

THE UNIVERSITY OF OREGON

EUGENE

OREGON



THE GRADUATE SCHOOL

ANNOUNCEMENTS
1921-1922

of O.

Section

78.795

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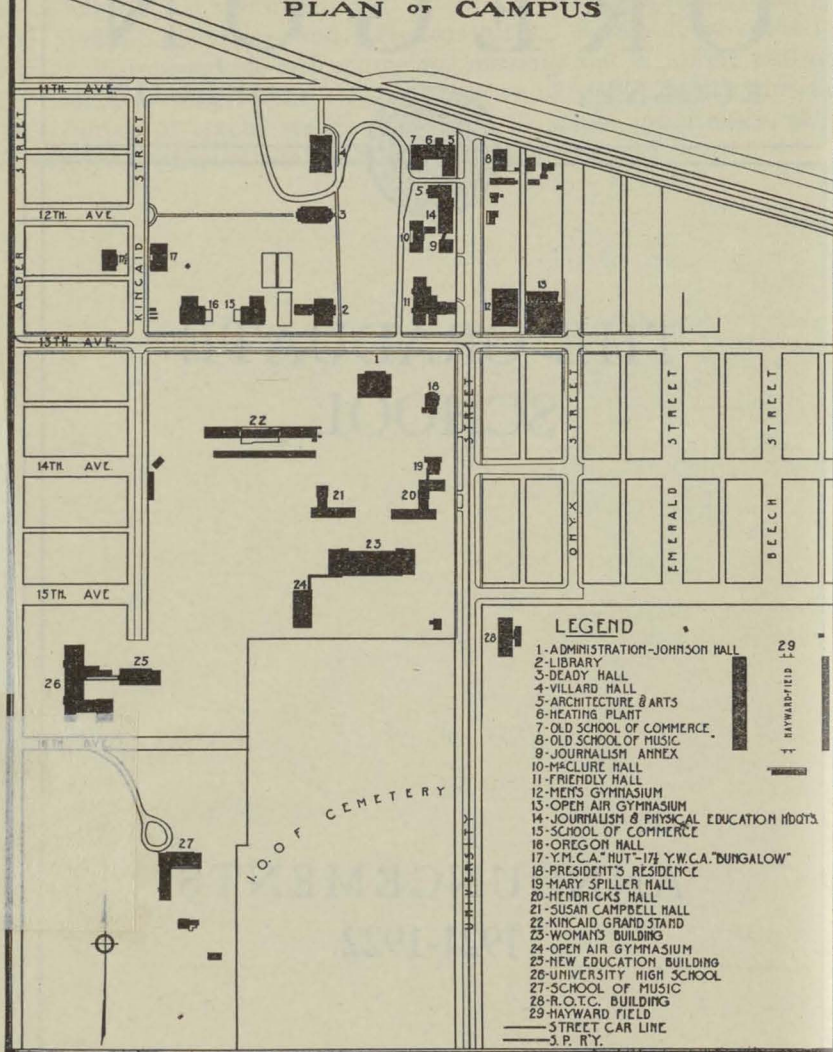
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UNIVERSITY OF OREGON

EUGENE-OREGON

PLAN OF CAMPUS



BOARD OF REGENTS

OFFICERS

HON. JAMES W. HAMILTON, President
HON. A. C. DIXON, Vice-President
L. H. JOHNSON, Secretary

EXECUTIVE COMMITTEE

HON. JAMES W. HAMILTON, Ex Officio Chairman
HON. A. C. DIXON, Acting Chairman
HON. CHAS. H. FISHER
HON. LLOYD L. MULIT
MRS. G. T. GERLINGER
HON. VERNON H. VAWTER

EX-OFFICIO MEMBERS

HON. BEN W. OLCOTT, GovernorSalem
HON. SAM KOZER, Secretary of StateSalem
HON. J. A. CHURCHILL, Superintendent of Public Instruction
.....Salem

APPOINTED BY THE GOVERNOR

Name and Address	Term Expires
HON. A. C. DIXON, Eugene.....	April 15, 1923
HON. CHAS. H. FISHER, Eugene	April 15, 1923
HON. JAMES W. HAMILTON, Roseburg.....	April 15, 1925
MRS. G. T. GERLINGER, Dallas.....	April 15, 1927
HON. C. C. COLT, Portland.....	April 15, 1927
HON. HENRY MCKINNEY, Baker.....	April 15, 1927
HON. LLOYD L. MULIT, Portland.....	April 15, 1929
HON. VERNON H. VAWTER, Medford.....	April 15, 1931
HON. C. E. WOODSON, Heppner.....	April 15, 1933
HON. WILLIAM S. GILBERT, Astoria.....	April 15, 1933

REGULAR MEETINGS OF BOARD OF REGENTS, 1921-22

Tuesday, January 17, 1922
Tuesday, June 13, 1922

CALENDAR, 1921

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

CALENDAR, 1922

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

UNIVERSITY CALENDAR 1921-1922

SUMMER SESSION

June 22, Wednesday	Registration day.
June 23, Thursday	Classes open.
July 4, Monday	Independence day. A holiday.
July 30, Saturday	Summer Session closes.

