wordsworth, and Shelley. Given alternately with English drama. Ernst.

Three hours, each term.

220. *Research.* Hours to be arranged.

225-226-227. *Seminar in Shelley.* Howe.

230. *Graduate Thesis.*

Nine hours.

WRITTEN ENGLISH

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101a,b,c. *Advanced Magazine Writing.* Perkins.

Two hours, each term.

103a,b,c. *Advanced Short Story.* For students who, on completing the Short Story course, show sufficient ability to justify further work. Thacher.

Two hours, each term.

107a,b,c. *Authorship.* A course of seminar character, for those students who wish to become professional writers. Thacher.

Two hours, each term.

120a,b,c. *Criticism.* A course in the writing of criticism supplemented by readings from the great English critics, especially Dryden, Coleridge, Hazlitt, Pater, and Shaw. Smith.

Two or three hours, each term.

125a,b,c. *Elements of Style.* This course is planned for students who wish to develop an easy, effective prose style. The work consists of analysis of strongly marked examples of style, and practice in securing typical stylistic effects.

Two hours, each term.

135a,b. *Development of English Prose Style.* The purpose of this course is to familiarize students with the development of the main stream of English prose from Malory to the present. Representative selections are read and papers based on particular problems are prepared.

Two hours, fall and winter terms.

139. *English Verse.* Studies in the principles of English versification. The aim of this course is to offer to upper division students and to honor and graduate students a rapid survey of the field of poetics.

Two hours, spring term.

199a,b,c. *Playwriting, Advanced Course.* Hours to be arranged.

PRIMARILY FOR GRADUATES

204a,b,c. *Seminar in Written English.* Special study of written English problems, with attention to rhetorical theory from Plato and Aristotle to the present. Given in alternate years with elements of style 125a,b,c.

Two hours, each term.

GENERAL LITERATURE

126a,b,c. *Literature of the Medieval World.* Boethius, St. Augustine, and the other Latin writers of the Dark Ages; medieval epics and romances; Icelandic sagas and eddas; the troubadours and minnesingers. Abelard, Albertus Magnus, Roger Bacon, and St. Thomas Aquinas; St.

Francis; Fabliaux; Reynard the Fox, Dante, Villehardouin. The medieval stage, and especially early English drama; Francois Villon; Piers Plowman, Layamon's Brut, and Chaucer. Smith. *Three hours, each term.*

127a,b,c. *Literature of the Renaissance.* Boccaccio and Queen Margaret of Navarre; Petrarch; Philippe de Comynes and Macchiavelli. Rabelais, Cervantes, Lope da Vega, and Calderon. Erasmus, More and the other Humanists; the Elizabethan dramatists; Bacon; the King James Bible; Robert Burton; Sir Thomas Browne; Ariosto; Milton. Smith.

Three hours, each term.

137a,b,c. *Introduction to Linguistics.* A scientific study of language; phonetics; laws governing the development of language; methods of comparative philology. Knowledge of Latin advisable as prerequisite. (Not offered in 1926-27). Smith.

Two hours, each term.

156a,b,c. *Romantic Revolt.* (1750-1832). The romantic movement in England, with some reference to parallel developments in French and German literature. (Not offered in 1926-27). Smith.

Three hours, each term.

PORTLAND EXTENSION CENTER

103. *Advanced Short Story Writing.* The instructor, in the capacity of editor, will receive, revise, and discuss with the class, manuscripts of short stories, one-act plays, and poetry. Parsons.

Two hours, each term.

LITERATURE

101. *Comparative Criticism.* A consideration of the literature of criticism in England from the sixteenth century to the present day, compared with that of France and other countries. Parsons.

Two hours, each term.

102. *Problems in Shakespeare.* An intensive study of Shakespeare's poetry, his drama, his stage technique, the personnel of the players with whom the poet was identified, and the larger relations and values of his work. Parsons.

Two hours, each term.

103. *Recent Development in Fiction.* Consideration in their relationship of the changes and tendencies noted in recent novels, both English and European. Parsons.

Two hours, each term.

104. *The French Novel in the Nineteenth and Twentieth Centuries.* A brief summary of the development of French fiction, with principal writers and periods; Madame deStael, Chateaubriand, Sand, Hugo, Balzac, Flaubert, Maupassant, Zola, Daudet, and Bazin. Anatole France, Barres, Loti, Proust, and Riviere.

One hour, each term.

105. *The French Romantic Period.* A study of French romanticism and its relation to similar movements in European literatures. Principal writers and assigned readings of English translations.

106. *The Classic Period of French Literature.* The influence of society, philosophy and religion on the literature of the period; the hotel de Rambouillet, French Academy, Descartes, Pascal and the moralists, followed by a study of the great classics: Boileau, Corneille, Racine, Moliere, La Fontaine. Assigned readings of English translations.

201. *English Seminar*. For graduate students majoring in English, but open to qualified undergraduates. Thesis needs will be cared for in this course. Parsons. *Two hours, each term.*

GEOLOGY

Professors SMITH, PACKARD, HODGE

The department of geology offers work in three distinct fields: economic geology, historical geology and paleontology, and geography.

In the first of these the work is directly linked with that done in the field of physics and chemistry; in the second, the natural alliances are with zoology and botany; while the third makes connections with economics, history and sociology.

Owing, however, to the distinctly threefold organization of the department, it is possible for a candidate for the master's degree in geology to major in economic geology, for example, and minor in geography, though this procedure is not encouraged.

Inasmuch as the three modern languages, German, French and Spanish, are tools indispensable to the professional geologist, the student who chooses this subject as a vocation is expected to acquire a reading knowledge of two (preferably three) of these. One modern language, other than English, is required of candidates for the master's degree, while the candidate for the doctorate must have two. The department gives its own independent test of this reading ability at the time of the preliminary examination for a higher degree.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101. *Structural Geology*. Study of origin, interpretation and mapping of minor rock structures and of joints, faults, and folds. Prerequisites: 1a,b, or 3, and 111. Two lectures and one laboratory or field period. Smith. *Three hours, spring term.*

102a,b. *Non-metallic Mineral Deposits*. The geology, uses, and economics of the non-metallic minerals. Coal, oil, building stones, road material, and fertilizers are stressed. Prerequisites, general geology, mineralogy and stratigraphy. Three lectures and one laboratory. Smith. *Four hours, fall and winter term.*

103. *Oil Geology*. This course is given as course 203, Applied geology.

105. *Physiography of the United States*. An advanced course, emphasizing the interpretation of the historical and economic development of the various natural regions of the country. Prerequisites: 1a,b, 2, and 104. Two lectures and one laboratory. Smith. *Three hours, winter term.*

107. *Metallic Ore Deposits*. (Not given 1926-27). This course is arranged as part of course 146, Earth Materials.

110. *Petrography*. (Not given 1926-27). This course is arranged as part of course 146, Earth Materials.

118. *Tertiary Faunas*. A study of the faunal aspects of the principal West Coast horizons, and the determination of characteristic index fossils. Two lectures and two laboratory periods. Prerequisites, stratigraphy and paleontology. Packard. (Not given 1926-27). *Four hours, fall term.*

119. *Mesozoic Faunas*. A consideration of the character, migrations, and successions of the Mesozoic West Coast faunas, including a laboratory study of typical species from the various horizons. Two lectures and two laboratory periods. Prerequisites, stratigraphy and paleontology. Packard. (Not given 1926-27). *Four hours, winter term.*

120. *Geologic History of North America*. The geologic development of the North American continent. Prerequisite, stratigraphy. Packard. (Not given 1926-27). *Three hours, one term.*

121. *Geologic History of the Pacific Coast*. The geologic history of the Pacific Coast of North America. Prerequisites, stratigraphy and paleontology. Packard. (Not given 1926-27). *Three hours, one term.*

122. *Geologic History of Pacific Countries*. A study of the broad problems of the Pacific region as a whole and of the countries bordering thereon, with special reference to the islands and the Far East. Prerequisites, general geology and courses 101 and 111. Smith. *Two hours, spring term.*

126. *The Geography of Europe*. Comprises both lectures and laboratory work, following syllabus prepared by the Division of Geology and Geography of the National Research Council. The physiography of Europe, with a survey of the principal natural resources of the continent. Intensive study of the map of Europe. Discussions of some of the general problems, as outlined in Bowman's "The New World, Studies in Political Geography." Smith. *Four hours, fall term.*

128. *The Geography of the Pacific*. An intensive study of the Pacific region, the physical geography and natural resources, with some attention given to the outstanding social, economic and political questions as influenced by the physical background of the more important countries bordering this ocean. Smith. *Two hours, spring term.*

129. *The Geography of North America*. A course of lectures, laboratory and discussions of the physiography and resources of the continent, and social reactions as influenced by these. The text used will be J. Russell Smith's "North America," accompanied by laboratory studies of Lobeck's Physiographic diagram of the United States. Smith. *Three or four hours, spring term.*

146a,b,c. *Earth Materials*. The description, occurrence, origin, uses and distribution of minerals, igneous, sedimentary metamorphic rocks and metallic ores. Laboratory work with hand specimens and microphysical and microchemical studies of fragments, slices and polished sections. Prerequisite, 106a,b,c. Hodge. *Four hours, each term.*

170. *Advanced Field Geology*. A general course in geologic mapping and surveying methods and in intensive study of a small area so chosen as to include a wide range of special problems. This work is conducted in a summer camp of four weeks. The course may be taken with full credit for a series of summers, since a different area is studied each season. Staff. *Seven hours.*

PRIMARILY FOR GRADUATES

201. *Seminar*. Open to advanced major students of this and related departments for the consideration of research material and a review of the current technical literature. Staff. *One hour, each term.*

202. *Advanced Geology*. Special work assigned to meet the requirements of advanced students. Staff.