FALL TERM

September 24, Saturday	Fall term opens. Examination in English Composition for Freshmen.
September 26, Monday	Registration day for upper class students.
September 27, Tuesday	Registration day for Freshmen.
September 28, Wednesday	All University work begins.
October 6, Thursday	Faculty meeting.
October 6, Thursday	Regular meeting Associated Students.
October 11, Tuesday	Last date in term for change of course.
November 1, Tuesday	Last date in term for withdrawal from class.
November 3, Thursday	Faculty meeting.
November 24, Thursday	Thanksgiving day.
December 1, Thursday	Faculty meeting.
December 5, 6, Monday, Tuesday	Examinations for the removal of conditions.
December 8, Thursday	Regular meeting of Associated Students.
December 10, Saturday	Meeting of Athletic Council.
December 14, 15, 16	Term examinations.
December 17, Friday, to January 2, Monday	Christmas vacation.

WINTER TERM

January 3, Tuesday	Registration day.
January 4, Wednesday	Classes open.
January 5, Thursday	Faculty meeting.
January 10, Tuesday	Last date in term for change of course.
January 17, Tuesday	Regular meeting of the Board of Regents.
February 1, Wednesday	Last day in term for withdrawal from class.
February 2, Thursday	Faculty meeting.
February 22, Wednesday	Washington's birthday. A holiday.
March 2, Thursday	Faculty meeting.
March 9, Thursday	Regular meeting Associated Students.
March 11, Saturday	Athletic Council meeting.
March 22, 23, 24	Term examinations.
March 25, Saturday, to April 2, Sunday	Spring vacation.

SPRING TERM

April 3, Monday	Registration day.
April 4, Tuesday	Classes open.
April 6, Thursday	Faculty meeting.
April 10, Monday	Last date in term for change of course.
April 23, Saturday	Filing of Failing and Beekman orations.
May 1, Monday	Last day in term for withdrawal from class.
May 1, 2, Monday, Tuesday	Examinations for the removal of conditions.
May 4, Thursday	Faculty meeting.
May 4, Thursday	Annual meeting Associated Students.
May 12, 13, Friday, Saturday	Junior week-end.
May 30, Tuesday	Memorial day. A holiday.
June 1, Thursday	Faculty meeting.
June 1, Thursday	Associated Students meeting.
June 14, 15, 16	Term Examinations.
June 16, Friday	Flower and Fern Procession, 7 p. m.
June 16, Friday	Failing and Beekman orations, 8 p. m.
June 17, Saturday	Alumni Day.
June 18, Sunday	Baccalaureate sermon, 11 a. m.
June 19, Monday	Commencement, 10 a. m.

OFFICERS OF ADMINISTRATION THE UNIVERSITY

P. L. CAMPBELL, B.A., LL.D.	President
LOUIS H. JOHNSON	Comptroller
KARL W. ONTHANK, M.A.	Executive Secretary
CARLTON E. SPENCER, A.B., LL.B.	Registrar
JOHN STRAUB, M.A., Lit.D.	Dean of Men
ELIZABETH FREEMAN FOX, B.A.	Dean of Women
WILBUR K. NEWELL	Superintendent of University Properties
M. H. DOUGLASS, M.A.	Librarian

THE GRADUATE COUNCIL

GEORGE REBEC, Ph.D., DEAN	Philosophy
WILLIAM P. BOYNTON, Ph.D.	Physics
EDMUND S. CONKLIN, Ph.D.	Psychology
HERBERT CROMBIE HOWE, B.A.	English Literature
EARL L. PACKARD, Ph.D.	Geology
FRIEDRICH GEORG G. SCHMIDT, Ph.D.	German
HENRY DAVIDSON SHELDON, Ph.D.	Education
FREDERIC GEORGE YOUNG, B.A., LL.D.	Sociology

GRADUATE FACULTY

- 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., Mich-
igan, 1897; Student in Florence, Italy, 1908-09; Faculty Michigan,
1894-1909; Oregon, 1912-18; Director Portland Extension Center, 1918-
1920; Head of Department of Philosophy and Dean of Graduate School,
1920.
- WALTER CARL BARNES, A.B. (Oxon) *Professor of History*
A.B., Colorado College, 1912; Graduate Student, California, 1912-13;
Rhodes Scholar, Honour School of Modern History, Oxford University,
England; B.A., Oxon, 1916. Faculty, British Columbia, 1917-18;
California, 1918-19; Present position, 1920..
- JAMES DUFF BARNETT, Ph.D. *Professor of Political Science*
A.B., Emporia, 1890; Fellow in Political Science, Wisconsin, 1902-03;
Ph.D., Wisconsin, 1905; Faculty Oklahoma, 1905-08; Oregon from 1908;
Associate Editor National Municipal Review; Member, Board of Edi-
tors, American Political Science Review.
- ROBERT PERKINS BASS, M.A. *Professor of Commerce*
A.B., Harvard, 1896; Graduate Student, Harvard, 1896-97; Harvard
Law School, 1897-98; M.A., Dartmouth; Governor of New Hampshire,
1911-13; present position from 1921.
- ERNEST SUTHERLAND BATES, Ph.D. *Professor of Rhetoric*
and *American Literature*
A.B., Michigan, 1902; A.M., 1903; University Fellow, Columbia,
1905-06; Ph.D., 1908; Faculty, Oberlin, 1903-05; Columbia, 1907-08;
Arizona, 1908-1915; Head of Department, Oregon, from 1915.
- THOMAS J. BOLITHO, A.B. *Professor of Accounting*
A.B., Washington State, 1917; Faculty, Washington State; present po-
sition from 1919.
- JOHN FREEMAN BOVARD, Ph.D. *Dean of the School of Physical Education*
and *Professor of Physiology*
B.S., California, 1903; M.S., 1906; Graduate student Harvard, 1914-
15; Ph.D., California, 1917; Faculty, Oregon from 1906; Dean of
School of Physical Education from 1920; Vice-President, President,
Western Society of Naturalists, 1917-18; Vice-President, Pacific
Division American Physical Educational Association, 1920.
- WILLIAM PINGRY BOYNTON, Ph.D. *Professor of Physics*
A.B., Dartmouth, 1890; M.A., 1893; Scholar and Fellow in Physics,
Clark, 1894-97; Ph.D., 1897; Faculty, Southern California, 1890-93; Cali-
fornia, 1897-1901; California College, 1901-03; Oregon, from 1903; Head
of Department from 1906.
- JULIA BURGESS, M.A. *Professor of American Literature*
B.A., Wellesley, 1894; M.A., Radcliffe, 1901; Faculty, Oregon from 1902.
- ALBERT EDWARD CASWELL, Ph.D. *Professor of Physics*
A.B., Stanford, 1908; Ph.D., 1911; National Research Fellow, Prince-
ton, 1919-20; Faculty, Purdue, 1911-13; Oregon from 1913, present
position from 1917.

- HERMAN ALDRICH CLARK, M.A. *Professor of Latin*
A.B., Michigan, 1909; A.M., 1910; Charles Kendall Adams Graduate
Fellow in Greek, Wisconsin, 1913-15; Faculty, Oregon, from 1915.
- ROBERT CARLTON CLARK, Ph.D. *Professor of History*
B.A., 1900; M.A., 1901; Scholar in History, Wisconsin, 1901-02;
Fellow, 1902-03; Ph.D. 1905; Faculty, Oregon from 1905; Head of
Department from 1920; Fellow, Texas Historical Association; Presi-
dent Pacific Coast branch, American 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; Stu-
dent, University of Paris, 1904-05; University of Madrid, 1905-06; Fac-
ulty, Shurtleff College, 1893-97; Idaho, 1899-1900; Vanderbilt, 1900-04;
Oregon from 1906; Head of Department from 1907.
- EDMUND S. CONKLIN, Ph.D. *Professor of Psychology*
B.H., 1908, Springfield, Mass.; A.M., Clark, 1909; Fellow in Psy-
chology, Clark, 1909-11; Ph.D., 1911; Faculty, Oregon, from 1911; Head
of Department from 1913.
- PETER CAMPBELL CROCKATT, M.A. *Professor of Economics*
B.A., Oregon, 1915; M.A., 1917; Graduate student, California; Fac-
ulty, Spokane, 1916-17; Present position from 1917.
- 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; Professor of Educational Psy-
chology from 1915; Member Oregon Child Welfare Commission.
- EDGAR EZEKIEL DECOU, M.A. *Professor of Mathematics*
B.S., Wisconsin, 1894; M.S., Chicago, 1897; Graduate student, Chicago,
1899-1900; Graduate School, Yale, 1900-01; Faculty, Bethel College,
1897-99, 1901-02; Head of Department from 1902.
- HARL R. DOUGLASS, B.S. *Professor of Education*
B.S. in Education, Missouri, 1915; Graduate Student, 1915-17; Super-
intendent Schools, Missouri and Oregon, 1917-19; Present position,
from 1919.
- FREDERICK STANLEY DUNN, M.A. *Professor of Latin*
A.B., Oregon, 1892; M.A., 1899; A.B., Harvard, 1894; M.A., 1903;
Faculty, Willamette, 1895-98; Head of Department from 1898; Leave
of absence in Italy 1918-19.
- JAMES HENRY GILBERT, Ph.D. *Professor of Economics*
B.A., Oregon, 1903; Ph.D., Columbia, 1907; Faculty, Oregon, 1907—;
Head of Department from 1920.
- CHESTER ARTHUR GREGORY, Ph.D. *Professor of Education*
B.A., Indiana, 1908; M.A., 1915; Fellow, Iowa, Ph.D., 1920; Faculty,
Parsons, 1912-14; Professor of School Administration and Director
of Bureau of Educational Research from 1916.
- EDWIN T. HODGE, Ph.D. *Professor of Geology*
B.A. Minnesota, 1913; M.A., 1914; William Bayard Cutting Travel-
ling Fellowship Columbia, 1914-16; Ph.D., 1916; Faculty, British
Columbia, 1916-20; present position, 1920; Honorary Life member,
Canadian Institute Mining Engineers.