203-204-205. *Applied Geology*. Advanced study in the application of geology to engineering and economic problems. *Three hours, each term.*

208. *Advanced Paleontology*. Special work assigned to meet the requirements of the advanced student. Packard.

210. *Regional Geology*. Advanced studies in selected regions outside the United States. Readings and conferences. Smith.

246. *Advanced Geography*. Research in the physical and economic geography of Oregon and closely related Northwest regions. The investigations will consist largely in intensive studies of the various physiographic regions of Oregon. Prerequisites, general geology and physiography. Special work assigned to meet the needs of individual students. Smith.

250. *Graduate Research and Thesis*. *Hours to be arranged.*

GERMANIC LANGUAGES AND LITERATURE

Professors SCHMIDT and THORSTENBERG

GERMAN

The work leading to the degree of M.A. with a major in German covers the study of advanced courses in Germanic philology and literature, and composition. As minor subjects the department suggests English, Latin, Greek, the Romance and Scandinavian languages, history, music, fine arts, education, journalism, psychology and philosophy.

The library of the University contains a good collection of German books, including the works of the more important authors of each period of German literature; critical and scientific works (philology, phonetics, etc.); and the most important German periodicals.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

105-106-107. *Modern German Drama*. Some of the following dramas will be read: Fulda's *Der Talisman* or *Das Verlorene Paradies*; Wildenbruch's *Harold*, Hauptmann's *Die Versunkene Glocke*; Ernst's *Flachsmann als Erzieher*; Sudermann's *Johannes* or *Heimat*, etc.

Three hours, each term.

114. *German Poetry*. Poems of Goethe, Schiller, Uhland, etc., will be read. *Three hours, spring term.*

115. *Goethe's Faust*. Part I with commentary. Schmidt.

Three hours, winter term.

116. *Goethe's Faust*. Part II with commentary.

Three hours, spring term.

117. *Heine*. Prose works. *Three hours, fall or winter terms.*

118. *Historical and Philosophical German*. The rapid translation of historical, philosophical and economic German. *Two hours, spring term.*

130. *Teaching of Modern Languages*. Discussion of methods of teaching German, French and Spanish; examination of texts. Open to juniors

and seniors. Required of students who wish to be recommended as teachers of foreign languages. Schmidt. *Three hours, spring or fall terms.*

131a,b,c. *Advanced German Composition*. Required of all students who wish to teach German. *Two hours, each term.*

141-142-143. *The Nineteenth Century Novel*. Representative works of Freytag, Keller, Meyer, Sudermann, Frenssen, Storm, Riehl, Heyse, Scheffel, Ludwig, Dahn, Ganghofer, Rosegger, Auerbach, Ebner-Eschenbach, Spielhagen, etc., will be included in the course.

PRIMARILY FOR GRADUATES

201a,b. *Middle High German*. Michels, *Mittelhochdeutsche Grammatik*, 1910; Henrici, *Proben der Dichtungen des Mittelalters*, Berlin, 1898; selections from *Nibelungenlied*; Walther von der Vogelweide, *Parzival*; Lexer, *Mittelhochdeutsche Taschen-Wörterbuch*. *Three hours, two terms.*

202a,b. *Old High German*. Braune's *Althochdeutsche Grammatik*, and the same author's *Althochdeutsches Lesebuch* (4th edition); Muellenhoff and Scherer's *Denkmaeler Deutscher Poesie and Prosa* (3rd edition); Behaghel's *Historical Grammar of the German Language*.

203a,b. *Gothic and the Elements of Comparative German Grammar*. Braune, *Gotische Grammatik*, latest edition (1920). Heyne's *Ulphilas*, 9. Auflage, von F. Wrede, Paderborn, 1896; Streitberg's *Urgermanische Grammatik*. This course is required for advanced degrees in English philosophy.

204a,b,c. *History of German Literature of the Nineteenth Century*. With special study of the classic periods of the twelfth and eighteenth centuries. Scherer's *Geschichte der deutschen Literatur*, Franke's *History of German Literature* are used as textbooks. Papers on assigned topics will be required.

205. *Physiological Phonetics*. The sounds of English, German and French. Grandgent, German, and English sounds (Boston, Ginn & Co., 1892); Ripman's adaptation of Viator's *Kleine Phonetik* (London, J. M. Dent & Co., 1913); Kleine's *Lesebuch in Lautschrift von Viator*; Sweet, *A Primer of Phonetics* (Oxford, Clarendon Press, 1890); lectures.

Two hours, one term.

206a,b,c.; 216a,b,c. *Seminar in German Literature and Philology*. Aiming to impart the principles and methods of investigation.

Three hours, each term.

220. *Graduate Thesis*.

Six to nine hours.

SCANDINAVIAN LANGUAGE AND LITERATURE

FOR GRADUATES AND ADVANCED UNDERGRADUATES

123-124-125. *Scandinavian Literature* (Conducted in English). Works of Bjoernson, Ibsen, Lie, Kielland, Tegner, Rydberg, Lagerloef, Strindberg, etc., in standard translations. Supplementary lectures on the history of the literature. Thorstenberg. *Three hours, each term.*

126a,b,c.; 136a,b,c. *Advanced Norwegian or Swedish*. Study of works, in the original, of representative Scandinavian authors, supplemented by advanced prose composition and conversation. Thorstenberg.

160-161-162. *Scandinavian Life and Culture*. Study of educational critical, biographical and other works and treatises on the literary and cultural life of the Scandinavian countries. Language credit may be earned by those who are qualified to gather facts from sources in the Scandinavian. Graduate credit may be earned by additional work on assigned topics. Thorstenberg. *Two hours, each term.*

PRIMARYLY FOR GRADUATES

222. *Old Icelandic*. Noreen's *Altislaendische und Altnorwegische Grammatik* is used. Thorstenberg.

PORTLAND EXTENSION CENTER

Dr. SCHMIDT

PRIMARYLY FOR GRADUATES

201a,b,c. *Middle High German*. *Nibelungen-Lied, Parzival, Walther von der Vogelweide, etc.* *Two or three hours, each term.*

216a,b,c. *Seminar in German Literature*. *Two or three hours, each term.*

GREEK

Dean STRAUB, Mr. JOHNSTONE

FOR GRADUATES AND ADVANCED UNDERGRADUATES

150a,b,c. *Plato and Aristotle*. Plato, Republic; Aristotle, Ethics. The purpose of this course is to arrive at a satisfactory philosophical interpretation of the Greek texts. *Three hours, each term.*

200a,b,c. *Critical Reading of Greek Literature*. Graduate students will read from a list of authors selected by the department. Textual criticism, as well as the historical context; presupposes adequate knowledge of the ancient world as a whole.

201a,b,c. *Plato*. Plato, The Dialogues. An extended reading of the dialogues with a study of their philosophical import.

202a,b,c. *The Greek Drama*. Reading of numerous plays in the original incidental to a study of the rise, development and genius of the Greek drama.

203a,b,c. *The Greek Historians*. Students will be expected to know the original throughout of Xenophon, Thucydides and Herodotus. A study of Greek history through the documents provided by the Greeks themselves.

HISTORY

Professors R. C. CLARK, WALTER BARNES, SHELDON;
Assistant Professors DONALD BARNES, FISH; Lecturer, Mr. DYMENT

Candidate for a master's degree with history as a major subject must select three of the following fields for special study and examination. 1, Ancient History; 2, Medieval History; 3, Modern Europe, 1500-1815; 4, Europe since 1815; 5, English History; 6, American History; 7, Pacific Countries. A written examination, in addition to the oral, may be required if it seems desirable to the department as a further means of determining the qualifications of the candidate.