- HERBERT CROMBIE HOWE, A.B. *Professor of English Literature*
B.L., A.B., Cornell, 1893; Graduate Scholar in Philosophy, Cornell,
1893-95; Head of Department, Oregon, from 1906.
- 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 College, Baker, Oregon, 1914—; present position, 1917—.
- EDWARD HIRAM MCALISTER, M.A. *Professor of Mechanics and Astronomy*
B.A., Oregon, 1890; M.A., 1893; Faculty, Oregon, from 1891; Dean
College of Engineering, 1902-15; Head of Department from 1915;
Certified member American Association Engineers.
- WILLIAM EDMUND MILNE, Ph.D. *Professor of Mathematics*
A.B., Whitman; A.M., Harvard, 1913; Ph.D., 1915; Faculty, Bowdoin,
1915-18; Present position from 1919.
- 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, 1917-18; present position from 1919; act-
ing head department, 1920-21.
- 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 Re-
search 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 Center School of Social Work from 1920.
- MARY HALLOWELL PERKINS, M. A. *Professor of English*
B.A., Bates, 1898; M.A., Radcliffe College, 1908; Graduate student,
Columbia, 1916-17; Faculty, Oregon from 1908; Present position
from 1917.
- FERGUS REDDIE *Professor of Public Speaking*
B.A., Valparaiso, (Hon.); Pennsylvania Museum School of Industrial
Art; Emerson College of Oratory. Director of plays for 20th Century
Club, Boston. Practical experience with Frohmans and others.
- EDWIN CLYDE ROBBINS, Ph.D. *Dean of School of Commerce*
B.A., Iowa, 1910; M. A., 1912; Garth Fellow in Economics, Columbia,
1912-13; Ph.D., Columbia, 1915; Faculty, Mt. Holyoke, 1914-15; Ore-
gon, 1915-17; Minnesota, 1917-19; Oregon from 1919; Present posi-
tion from 1920.
- FRIEDRICH GEORG GOTTLLOB SCHMIDT, Ph.D. *Professor German Language
and Literature*
Student at University of Erlangen, Bavaria, 1888-90; Johns Hopkins,
1890-93; University Scholar and Fellow, 1894-96; Ph.D., 1896; Faculty
Cornell College, 1896-97; Oregon from 1897; Head of Department of
German from 1905.
- HENRY DAVIDSON SHELDON, Ph.D. *Dean of the School of Education*
A.B., Stanford, 1896; A.M., 1897; Ph. D., Clark, 1900; Student Leip-
zic, 1911-12; Faculty, Oregon, 1900-1911; Pittsburg, 1912-14; present
position from 1914.
- FREDERICK LAFAYETTE SHINN, Ph.D. *Professor of Chemistry*
B.A., Indiana, 1901; M.A., 1902; Scholar, Yale 1902; Ph.D., Wis-
consin, 1906; Faculty Oregon, from 1907; Acting head of Depart-
ment from 1918.