Candidates for the degree of doctor of philosophy are required to choose five of the fields listed below and historiography in addition. A special field in which a thesis is to be written must be chosen. The remaining four courses, those selected in addition to the special field

and historiography, must be distributed in such manner that not more than two may fall in any one of the several groups. Within the fields selected the candidate will be permitted to direct his study toward the social and intellectual, the constitutional and political, the diplomatic or the economic aspects as his interests may decide. Written examinations in addition to the final oral examination may be prescribed.

Group I. 1. Ancient History. 2. Medieval History. 3. Renaissance and Reformation. 4. History of England to 1660.

Group II. 5. France from Louis XI to the French Revolution. 6. Revolutionary Europe, 1789-1815. 7. France since 1789. 8. Germany since 1648. 9. England since 1660.

Group III. 10. American History to 1789. 11. History of the United States, 1789 to 1865. 12. The United States since 1865.

Group IV. 13. Europe since 1871. 14. The Pacific Countries. 15. Latin-American History.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

102-103. *The History of History*. The development of the art and science of history writing from the crudest early records to the highly scientific work of today. Correlation between the changing conceptions of the function of written history and changes in the general intellectual outlook. The works of the great historians of the world. Prerequisite, two years of history. Fish. (Not given, 1926-27).

Three hours, winter and spring terms.

104-105-106. *Intellectual History*. An outline study of the development of the Western European mind. The historical origins and growth of contemporary mental attitudes. The course serves also as a study of the history of the freedom of thought. Prerequisite, junior standing or instructor's permission. Fish.

Three hours, each term.

107a,b,c. *History of Civilization*. Lectures with discussion group especially devoted to literature of the subject. Open only to students who have had two consecutive years work in history and are acquainted with the outlines of history. Sheldon.

Four hours, each term.

121-122-123. *The Middle Ages*. A study of the development of Europe and its civilization from the decline of the Roman Empire to the age of Dante. Fish.

Two hours, each term.

131-132-133. *The Age of Monarchy*. Fall term, the Renaissance; winter and spring terms, the Reformation; the Religious Wars, and Louis XIV. This course traces the development from the medieval period of the universal church to the modern period of the independent states, and their rivalry in war, colonial expansion, commerce, culture, and religion, to the eve of the French Revolution. Walter Barnes. (Not given 1926-27).

Two hours, each term.

141-142-143. *The French Revolution*. An advanced study of the ten years of the French Revolution beginning with the calling of the Estates General. Prerequisite, a general course covering the French Revolution.

Desirable, a reading knowledge of French. Should be entered only the first term, and if possible continued for the year. Walter Barnes.

Two or three hours, each term.

144-145. *The Revival of Italy.* A study of the awakening of Italy in the 18th century, of the revolutionary and Napoleonic periods, and of the unity movement to 1848, showing both the political and the cultural aspects. Prerequisite, a general course covering the French Revolution. Walter Barnes.

Three hours, two terms.

147. *Foundations of Modern Democracy.* A study of the conditions and theories upon which general male suffrage was introduced in England, Germany, and France in the sixties and seventies. Prerequisite, a general course covering the period. Walter Barnes. (Not given, 1926-27).

Three hours, one term.

155. *Recent Italy.* A study of political, industrial, and social conditions in Italy before and after the War of 1914, and under the dictatorship of Mussolini. Prerequisite, a knowledge of Europe since 1848. Walter Barnes.

Three hours, one term.

156. *Recent Germany.* A comparative study of the Empire and the Republic; with the same method and the same prerequisite as 155. Walter Barnes. (Not given 1926-27).

Three hours, one term.

158. *Recent Russia.* A study of the tsarist regime in Russia, an account of the work of the reformers and of the successive revolutions, then a study of the bolshevik regime. Prerequisite, a general course covering the French revolution or the War of 1914. Walter Barnes. (Not given 1926-27).

Three hours, one term.

159. *Modern Empires.* A survey of the expansion of Europe since Columbus, then a study of the colonization movement of the last half century, especially of the relations between the great powers and the backward peoples. Prerequisite, a general course leading into the subject. Good introductory reading, chapters on colonial policy in Fueter: World History 1815-1920. Walter Barnes.

Three hours, spring term.

162. *England in the Eighteenth Century.* An intensive study of eighteenth century England with emphasis upon social and economic changes, and the development of the party system. Donald Barnes.

Three hours, fall term.

163. *The Reconstruction of Great Britain, 1815-1852.* A study of the changes and reforms in the political system, the social order, and the economic structure during these years. Donald Barnes. (Not given 1926-27).

Three hours, fall term.

165-166-167. *The Development of the British Empire.* First term, to 1782; second term, 1782-1874; third term, 1874 to the present. Donald Barnes. (Not given 1926-27).

Three hours, each term.

174-175. *American Foreign Relations.* A history of the relations of the United States with other powers and the development of American foreign policies. R. C. Clark. (Not given 1926-27).

Three hours, winter and spring terms.

176a,b,c. *History of Civilization in the United States.* This course covers the following topics: the development of social classes, newspapers,

magazines, science, philosophy, literature, religion, cities, ethical standards, education, and economic expansion in their interrelations. Lectures, quizzes, and assigned readings. Sheldon.

Two hours, each term.

177-178. *History of the West.* The westward movement and its effect upon the life, ideas, problems and institutions of the American people. Open to history majors and to all who have completed a general course in American history. Dan E. Clark.

Three hours, fall and winter terms.

179. *History of Canada.* From Jacques Cartier to the present, with an introduction covering the geography of Canada. Dymont.

Three hours, spring term.

181. *South America.* The story of the conquest and organization of Spain's American empire, and of the wars of independence, followed by a study of the political and social life of the four or five most important republics. Open to all juniors and to sophomores who have had sufficient history. Walter Barnes. (Not given, 1926-27).

Three hours, spring term.

191-192. *Asia and the Pacific.* A brief history of China and Japan, a study of their present conditions and of their relations with Europe and the United States. First term, China to 1914; second term, Japan and the Pacific question. Open to all juniors and to sophomores who have had sufficient history. Good introductory reading, Bertrand Russell: The Problem of China. Walter Barnes.

Three hours, fall and winter terms.

PRIMARILY FOR GRADUATES

201a,b,c. *Problems in History of 19th Century Education and Civilization.* A special course for students in history and education. Each student will prepare paper based on source material. The library is equipped with a collection of source material covering the English, German, and American portions of the subject. Sheldon.

Two hours, each term.

204a,b,c. *Special Problems in Intellectual History.* Prerequisite, Intellectual History; or may be taken in conjunction with that course on permission of instructor. Fish.

Two or three hours, each term.

210. *Graduate Thesis.*

Nine hours.

241a,b. *Forerunners of the French Revolution.* A source study of the influence of the leading eighteenth century writers upon the ideas of the French revolutionists. Prerequisite, two years of French, and a knowledge of modern European history. Walter Barnes. (Not given, 1926-27).

Two hours, fall and winter terms.

262a,b. *George III and His Prime Ministers.* A study from sources and secondary works of the influence of George III on the policies of his various prime ministers. Prerequisite, History 162.

Two or three hours, winter and spring terms.

263a,b. *Economic Problems in 19th Century England.* A study from sources and secondary works of certain phases of English economic history from 1815 to 1852. Prerequisite, History 163. (Not given 1926-27).

Two or three hours, winter and spring terms.

276a,b,c. *Seminar in Oregon History.* A detailed study largely from the sources, of the building of civilization in the western portion of the

United States, particularly in Oregon and the Northwest. For history seniors as an equivalent of the thesis requirement and for graduate students. R. C. Clark.

Two hours, each term.

PORTLAND EXTENSION CENTER

DR. R. C. CLARK, DR. FISH

FOR GRADUATES AND ADVANCED UNDERGRADUATES

102. *Great Historians*. A study of the works of the world's great historians from the times of classical Greece to the nineteenth century. The aims and purposes of the writers are noted and related to the general changes in intellectual outlook. The rise of the modern scientific historiography is traced, and recent tendencies in the writing of history receive attention. Fish.

One hour, each term.

179. *The Frontier in American History*. Exploration of the west, the fur trade, the mining booms, the westward movement of American settlers, routes and means of travel and transportation to the west, public land policy, Indian policy, and other features of the part played by the west in American history. R. C. Clark.

One hour, each term.

JOURNALISM

Dean ALLEN

Certain sufficiently advanced courses in the upper division, even though of fairly technical nature, may be presented for students with a minor in journalism, in addition to the course given below, for graduate students doing work toward a non-professional degree.

PRIMARILY FOR GRADUATES

200a,b,c. *Seminar*. A research course for students having the necessary preparation to enter a specialized field of original investigation.

Three to five hours, each term.

LAW

Professor WARNER

The course given below is open to graduate students doing work toward a non-professional degree.

PRIMARILY FOR GRADUATES

290. *Research in Criminology*. Open only to advanced students who have had both criminal law and at least two years of psychology. Consideration of the theories of punishment and of criminal responsibility. Thesis on the operation of some agency dealing with crime. Warner.

Three hours, winter term.

LATIN

Professor DUNN, Mr. JOHNSTONE

Extant Latin literature is so varied and so voluminous that any college curriculum is necessarily restricted in its choice of courses offered. The personal predilections of the professional staff or the particular needs of the province served or an unbroken tradition all naturally play a considerable part in the complexion of the Latin program.

Nevertheless, the subjoined list will be found fairly representative of

the principal phases involved. An attempt has been made, not merely to suggest the choicest, but to introduce also the less exploited authors, in order that the graduate student may have cognizance of extent as well as intent. Pure appreciation of the literature is coupled with the invasion of allied studies that make the pursuit of Latin so profitable—such as archaeology, mythology, history, philosophy, the fine arts.

The spirit of research and investigation and comparison is therein stimulated and made the heart of the study, whether the course implies the use of a classical text or a series of lectures. The student cannot but be impressed by the conviction that there are yet unexplored volumes in the classic library, Latin authors that are seldom if ever approached, and themes for graduate theses which have never yet been broached. The "Meta Incognita" of Martin Frobisher is still a luminous legend for the Latin scholar.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101a,b. *Latin Literature, Tragedy*. Fragments of Roman scaenaic literature; Seneca, selected tragedies. Dunn.

Three hours, fall and winter terms.

101c. *Latin Prose Composition, III*. An advanced course in composition and sight reading. Dunn.

Three hours, spring term.

102a,b. *Latin Literature, Satire*. Horace, Satires and Epistles; Juvenal, selected Satires; lectures on the history of Roman satire. Dunn.

Three hours, fall and winter terms.

102c. *Tacitus, The Annals*. Selections from Books I to VI will be read, with lectures on the period. Dunn.

Three hours, spring term.

130a,b,c. *Latin Literature, The Civil War*. Caesar, Bellum Civile; Cicero, selected Letters. Dunn.

Two hours, each term.

151. *Topography of Rome*. Lectures and required readings on Roman archaeology. A service course open to majors and qualified non-majors. Dunn.

Three hours, fall term.

152. *Mythology*. Lectures and required readings upon our inheritance from the myths of Greece and Rome. A service course open to majors and qualified non-majors. Dunn.

Three hours, winter term.

153. *Latin Pedagogy*. A laboratory course for prospective teachers of Latin. A service course open to majors and qualified non-majors. Dunn.

Three hours, spring term.

155a,b,c. *Latin Literature, the Historians*. Livy, the Macedonian Wars; Velleius Paterculus; *Historiae Augustae*, selections. Dunn.

Three hours, each term.

191-192-193. *Seminar*.

Two hours, each term.

PRIMARILY FOR GRADUATES

201a,b,c. *History of Latin Literature*. Part I (Poetry).

202a,b,c. *History of Latin Literature*. Part II (Prose).

These courses, offered in alternate years, give a two-years' intensive study of Latin literature, comprising extensive reading in the works of

the lesser known authors as well as those familiar through the undergraduate course, together with lectures on their lives and style.

203a,b,c. *Roman Philosophy*. Lectures covering the chief systems of doctrine prevailing among the Romans will alternate with readings from Cicero's *De Officiis* and the best portions of Lucretius.

204a,b,c. *The Reign of Trajan*. Trajan's reign will be studied from Pliny's Letters, from inscriptions, from monumental remains, and other sources.

205a,b,c. *The Reign of Nero*. Suetonius' Life of Nero and Tacitus' Annals are made the basis of a thorough study of this particular epoch.

251a,b,c. *Historical Latin Grammar*. A study of the development of Latin sounds, inflections, and syntax.

MATHEMATICS

Professors DECOU, McALISTER, MILNE

Some of the most suitable subjects for minors for those majoring in mathematics are: physics, mechanics, chemistry, biology, geology, psychology, education and economics.

Graduate students in mathematics will find in the University library a carefully selected collection of the best modern mathematical works in English, French, German and other foreign languages; also complete files of all the American mathematical journals, together with many of the English, French, German and Italian journals. Many books of marked historical value published during the past three centuries, and all the standard histories are available for the use of those working in the history of mathematics.

An extended text book library of recent books in arithmetic, algebra, geometry and trigonometry, together with many dating back to the eighteenth century, is available for the study of the pedagogy of mathematics.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

103a,b. *Differential Equations*. A practical course in the solution of ordinary and partial differential equations. Prerequisite, course 102a,b,c, differential and integral calculus. DeCou.

Three hours, winter and spring terms.

104. *Higher Algebra*. A more advanced and rigorous treatment of the topics of the preceding course in algebra, together with the addition of many new topics. DeCou.

Three hours, one term.

105. *Theory of Equations and Determinants*. An important course giving the essential principles required in various advanced studies. DeCou.

Three hours, one term.

106. *Solid Analytical Geometry*. An advanced course dealing with surfaces of the second degree and their properties, together with some discussion of surfaces in general. DeCou.

Three hours, one term.

107. *Advanced Calculus*. An important course rounding out undergraduate study of mathematics. It includes definite integrals, improper

integrals, power series, Fourier's series, elliptic functions and other special functions. Applications to physics, mechanics and astronomy receive emphasis. Prerequisite, Calculus 102a,b,c. DeCou.

Three hours, one term.

108. *Analytical Trigonometry*. Prerequisite, plane trigonometry. De Cou.

Three hours, one term.

109. *Foundations of Algebra*. A systematic study of the logical development of the number system of algebra. Prerequisite, a course in calculus.

Three hours, one term.

110. *Projective Geometry*. Prerequisite, analytical geometry and calculus. DeCou.

Three hours, one term.

111. *Theory of Probability*. Course for advanced students presupposing a knowledge of calculus. Milne.

Three hours, fall term.

112. *Theory of Statistics*. Course for advanced students, presupposing a knowledge of calculus. Milne.

Three hours, winter term.

113. *Advanced Analytical Geometry*. A more advanced treatment of the subject and intended for students of fair mathematical maturity. DeCou.

Three hours, fall term.

115. *Introduction to Lie's Theory of Differential Equations*. A short course dealing with one parameter groups and their application to the theory of differential equations. Prerequisite, course 103a,b. Milne.

Three hours, one term.

139. *Applied Mathematics*. Intended for students of chemistry and physics. A rapid review of differential and integral calculus, with application to problems of physics and chemistry: the development of infinite series; elements of differential equations; Fourier's theorem; theory of probability and adjustment of errors; calculus of variations. A course in calculus should precede this course. Hours to be determined. McAlister.

Three hours, two terms.

PRIMARILY FOR GRADUATES

201a,b,c. *Theory of Functions*. An introduction to the theory of functions of real and complex variables, with applications. Prerequisites, courses 103a,b, 113, or their equivalent. Milne.

Three hours, each term.

202. *Infinite Series*. This course deals with tests for convergence, uniform convergence, operations on infinite series, and the expansion of functions.

Three hours, one term.

203a,b,c. *Differential Equations of Mathematical Physics*. This course includes Fourier's series, Legendre's polynomials, spherical harmonics, and Bessel's functions. Methods are developed for the solution of the most important linear partial differential equations of mathematical physics, with application to elastic vibrations and the flow of heat. Milne.

Three hours, each term.

204a,b,c. *Mathematical Seminar*. Conferences and reports on assigned subjects. DeCou, Milne.

MECHANICS AND ASTRONOMY

Professor McALISTER

Candidates for the master's degree who wish to take their major in this department should make a selection from: (a) the courses numbered above 200, listed herewith; (b) the courses in strength of materials and hydraulics, listed under the school of architecture; and (c) approved courses in mathematics and physics. For all the courses under (a), the prerequisite is the usual mathematical preparation up to and including differential equations, and analytical mechanics. Note the special preparation under course 202. For courses under (b), calculus and analytical mechanics are required.

For a minor in this department, any of the above courses are suitable, together with analytical mechanics.