- *WARREN DU PRE SMITH, Ph.D. *Professor of Geology*
B.S., Wisconsin, 1902; Stanford, 1904; Fellow in Geology, Chicago, 1904-05; Ph.D., Wisconsin, 1908; Head of Department, Oregon, from 1914.
- *ORIN FLETCHER STAFFORD, M.A. *Professor of Chemistry*
A.B., Kansas, A.M.; 1900; Faculty Oregon, from 1900; Head of Department from 1902.
- FRED L. STETSON, M.A. *Professor of Education*
B.A., Washington, 1911; M.A. 1913; Research Scholar, Teachers College, Columbia, 1919-20; Faculty Washington, 1912-13; Oregon, from 1913; present position from 1916.
- JOHN STRAUB, Lit.D. *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 from 1920.
- BERTHA S. STUART, M.D. *University Physician*
A.B., Michigan, 1903; M.D., 1908; Faculty, Michigan, 1901-09; Oregon, 1909-15; Reed College, 1915-20; Present Position, 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, 1897-92; Oregon from 1902; Head of Department of Botany from 1909.
- W. F. G. THACHER, M.A. *Professor of Rhetoric*
A.B., Princeton, 1900; M.A., 1906; Graduate Student, Chicago, 1906; Associate Editor of Pacific Monthly, 1902-04; Faculty Oregon since 1913.
- EDWARD THORSTENBERG, Ph.D. *Professor of Scandinavian Languages and Literature*
B.A., Bethany College, 1899; Scholar, Yale, 1900-03; M.A., 1902; Ph.D., 1904; present position from 1913.
- HARRY BEAL TORREY, Ph.D. *Professor of Zoology*
B.S., California, 1895; M.S., 1898; Fellow in Geology, Columbia, 1900-01; Ph.D., 1903; Faculty, California, 1898-1912; Reed College, 1912-20; Head of Department, Oregon, from 1920.
- MARY ELIZABETH WATSON, M.A. *Professor of English Literature*
B.A., Oregon, 1909; M.A., 1911; Graduate student, Columbia, 1918-19; Faculty, Oregon, from 1911; present position from 1919.
- RAYMOND HOLDER WHEELER, Ph.D. *Professor of Psychology and Director of the Laboratory*
B.A., Clark, 1912; Scholar and Fellow in Experimental Psychology, Clark, 1912-15; M.A., 1913; Ph.D., 1915; Faculty, Oregon from 1915; present position from 1919.
- FREDERIC GEORGE YOUNG, LL.D. *Dean of the School of Sociology and Professor of Sociology*
B.A., Johns Hopkins, 1886; Graduate scholar, 1886-7; LL.D., Oregon, 1920; President Albany College, 1894-95; Faculty, Oregon, from 1895; Dean of the Graduate School, 1901-1920; 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; leave of absence, 1920-21; Commonwealth Review; Oregon section Encyclopedia Britannica.

- CATHERINE WETHERELL BEEKLEY, B.S. *Assistant Professor of Zoology*
B.S., Pennsylvania, 1910; Graduate work Eugenics Record Office, New York, 1913; Marine Biological Laboratory, Woods Hole, Mass., 1919.
- MERTON KIRK CAMERON, M.A. *Assistant Professor of Economics*
A.B., Princeton, 1908; A.M., Harvard, 1914; Graduate Student, Harvard, 1915-16; Faculty, Hibbing Junior College, 1917-20; Oregon from 1920.
- HAROLD RANDOLPH CROSLAND, Ph.D. *Assistant Professor of Psychology*
A.B., South Carolina, 1913; A.M., Clark, 1914; Ph.D., 1916; Fellow in Experimental Psychology, Clark, 1913-16; Faculty, Minnesota, 1916-17; Arkansas, 1917-18; Pittsburgh, 1918-20; Oregon, from 1920.
- ELDON GRIFFIN, B.A. *Assistant Professor of History*
B.A., Harvard, 1916; Seabury Fellow in World Politics, Stanford, 1919-20; Foreign Lecturer, English Department, Imperial Government Service, Japan, 1916-19; Present position from 1920.
- CARLTON M. HOGAN, A.M. *Assistant Professor of Commerce*
A.B., Illinois, 1918; Graduate Scholar, Harvard, 1918-19; A.M., Illinois, 1920; Faculty, Illinois, 1919-20; Present position from 1920.
- VERNE R. McDOUGLE, A.B. *Assistant Professor of Accounting*
Ph.B., Wisconsin, 1916; A.B., 1916; Graduate student, Illinois, 1919-20; Faculty, Illinois, 1919-20; Present position from 1920.
- JAMES HUGH PRUETT, A.B. *Assistant Professor of Physics*
A.B., McMinnville, 1911; Graduate Student, Chicago, 1915-16; Science and Research Section Meteorological Division U. S. Signal Corps, 1918-1919; present position from 1920.
- ROGER JOHN WILLIAMS, Ph.D. *Assistant Professor of Chemistry*
B.S., Redlands, 1914; M.S., Chicago, 1918; Ph.D., 1919; present position from 1920.
- HARRY BARCLAY YOCOM, Ph.D. *Assistant 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; Present position from 1920.
- KIMBALL YOUNG, M.A. *Assistant Professor of Psychology*
A.B., Brigham Young, 1915; A.M., Chicago, 1918; University Research Fellow, Stanford, 1918-19; Present Position from 1920.
- ETHEL IDA SANBORN, M.A. *Instructor in Botany*
B.S., South Dakota State College, 1903; B.A., South Dakota, 1904; M.A., 1907; Graduate Student, Oregon, 1911-13; Puget Sound Biological Station, 1913; Stanford, 1917-18; Curator of Museum, Oregon, 1914-17; Present position from 1918.
- IDA V. TURNER, M.A. *Instructor in Rhetoric*
B.A., University of Oregon, 1912; M.A., 1913; Graduate Student Michigan, 1913; present position from 1914.