MECHANICS

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101a,b,c. *Analytical Mechanics*. First term, statics; second term, particle dynamics; third term, dynamics of a rigid body. Calculus is a prerequisite. *Three hours, each term.*

PRIMARILY FOR GRADUATES

201. *Theory of Elasticity*. The mechanics of elastic solids; applications to the strength, resistance and deformation of the ordinary materials of construction. *Four hours, fall term.*

202a,b. *Hydrodynamics*. The mechanics of fluids, with special reference to liquids, but including also some applications to air and other gases. The work of the second term requires a knowledge of spherical and cylindrical harmonics. *Four hours, winter and spring terms.*

205-206-207. *Advanced Analytical Mechanics*. Topics selected according to the needs of students, in relation to previous work and work contemplated in the future. Elective by terms. *Three hours, each term.*

209. *Special Problems*. Advanced work in the applications of mechanics, and problems relating thereto.

ASTRONOMY

PRIMARILY FOR GRADUATES

205. *Celestial Mechanics*. The fundamentals of the subject with such applications as time may permit; including some consideration of the theory of perturbed orbits.

MUSIC

Dean LANDBURY

FOR GRADUATES AND ADVANCED UNDERGRADUATES

104a,b,c. *Free Composition*. A study of the characteristic idioms of the free style; the variation, simple and developed song form; developed ternary form, the art song, etc. Not more than three will be permitted in the class. Landsbury. *Two hours, each term.*

PRIMARILY FOR GRADUATES

201. *Seminar*. A study of present day musical conditions with particular reference to the adjustment of music to the curriculum. Each student will be given a definite research problem, and must defend his

solution before the class. For the coming year it is planned to consider the nature of music; its relation to literature and science; progress toward the educational ideal in music, etc. Although intended primarily for graduates, advanced students in the upper division, showing proper preparation, will be admitted.

202. *Multiple Counterpoint, Canon and Fugue*. A course dealing with the principles of multiple counterpoint in general, and the double, triple, and quadruple counterpoints of J. S. Bach in particular; types of finite and infinite canon; simple, double and triple fugue; application of the strict style of orchestral and choral composition.

Two hours, each term.

203. *Advanced Free Composition*. Open to students showing marked creative ability, who have had adequate preparation. Classes will be limited to three members and each member must produce specimens in both the small and large forms which will be deemed worthy of publication or public performance.

204. *Practical Artistry*. To be accepted, the student must possess a technique adequate to the needs of the classical, romantic and modern schools; the required undergraduate work for a B.M. degree; must be enrolled in courses 201 and 202, and must show promise of being able to demonstrate by public performance the beauty and cultural value of the tonal masterpieces.

PATHOLOGY

Professors BENSON, MENNE

The following courses given in the School of Medicine at Portland are accepted toward the master's degree.

The pathological museum is comprehensive. Gross and microscopic tissues are received from the surgical clinics of the Portland hospitals and from the autopsies of the coroner's office.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101. *Pathological Histology, General Pathology*. A course in general pathology, comprising the study of prepared slides supplemented by experiments, fresh and museum specimens. Lectures, recitations and laboratory; 176 hours; eight credits. Benson.

102. *Systematic Pathology*. Embraces a study of systematic pathology and tumors. Lectures, recitations and laboratory; 132 hours, six credits. Menne.

103. *Autopsy Clinic*. Studies of autopsies, including a presentation of the clinical history. 22 hours; one credit. Menne.

105. *Gynecologic Pathology*. Menne.

PRIMARILY FOR GRADUATES

201. *Lectures on the History of Physiology*. Burget.

Winter term, one hour per week.

202. *Advanced Systematic Pathology*. Study of the detached pathology of one system. Hours and credits to be arranged. Benson or Menne.

203. *Research*. Open to specially qualified students. Hours to be arranged. Benson and Menne.

PHARMACOLOGY

Professor MYERS

The following courses given in the School of Medicine at Portland are accepted toward the master's degree:

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101. *Systematic Pharmacology and Prescription Writing*. Second year, winter term; lectures and quizzes, 5 hours per week; laboratory, 3 hours per week; total, 88 hours; six credits.

102. *Systematic Pharmacology and Pharmacodynamics*. Second year, winter term; lectures and quizzes, 5 hours per week; laboratory, 3 hours per week; total, 88 hours; six credits.

PRIMARILY FOR GRADUATES

201. *Toxicology*. Second year, spring term; lectures and quizzes, 1 hour per week; laboratory, 3 hours per week; total, 44 hours; two credits.

203. *Research*. Students who are properly qualified and who can devote an adequate amount of time to the work are encouraged to pursue original investigation of pharmacological problems. Hours and credits to be arranged.

PHILOSOPHY

Dean REBEC, Dr. MUELLER

FOR GRADUATES AND ADVANCED UNDERGRADUATES

105. *Continental Philosophy of the Seventeenth and Eighteenth Centuries*. Descartes, Discourse on Method, Meditations, Selections from Principles; Spinoza, Ethics; Leibnitz, New Essays and Monadology.

Three or four hours, fall term.

106. *British Philosophy*. From Bacon, Locke, Berkeley, Hume, to Mill and Spenser. Reading representative masterpieces.

Three or four hours, fall term.

107. *Kant's Critique of Pure Reason*. Reading of Critique of Pure Reason. Mueller.

Three or four hours, winter term.

108a,b,c. *Nineteenth Century Thought*. From the death of Hegel to the present. Pessimism, materialism, positivism, agnosticism, the later idealism, pragmatism, the new realism. *Three or four hours, each term.*

109. *American Philosophy*. From Jonathan Edwards to Royce, James, Dewey and Santayana.

Three or four hours, winter term.

111. *Advanced Course in Ethics*. *Three hours, spring term.*

112. *Plato's Republic*. Mueller. *Two or three hours, winter term.*

113. *Aristotle's Ethics*. Mueller. *Two or three hours, spring term.*

114. *Inductive Logic (Logic of Scientific Method)*. *Three or four hours, winter term.*

115. *Advanced Theoretical Logic*. *Three or four hours, spring term.*

119. *Philosophy of Religion*. *Three hours, fall term.*

120a,b,c. *Aesthetics*. The first term of the course will be devoted to systematic problems of the philosophy of the beautiful; the second and third terms will be historical, an attempt to trace the evolution of the aesthetic consciousness as revealed in the succession of art epochs and art forms. *Three or four hours, each term.*

125a,b,c. *Philosophy of History*. The conflict of ideals in history. A critical attempt to envisage history as an evolution of such conflict. The study will converge upon an attempt to seize and interpret the essential movement of contemporary civilization. Rebec.

Three or four hours, each term.

135a,b,c. *Contemporary Civilization*. Lectures and readings which will lead the student to interpret and evaluate the course of modern events and modern conditions, and give an inclusive human outlook on the world. Given alternately with 125. Rebec.

Three or four hours, each term.

151-152-153. *Undergraduate Seminar*. Hours to be arranged.

PRIMARILY FOR GRADUATES

201a,b,c. *Graduate Seminar in Aesthetics*.

202a,b,c. *General Philosophical Seminar*.

205. *Thesis in Philosophy*. *Nine hours.*

PHYSICAL EDUCATION

Dean BOVARD, Professors ALDEN, OSBORNE, THOMSON, SCOTT

Certain sufficiently advanced courses in upper division physical education, even though of fairly technical nature, may be presented as major courses by graduate students doing work toward a non-professional degree, on consultation with the instructor. A suitable minor should be chosen from the courses in education, psychology or biology.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

102a,b,c. *Playground and Community Recreation*. Nature and function of play, age periods and adaptation of activities, social environments, playground development, construction, management, supervision. Practice in class instruction in games, story-plays, handwork and other physical activities. Recreation material, athletics, field meets. Practical application in teaching age groups on university playground. Alden.

One hour, each term.

111. *Principles of Physical Education*. For women. The aims and functions of physical education; its place in a scheme of general education. The problem of interest and adaptation of means of physical education and problems of supervision. Alden.

Three hours, winter term.

112a,b,c. *Principles of Physical Education*. For men. The aims and functions of physical education; its place in a scheme of general education. The problem of interest and adaptation of the means of physical education to this end. Organization and administration of physical education and problems of supervision. Scott. *Two hours, each term.*

125a,b,c. *Advanced Theory and Practice of Individual Gymnastics.* Lectures, assigned reading and clinical practice in individual gymnastics, massage, heat and light therapy, for referred cases. Prerequisite, course 121a,b,c. Thomson and Osborne. *Three hours, each term.*

140a,b. *Physiology of Exercise.* Fundamental principles underlying the physiology of the muscle and nerve with special application to physical activities. Study of the inter-relationship of digestion, respiration, excretion, internal secreting glands, etc., to muscular efficiency; study of effects of training, over-exertion, etc. Bovard.

Three hours, fall and winter terms.

PRIMARILY FOR GRADUATES

201. *Corrective Gymnastics and Physiotherapy.* An advanced course in the theory and practice of corrective work. Lectures and clinic. The student will have opportunity for making diagnosis and following cases through treatments. Osborne.

202. *Research in Corrective Gymnastics and Physiotherapy.* Specially qualified students may arrange for work of this kind on consent of instructor. Osborne and Thomson.

203. *Physiological Problems.* Lectures and laboratory work. An advanced course in physiology covering the physiology of muscle and nerve activities with application to exercise, industrial fatigue problems, massage and corrective gymnastics. Bovard. *Three hours, one term.*

204. *Research in Physiology.* Specially qualified students may arrange to take problems concerned with muscle nerve physiology. Bovard.

205. *Seminar.* Open only to qualified students on consent of dean of school. Bovard. *Credit to be arranged.*

206. *Thesis.* All candidates for degrees must present a thesis representing investigation in some special field of physical education. The subject and general plan must have the approval of the dean of the school. *Credit to be arranged.*

PHYSIOLOGY

Professor BURGET; Associate Professor MANVILLE

The following courses given in the school of medicine at Portland are accepted toward the master's degree:

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101. *Physiology of Blood, Circulation and Respiration.* First year, spring term; prerequisite, Biochemistry 101; lectures and recitations, 3 hours per week; laboratory, 6 hours per week; total, 99 hours; five credits. Burget, Manville.

102. *Physiology of Digestion, Metabolism, Absorption, Secretion, Excretion, Muscle and Heat.* Second year, fall term; prerequisite, Physiology 101; lectures and recitations, 3 hours per week; laboratory, 6 hours per week; total, 99 hours; five credits. Burget, Manville.

103. *Physiology of the Nervous System.* Second year, winter term; prerequisite, Anatomy 104; lectures and recitations, 3 hours per week;

laboratory, 6 hours per week; total, 99 hours; five credits. Burget, Manville.

PRIMARILY FOR GRADUATES

201. *Lectures on the History of Physiology.* Winter term; 1 hour per week. Burget.

202. *Physiology of the Glands of Internal Secretion.* Spring term; prerequisite, Physiology 101-103; lectures, 1 hour per week; laboratory, 3 hours per week; total, 44 hours; two credits. Burget.

203. *Studies in Metabolism.* Fall term; prerequisite, Physiology 101-103; lectures, 1 hour per week; laboratory, 3 hours per week; total, 44 hours; two credits.

204. *Diet and Nutrition.* Spring term. A course in dietary requirements in health and in disease with special emphasis given to the indications and contra-indications for particular food factors; the hygiene of the intestinal tract; the peculiar value of sunlight and vitamins. Prerequisite, Physiology 101-102; lectures, 2 hours per week; two credits. Manville.

215. *Research.* Each term; hours and credits to be arranged. Burget and Manville.

PHYSICS

Professors BOYNTON, CASWELL

Graduate students taking physics as their major subject will ordinarily select their minor work from the departments of chemistry, mathematics, mechanics and astronomy, and candidates for the doctorate must select their minors from this list. Occasionally a course of suitable character given by one of these departments may be counted as major work in physics.

All the courses here listed as carrying graduate credit call for a full year of college physics and the calculus as prerequisites. Those numbered under 200 may be taken in partial fulfillment of the requirements for the master's degree when supplemented by sufficient additional work; the program of major work for the doctorate after the first year must be made up exclusively of courses numbered above 200.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

111-112-113. *Advanced General Physics.* Supplementing, and giving more attention to certain topics than the elementary courses, and especially to some of the more fruitful modern theories, such as the kinetic theory, the electromagnetic theory of light, the electron theory, etc. Two lectures and one laboratory period. Caswell. *Three hours, each term.*

114-115-116. *Electrical Measurements.* The more important electrical quantities, with some reference to their partial applications. Direct current measurements; the magnetic properties of iron; the introduction to alternating current theory and measurements; transient electrical phenomena; elementary theory of radio. Two lectures and one laboratory period. Boynton. *Three hours, each term.*

120. *Advanced Laboratory.* Including senior thesis. Department staff. *Hours to be arranged.*

121-122-123. *Thermodynamics, Molecular Physics and Heat.* A study of heat and other forms of energy in connection with ideal gases, saturated vapors, dilute solutions and other ideal or actual substances, including a discussion of the kinetic theory of gases and liquids. Especially for students of physics, physical chemistry and those interested in industrial applications. Boynton. *Three hours, each term.*

124-125-126. *Electron Theory.* An introductory course dealing with cathod, canal and X-rays, ionization of gases, photo-electricity, radio-activity, atomic structure, thermoelectricity, metallic conduction and the fundamental phenomena of light from the standpoint of the electron theory. Caswell. *Three hours, each term.*

127. *Physical Optics.* A study of such typical phenomena as refraction, dispersion, interference, diffraction and polarization. Lectures and laboratory. *Three hours, one term.*

130. *Journal Club.* Assigned readings with reports and conferences. The departmental staff. *Hours to be arranged.*

PRIMARILY FOR GRADUATES

200. *Research Laboratory.* Qualified students will have all facilities of the laboratories placed at their disposal and will receive the advice and assistance of the department. Boynton, Caswell.

201. *Thermodynamical Potentials.* A continuation of 121-122-123, based upon the work of Gibbs and others upon the various thermodynamic potentials and their application to problems in physics and chemistry. Boynton. *Three hours, fall term.*

202. *Statistical Physics.* With especial reference to certain problems in the kinetic theory, such as the equipartition theorem, the nature of entropy, etc. Boynton. *Three hours, winter term.*

203. *The Conduction of Heat.* With especial reference to the Fourier theory. Caswell. *Three hours, spring term.*

204. *Modern Physical Theories.* A discussion of such topics as the electromagnetic theory of light, the electron theory, relativity and the quantum theory. Caswell.

211-212-213. *Advanced Electrical Theory.* With especial reference to transient phenomena, oscillations and waves, thermionic vacuum tubes, and the modern applications. Courses 114-115-116 are prerequisite. Boynton. *Three hours, each term.*

214-215-216. *Advanced Electrical Laboratory.* Designed to accompany the preceding course, dealing with the same points. Boynton. *One or two hours, each term.*

221. *Advanced Mathematical Physics.* Lectures and assigned readings. The topics treated will be varied from year to year to suit the needs of the students. Boynton, Caswell.

230. *Seminar.* Conferences and reports on assigned topics and current periodical literature. Boynton, Caswell.

POLITICAL SCIENCE

Professor BARNETT; Mr. MADDOX

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101. *Constitutional Law.* A study of the federal constitution as interpreted by the courts. Chiefly a discussion of leading cases. Barnett. *Four hours, one term.*

102. *Administrative Law.* The principles of the law of public officers. Chiefly a discussion of leading cases. Open to students credited with at least one course in law. Barnett. *Three hours, one term.*

103. *Law of Municipal Corporations.* The principles of the law of municipal corporations. Chiefly a discussion of leading cases. Open to students credited with at least one course in law. Barnett. *Three hours, one term.*

104. *International Law.* The principles of international law. Barnett. *Four hours, spring term.*

105. *City Government.* The organization and operation of city government in France, Prussia, England and the United States, with special attention to contemporary reforms in the United States. Barnett. *Four hours, winter term.*

106. *Political Theory.* A study of the main concepts of political theory, mostly from the works of modern writers. Barnett. *Four hours, spring term.*

108. *Political Parties and Election Problems.* The nature, organization, and operation of political parties, with special attention to conditions in the United States; election and recall of officers; proportional representation; representation of vocational interests; initiative and referendum; civil service reform. Barnett. *Four hours, fall term.*

110-111-112. *International Organization and Politics.* Nature and history of international institutions of government, including the Concert of Europe, the Hague system, the League of Nations and World Courts, together with a study of political and economic realities affecting international relation. Maddox. *Four hours, each term.*

113-114-115. *Diplomatic Relations.* A study of diplomatic practice, treated from the international and national points of view, including the control and conduct of foreign relations under the American political system. Maddox. *Four hours, each term.*

PRIMARILY FOR GRADUATES

201a,b,c. *Research in Political Science.*

204. *Graduate Thesis.* *Nine hours.*

PSYCHOLOGY

Professor CONKLIN; Associate Professors CROSLAND, KIMBALL YOUNG; Assistant Professor TAYLOR

This department is equipped and authorized to offer work for both of the advanced degrees, master of arts and doctor of philosophy. Its library

facilities and laboratory equipment and its scientific productivity meet the requirements of the University for doctoral standing.

Candidates for major work in this department for the degree of doctor of philosophy must have completed the work required by this department for the degree of master of arts, or its equivalent.