STUDENTS IN THE GRADUATE SCHOOL

GRADUATE ASSISTANTS

Chester Elgin Adams, <i>Chemistry</i>	Myrtle Point
B.A., Oregon, 1920.	
J. Read Bain, <i>Sociology</i>	Tillamook
A.B., Willamette, 1916.	
Adele J. Bischoff, <i>German</i>	Eugene
A.B., Kansas, 1916; M.A., California, 1920.	
Ranie P. Burkhead, <i>Psychology</i>	Monmouth
B.S., Oregon, 1920.	
Victoria Case, <i>Psychology</i>	Tigard
Work completed for B.A.	
Mary Hendricks Chambers, <i>Zoology</i>	Eugene
B.A., Oregon, 1917.	
Helen Louise du Buy, <i>Romance Languages</i>	Eugene
Work completed for B.A.	
Mary Anne Hogan, <i>Psychology</i>	Eugene
A.B., Illinois, 1915.	
William C. Hoppes, <i>Education</i>	Salem
Work completed for B.A.	
Benjamin Horning, <i>Zoology</i>	Otter Rocks
B.S., O. A. C.	
Ruth Helen Montgomery, <i>Education</i>	Eugene
B.A., Oregon, 1919.	
Marcus Driver O'Day, <i>Physics</i>	Centralia, Wn.
B.A., Oregon, 1920.	
William R. Skidmore, <i>Chemistry</i>	Eugene
B.A., Oregon, 1920.	
Paul Freeborn Weidenheimer, <i>Rhetoric</i>	Corvallis
B.A., Oregon, 1920.	

*GRADUATE STUDENTS

Hilma Anderson	Portland
Newton Charles Bader, <i>Education</i>	Eugene
B.A., Oregon, 1920.	
Sophia F. Batterson	Portland
Anna Landsbury Beck, <i>Rhetoric</i>	Eugene
B.A., Oregon, 1919.	
Lorenz Blankenbuehler, <i>English Literature</i>	Portland
Concordia College, 1906.	
Alta Roberta Blood, <i>English Literature</i>	Portland
A.B., Oberlin, 1905.	
Walter Henry Buxton, <i>Mathematics</i>	Gaston
A.B., Nebraska, 1910.	
Lillian Ackerman Carlton	Eugene
B.A., Oregon, 1898.	
Chandos B. Castle, <i>Rhetoric</i>	Merced, Calif.
B.S., Oregon, 1919.	

* This list is confined to those doing resident graduate work, and does not include the names of those taking graduate work only in the Summer Session of 1920.

Sabra Conner, <i>Rhetoric</i>	Portland
B.A., Oregon, 1918.	
M. Lucile Copenhaver, <i>Mathematics</i>	Eugene
Work completed for B.A.	
Leo Herbert Cossman, <i>Education</i>	Eugene
Work completed for B.A.	
Viola Noon Currier, <i>Rhetoric</i>	Portland
B.L., California, 1905.	
Francis Day Curtis, <i>Education</i>	Portland
B.S., Oregon, 1911.	
Catherine Mary Davis, <i>English Literature</i>	Portland
B.A., Pacific University, 1919.	
Leigh Carroll Douglass, <i>Psychology</i>	Wenatchee, Wn.
B.A., Willamette, 1917.	
Laura Gertrude Eaton, <i>English Literature</i>	Portland
B.A., Oregon, 1919.	
Charles Ferguson, <i>Medicine</i>	Portland
R. Louise Fitch, <i>Psychology</i>	Eugene
B.A., Knox, 1902; M.A., 1911.	
Meta Marion Goldsmith, <i>Romance Languages</i>	Oregon City
B.A., Oregon, 1914.	
Vivien Kellems, <i>Economics</i>	Eugene
B.A., Oregon, 1918.	
Frederic Stuart Knight, <i>Journalism</i>	Forest Grove
A.B., Pacific University, 1911.	
Richard Houghton Martin, <i>Economics</i>	Portland
Work completed for B.A.	
Effie Belle McCallum, <i>Education</i>	Eugene
B.A., Oregon, 1911; B.D., E. B. U.	
Verne Russel McDougale, <i>Commerce</i>	Eugene
Ph.B., A.B., Wisconsin, 1916.	
Jessamine Margaret McGloin, <i>Sociology</i>	Wall Lake, Iowa
B.A., B.S., Valparaiso, 1911.	
Irl Samuel McSherry, <i>Rhetoric</i>	McMinnville
Ph.B., B.S., McMinnville, 1920.	
Wendell L. Miller, <i>Commerce</i>	Portland
A.B., Willamette.	
Eunice Mitchell	Philomath
Ph.B., Philomath, 1920.	
Charles N. Reynolds, <i>Education</i>	Portland
B.A., Oregon, 1913.	
Charles A. Rice, <i>Education</i>	Portland
A.B., Illinois Wesleyan.	
Dorothy Sanford, <i>Psychology</i>	Portland
B.S., Oregon, 1919; M.A., Columbia, 1920.	
Ruth Stone, <i>English Literature</i>	Portland
B.A., Oregon, 1913.	
Nellie M. Wade	Portland
George Edwin Theiss, <i>German</i>	Eugene
Concordia College, 1915.	
Sarah Capps Tingle, <i>Romance Languages</i>	Eugene
Ph.B., Chicago, 1898.	
Mary E. Watson	Portland