Candidates for minor work in this department for the degree of doctor of philosophy must have fulfilled the same requirements made of candidates for major work for the master's degree.

Preparation deficiencies may be worked off in the undergraduate courses of the department.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

106a,b. *Adolescence*. An elaborate study of genetic psychology, including the work of G. Stanley Hall and the fundamental principles of psychoanalytic psychology. Conklin. *Three hours, two terms.*

117a,b,c. *Advanced Laboratory*. A thorough training in laboratory technique as used in the problems of general psychology.

Two hours, each term.

118. *Abnormal Psychology*. Traits and theories of hysterical phenomena, insanity and the borderland phenomena. Conklin.

Three hours, one term.

133. *Character and Personality*. The conditioning of the personality by the social stimuli, the rise of social attitudes, habits and reaction patterns, the growth of character, the integration of personality. Use of rating schemes, tests, etc., for the study of these aspects. K. Young.

Three hours, one term.

134-135. *Advanced Social Psychology*. First term, crowd behavior: the problem of the crowd and the social leader with illustrative materials from historical sources and current crowd phenomena. Second term, the individual and institutions; the conventionalization of society, the rise of cults and rituals, the place of institutions in the growth of personality and the effect of individuals and groups on institutions. K. Young.

Three hours, each term.

136. *Criminal Psychology*. The bio-psychological foundations for the study of criminal types. A critical survey of psychological methods of diagnosis and treatment of crime. (Not offered, 1926-27). K. Young.

Three hours, one term.

151-152-153. *Advanced Experimental*. Designed to give advanced students a thorough knowledge of general psychology as presented in the periodical literature, especially that which has not yet been summarized in text books. The point of view is consistently experimental, all theoretical and systematic considerations are but incidental to the presentation of experimental data and technique. Crosland.

Three hours, each term.

161. *Test Methods in Psychology*. Brief survey of the most important statistical resources for handling psychological problems. Measures of central tendency, variability and relationship as applied in test procedure and practice. Taylor.

Three hours, one term.

162. *Mental Tests*. Survey of theory and practice of intelligence testing. Practice with the more important types of test, and in the interpretation especially of group tests. Taylor. *Three hours, one term.*

163. *Aptitude Tests*. Study of the possibilities in the differentiation of special individual potentialities. Principles of such test construction and a study of the various tests of this type. Taylor.

Three hours, one term.

164. *Animal Learning*. A consideration of experimental evidence on learning problems drawn from work on various animals and an attempt to orient students toward the study of human learning. Taylor.

Two hours, one term.

165. *The Learning Process*. Some class experiments with different kinds of learning problems preceded by a survey of the literature in this field. Taylor.

Two hours, one term.

166. *Human Learning*. A critical examination of the laws of learning and the conditions which influence learning favorably or unfavorably. Taylor

Two hours, one term.

PRIMARILY FOR GRADUATES

201. *History of Psychology*. The contributions of the classical psychologists from the early Greeks to the founders of modern psychology with consideration of developmental tendencies, schools of thought and culture influences constitute the content of the course. Most of the work is done through class discussion of the assigned readings in original texts. Conklin.

Two hours, two terms.

207. *Research and Thesis*. Original work for thesis purposes under the direction of the instructor in charge. Staff.

210. *Psychology of Attention and Perception*. A detailed and systematic handling of the various factors and the various aspects of attention phenomena and the phenomena of perception and various points of view, of behaviorist, objectivist, centralist, subjectivist, idealist, realist, nativist and empiricist. Special attention to the modern conception of attention and perception so influential in medicine, psychiatry, ethics, and education. Crosland.

Two hours, one term.

211. *Psychology of Memory and the Image*. A rigorous analytical and synthetic treatment of the various phases of mental organization manifested in conscious memory phenomena and in the image of imagination. Dissociation, assimilation, organization and generalization of memory contents will be thoroughly studied and illustrated, together with many technical as well as practical applications of the facts here presented. Crosland.

Two hours, one term.

212. *Psychology of Religion*. The place and nature of religious experience in human behavior, social and personal. The psychological aspects of belief, conversion, prayer, sacrifice, myth, ritual and ceremony. Illustrative material from primitive and historical religions. K. Young.

Three hours, one term.

214a,b,c. *Special Problems in Social Psychology*. Intensive work in individually assigned topics. K. Young. *One to three hours, each term.*

216a,b. *Seminar in Genetic Psychology*. Intensive study of selected special topics in the theory, data and methods of genetic psychology. Emphasis will be placed upon newer developments, including psychoanalysis. Conklin.

Two or three hours, two terms.

217. *Seminar in Abnormal Psychology.* A more intensive study of the data and theories, especially of current literature in this field. Conklin.

Two or three hours, one term.

218. *Association.* The doctrines of association, as related to the phenomena of habit formation, memories and imagination, imagery, attention, complexes and diagnosis of mental ailments, the diagnosis of guilty knowledge, assimilation, conception, illusions and hallucinations. The concepts of the reflex-arc and the irreversibility of nerve-conduction. Crosland.

Two hours, one term.

221a,b,c. *Seminar in Experimental Psychology.* Discussions and reports of experimental movements in contemporary psychology. Crosland.

One to three hours, each term.

230. *Graduate Thesis.* *Nine hours.*

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124. *Advanced Psychology.* The nervous system, reflexes, habit, sensation, and perception. Frequent demonstration of experimental methods.

Two hours, each term.

127. *Genetic Psychology.* The mental and physical development of youth as treated in the psychology of G. Stanley Hall. The instinctive, emotional and intellectual life of adolescents.

Two hours, each term.

128. *Social Psychology.* The behavior of man in the group and the mechanism underlying such behavior. Crowd phenomena and their relation to systematic psychology.

Two hours, each term.

ROMANCE LANGUAGES

Professors BOWEN, CLORAN

The library facilities for graduate work in Romance languages are excellent, including the best editions of the great writers and complete sets of standard periodicals.

Majors in Romance languages may minor in Latin, German, English, history or education.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

Graduate credit will be given for these courses only if the student completes considerable additional work of a high grade.

104a,b,c. *French Literature.* (Fourth year). Reading of selections from the great writers of France. Lectures, reports, and explanation of texts. History of French literature. Cloran. *Three hours, each term.*

111a,b,c. *French Classics.* Reading of representative plays of Corneille, Moliere, Racine, LaFontaine, Madame de Sevigne, and Pascal. Bowen. *Three hours, each term.*

112a,b,c. *Nineteenth Century Novel and Short Story.* Required of French majors. Bowen. *Three hours, each term.*

113a,b,c. *Modern French Drama and Lyric Poetry.* *Three hours, each term.*

122a,b,c. *Spanish Literature.* (Fourth year). Reading of selections from the great writers of Spain. Lectures, reports and explanation of texts. History of Spanish literature. Cloran. *Two hours, each term.*

123a,b,c. *Modern Spanish Drama and Lyric Poetry.* *Three hours, each term.*

PRIMARILY FOR GRADUATES

200a,b,c. *Romanticism, Realism and Naturalism in French Literature in the Nineteenth Century.* Bowen. *Three hours, each term.*

201a,b,c. *French Literature in the Eighteenth Century.* *Three hours, each term.*

202a,b,c. *French Literature in the Sixteenth Century.* *Three hours, each term.*

205a,b,c. *Romance Philology.* Bowen. *Two hours, each term.*

206a,b,c. *Old French. Phonology and Inflections.* The oldest texts. Readings from the Chanson de Roland, Marie de France, Chretien de Troyes, Aucassin et Nicolette. Cloran. *One to three hours, each term.*

210. *French Seminar.* *Hours to be arranged.*

216a,b,c. *Old Spanish. Phonology and inflections.* The oldest texts. The poem of the Cid. *Two hours, each term.*

218a,b,c. *Spanish Literature of the Sixteenth Centuries.* Cervantes, Lope de Vega, Calderon. *Three hours, each term.*

219a,b,c. *Modern Spanish Seminar.* *Three hours, each term.*
The graduate courses are given in rotation. Only two or three of them are given in any one year.

SOCIOLOGY

Dean YOUNG, Professor PARSONS: Associate Professor KIMBALL YOUNG

The candidate for the master's degree taking sociology as his major subject must have included in his program either as undergraduate or as graduate, courses 104, 136 and 202.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

104a,b,c. *Principles of Sociology.* The influences and factors, determining human life in association are studied. A comprehensive view of the social process is developed. K. Young. *Three hours, each term.*

105. *The New Social Order.* The factors in the present situation of western civilization causing movements for reorganization are examined. The leading programs for the attainment of a new social order are analyzed. (Not offered 1926-27). *Three hours, spring term.*

120. *Sociology and Ethics.* The development of a world view with the sociological method and the application of it to the more fundamental and pressing ethical problems of the present time.

Three hours, spring term.

134-135. *Advanced Social Psychology.* First term, crowd behavior: the problem of the crowd and the social leader, with illustrative materials from historical sources and current crowd phenomena. Second term, the individual and institutions: the conventionalization of society, the rise of cults and rituals, the place of institutions in the growth of personality and the effect of individuals and groups on institutions. K. Young.

Three hours, winter and spring terms.

136a,b. *Theory of Social Progress*. Concepts of the social self and of progress are developed and the roles of the different factors affecting progress are determined. Young. *Three hours, fall and winter terms.*

140. *Community Organization and Development*. The unit or focus of common life is defined and the organization for it that will serve to bring into play most effective functioning for normal development. Young. *Three hours, spring term.*

149. *Historic Approach to the Social Problem*. The threatened disintegration of civilization is considered in the light of history. Parsons. *Two hours, fall term.*

150. *Introduction to Social Problems*. A study of the manifestations of the social problem in present day social problems. Parsons. *Two hours, winter term.*

151. *Constructive and Preventive Social Work*. A brief consideration of the development of modern social service, public and private. Parsons. *Two hours, spring term.*

152. *Social Unrest*. The nature and causes of social unrest, and its relation to social problems. Parsons. *Two hours, fall term.*

153. *Criminology*. The nature and causes of crime, history of its treatment and a criticism of present methods of repression. Parsons. *Two hours, winter term.*

154. *Matrimonial Institutions and Divorce*. The development and social utility of the family and an analysis of its breakdown in divorce, desertion, and celibacy. Parsons. *Two hours, spring term.*

155a,b,c. *Sociological Aspects of Religion*. The nature, development and function of religion; its status in modern civilization; and its utility as a social asset. Parsons. *Two hours, each term.*

PRIMARILY FOR GRADUATES

202a,b,c. *Sociological Systems*. Selected systems of thought essaying to interpret the course of human history are analyzed with the view of determining their fundamental ideas. The evolution to clearness and scientific character of the hypotheses used, through their receiving increasing support of natural and psychological science, is traced. Prerequisite, 104. Young. *Three hours, each term.*

203. *Social Research*. Requirements of a scientific method in social survey inquiry. Diagnosis of social problems; formulation of community programs; presentation of social facts and survey findings. Young. *Three hours, spring term.*

204. *Social Statistics*. Principles of statistics and their application to the data furnished by official publications and special investigations; statistical methods applied to both theoretical and practical problems of sociology. Prerequisite, 104. Young. *Three hours, winter term.*

205. *Town, City and Regional Planning*. Study of the principles of city planning and the relation to regional, state and national planning. Formulation of programs of development based upon fundamental principles of progress. Young. *Three hours, spring term.*

214-215-216. *Special Problems in Sociology and Social Psychology*. *One to three hours, each term.*

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PRIMARILY FOR GRADUATES

218. *Graduate Seminar in Social Research*. Parsons. *Two hours, each term.*

ZOOLOGY

Professor BOVARD; Associate Professor YOCOM; Assistant Professor HUESTIS

At least half of the work submitted for a master's degree with a major in zoology must be from purely graduate courses of the sort numbered 200 and above.

Candidates for the degree of doctor of philosophy in zoology will ordinarily give one-half the time devoted to their major subject to research. Candidates for the doctorate who elect zoology as their minor subject will ordinarily fulfill the requirements for major work for the master's degree in zoology, with the exception of the prerequisite of a full undergraduate major.

That candidates for higher degrees in zoology may have a broad fundamental training in science, it is strongly recommended that minors be chosen from physics, chemistry and mathematics as well as botany and psychology; the minors are in no sense limited to these subjects.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

101. *Human Physiology: Muscle, Nerve and Special Senses*. An analysis of the sensory and motor adjustment of the body to environmental changes. The physiology of muscular and nervous tissues. The reflex. Relation between structure and function in the chord, brain, autonomic system and special sense organs. Prerequisite: chemistry and physics. Three lectures. Two laboratory periods. *Five hours, fall term.*

102. *Human Physiology*. Circulation, Respiration, Digestion, Secretion and Excretion. A study of the metabolism associated with the assimilation, digestion and utilization of food materials, with the formation and elimination of waste substances and with the liberation and action of secretory products, and of the structural mechanism and physical principals concerned with these processes. Prerequisite: chemistry and physics. Three lectures and one laboratory period. *Four hours, winter term.*

105. *General Physiology*. A study of the fundamental structure and behavior of living organisms, the analysis of their vital activities and of the physico-chemical nature of the factors underlying them. Prerequisite: physics and chemistry. Two lectures. Two laboratory periods. *Four hours, spring term.*

111. *Vertebrate Embryology*. An advanced course dealing with the embryology of vertebrates with especial reference to the early development of mammals. Two lectures and six hours laboratory per week. Given in alternate years. (Not given 1926-27). Yocom. *Four hours, spring term.*

112. *Cytology*. An advanced course in cellular biology dealing with the structure and function of cells, with special reference to germ cells and their function in reproduction, heredity and evolution. Two lectures and six hours of laboratory. Given in alternate years. (Not given 1926-27). Yocom. *Four hours, fall term.*

113. *Histology*. A course dealing with the cellular organization of tissues and organs. Practice will be given in the preparation of histological material. Lectures and laboratory. Given in alternate years. Yocom.
Three hours, fall term.

114. *General Embryology*. An advanced course dealing with the experimental morphology and physiology of development. Lectures, conferences, reports and laboratory work which will be in the nature of individual problems carried through the term. Two class hours and a minimum of six laboratory hours. Prerequisite, course 103. Given in alternate years.
Four hours, spring term.

115. *Genetics*. An analysis and interpretation of genetic processes in the light of Mendelism and of its recent modifications. A discussion of the modern genetic problems. Prerequisite: course 103 or 107, or consent of instructor. Term problem, conferences, two lectures.

121. *Comparative Anatomy*. A comparative study of the structure of typical chordates from the standpoint of the development of the individual and of the species, with reference to analogous structures in type invertebrates and special inference to the structure of man. Every attempt is made to make a correlation between structure and function. Two lectures and six hours of laboratory work.
Four hours, fall or winter term.

122. *Mammalian Anatomy*. An intensive study of a typical mammal with special emphasis on its gross structure; and the correlation of structure with function. The course is comparative in that every attempt is made to apply the knowledge of the animal studied in the laboratory to the human body. One lecture and six hours of laboratory work.
Three hours, winter term.

124. *Advanced Invertebrate Zoology*. A course dealing with the morphology, taxonomy, habits, life histories, etc., of invertebrate animals. Special reference will be given to the invertebrate fauna of the Oregon coast. Two lectures and six hours of laboratory. Yocom.
Four hours, winter term.

125. *Marine Zoology*. Given as a part of the regular summer session. A study is made of the invertebrate fauna of some region of the Oregon coast. Field and laboratory work make up the major part of the course. This is supplemented by lectures and text-book assignments. Yocom.
Eight hours.

126. *Advanced Vertebrate Ecology*. The morphology and distribution of the higher animals is studied in order to learn of their many interactions with the environment and with one another. The relatively large area in which natural conditions still obtain, together with considerable climatic differences, makes Oregon a splendid field for ecologic study. Two lectures or conferences and six hours of museum or field work. Huestis.
Four hours, spring term.

131. *Protozoology*. A course dealing with the problems of protozoa in their relation to the larger problems of biology. A study of the morphology, physiology and ecology of the free living forms with special reference to the parasitic forms as the causative agents in disease. Two lectures and six laboratory hours. Given in alternate years. Yocom.
Four hours, winter term.

132. *Parasitology*. A consideration of animals in their relation to the cause and transmission of disease especially those important as producers of disease in man and domesticated animals. Two lectures and six laboratory hours. Given in alternate years. (Not given 1926-27). Yocom.
Four hours, winter term.

140. *Special Problems*. Department staff. *Hours to be arranged.*

150. *The Teaching of Zoology*. *Hours to be arranged.*

PRIMARILY FOR GRADUATES

201a,b,c. *Seminar*. Yocom.

203a,b,c. *Research*. Topics to be arranged upon consultation with the professor in charge of the student's work. Department staff.

204a,b,c. *Problems in Cytology*. Yocom.

205a,b,c. *Problems in Genetics*. Huestis.

207. *The Physiological Analysis of Behavior*.

208. *Problems in Ecology*. Huestis.

209. *Problems in Physiology*.

210. *Problems in Embryology*. Yocom.

211. *Problems in Protozoology*. Yocom.