THE GRADUATE SCHOOL

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. Catalogs 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 increasing frequency and in greater 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 evidenced high and fruitful scholarship, and in the production and publication of books and scholarly papers of value.

The catalog 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.

LOCATION

The Graduate School of the University of Oregon is located on the campus in Eugene, at the head of the Willamette valley. Eugene is an important railroad centre, being reached by the main line and several branches of the Southern Pacific, and also by the Oregon Electric. The Pacific highway also passes through the city and the University campus. Eugene is a modern, progressive city, furnishing a favorable environment for such a school. Climatic and health conditions are of the best, with mild winters, summers not too warm for effective work, water supply pure and carefully safeguarded, and sanitation modern and effective.

FACILITIES FOR GRADUATE STUDY

The period since the organization of the Graduate School has been one of rapid growth and development in the University. The general growth is well typified by the increase of the permanent staff of the library from one to thirteen. One result of this growth has been the expansion of nearly every department to the point where it has several members qualified to give graduate instruction, thus permitting some degree of subdivision and specialization in the fields of each department. Further, the University is definitely committed to the policy of encouraging graduate work, and reserving a sufficient portion of the instructor's time for such work as a means of maintaining the standards of its own scholarship.

The recent large increase in the income of the University has not only permitted an increase in the instructional staff, but has also enabled the University to enter upon a large building program, which results in greatly increased facilities for graduate

work during the coming year. Aside from the obvious advantages of additional class-rooms and the relief from the congestion of the past, the increased space will give more departmental offices for consultations, departmental libraries and seminar rooms, and an increased number of laboratory rooms which can be assigned to research problems.

THE UNIVERSITY LIBRARY

The University library is a well-selected and rapidly growing collection of books numbering over 100,000 volumes. The regular annual appropriation for books and periodicals and for binding is \$10,000, which is occasionally supplemented by special appropriations to secure particular collections.

The library is supplied with the best general and special reference books; with the files of the principal American and English periodicals of general interest, and with many of the most useful sets of periodicals of special and scientific interest, both American and foreign. Over 700 periodicals are currently received, besides many of the daily and weekly newspapers of the state. Bound files of about 90 Oregon newspapers are on hand.

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

The annual appropriation for books is sufficient to provide for the books needed for use in connection with the courses given and for general reference work. It also makes possible the acquisition each year of a few of the larger and more expensive sets needed.

The library is open each week day from 7:45 a. m. to 10 p. m. On Sunday it is open from 2 to 6 p. m. Books, other than reference books and those especially reserved for use in the library, may be drawn for a period of one month, and at the expiration of that time renewed if there is no other demand for them. All persons connected with the University have the privilege of drawing books, and the use of the library for reference purposes is extended to the general public as well. Books that can be spared from the University are also loaned for a month at a time to other libraries, to superintendents and principals of Oregon schools, and to individual citizens of the state.

THE UNIVERSITY MUSEUMS

The University museums are three in number, as follows:

THE CONDON GEOLOGICAL MUSEUM

The geological collections occupy quarters in Johnson Hall and constitute the Condon Geological Museum. The more important collections include the following.

(1) The "Condon Cabinet" consisting of many thousand specimens, represents the life work of the late Dr. Thomas Condon. The collection is especially rich in vertebrate fossils from the John Day valley, and contains in addition many invertebrates and paleo-botanical specimens.

(2) A display collection of minerals. This is a growing collection of especially fine minerals, including the Wilke collection of minerals from all parts of the world.

(3) A type collection of minerals. A collection of about 1,500 mineral specimens representative of the ordinary occurrence of the different minerals.

(4) A collection of Oregon economic minerals.

(5) A type collection of rocks, etc. This contains, besides the United States Geological Survey Educational Series of rocks, a collection from type localities in the Lake Superior iron-bearing and copper-bearing districts illustrating some of the oldest formations on the continent; also a collection of typical specimens from the Philippine Island. There are besides these many isolated specimens from various and remote parts of the world.

(6) Collection of Krantz rocks containing over 500 European rock types.

(7) An ethnological collection of tools and implements used by early man.

(8) A representative conchological collection.

In the museum collection is also a cast of the Willamette meteorite, the gift of Mr. D. A. Patullo, of Portland. The original meteorite was found $2\frac{1}{2}$ miles west of Oregon City. Its dimensions are: extreme length, 10 feet $3\frac{1}{2}$ inches; breadth, 7 feet; height, 4 feet; estimated weight, 12 to 15 tons. It is now in the American Museum of Natural History, New York City. The museum, through Dr. E. O. Hovey, is said to have paid \$20,000 for this meteorite.

BOTANICAL MUSEUM

The botanical museum consists of the following: (1) The Howell collection, consisting of 10,000 specimens, collected for the most part in Oregon, many of which are type specimens; (2) the Leiberg collection, presented to the University by Mr. John B. Leiberg in 1908, consisting of 15,000 sheets of specimens, collected principally from Oregon, Washington and Idaho, but including also some from other states. The specimens are for the most part duplicates of others deposited in the National Herbarium at Washington by Mr. Leiberg for the government while he was in its employ, and are extremely valuable; (3) the Cusick collection, consisting of 7,000 specimens of Oregon and other flora; (4) the Edmund P. Sheldon collection, and that of Kirk Whitead, both recently acquired by donation. These collections are being constantly added to by gifts and exchange. All specimens not already classified are being classified and arranged in cases as rapidly as possible.

ZOOLOGICAL MUSEUM

The Zoological Museum is located on the third floor of Deady Hall. It contains a series of mounted and unmounted birds and mammals, to illustrate different groups; a collection of Oregon reptiles, made by Mr. J. R. Wetherbee; a series of fish, 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. It has also just received a collection of birds and mammals, made and presented by Dr. A. G. Prill, of Seio, Oregon.

It is further supplied with a series of invertebrate animals, models of types from France and Germany. To this may be added casts of brains and head formation of various races, and a series of wax models made from drawing by His in Zeigler's laboratory at Freiburg, illustrating different stages in the development of the human embryo and that of the chick; also a similar series showing the development of amphioxus, different forms of segmentation, etc.

THE UNIVERSITY LABORATORIES

BOTANY

The botanical department occupies the fourth floor of Deady Hall. The laboratory for the general botany classes has the regular equipment of work tables, lockers, and compound microscopes, as well as provision for the displaying of stereopticon illustrations and charts. This, as are all the other rooms, is furnished with gas and lighted with electricity. The department possesses a fine series of botanical models of flower types and insectivorous plants. The supply of preserved material is constantly being added to and is fairly representative of the various plant groups. Each student is expected to provide himself with dissecting set and drawing material, but the laboratory is prepared to furnish the necessary microscopical slides, reagents and glassware.

The collections of Mr. Howell, Mr. Leiberg, Mr. Cusick, Mr. Kirk Whitead and Mr. Sheldon are available for students of systematic botany. Facilities are provided for the study and preservation of local material and for cataloging of plants sent from various parts of the state, and the department will be glad to name any specimen that may be sent to the herbarium for determination. The bacteriological laboratory is well equipped for work, with its gas-fitted and electrically wired work tables and lockers combined, its auto-clave, steam and hot-air sterilizers, incubators, hot water heater and compound microscopes with oil-immersion lenses.

CHEMISTRY

The chemical laboratories are located in McClure Hall. The first floor and portions of the basement and second floor are devoted to chemistry. The chemical laboratories will accommodate somewhat over 250 students.

The department of chemistry has separate laboratories for the general chemistry courses, the analytical courses, and for organic chemistry. It also has smaller rooms devoted to special problems in research work. Well equipped store rooms provide all of the necessary apparatus and materials.

A working library is kept in the departmental office to which students in the department have free access.

GEOLOGY

MINERALOGY. The laboratory is equipped for work in descriptive and determinative mineralogy and crystallography, and contains the following mineral collections:

- (1) A display set of minerals.
- (2) The Wilke collection of world minerals.
- (3) A labeled set of working material.
- (4) An unlabeled working set, together with a quantity of unlabeled working material.
- (5) A set of Penfield's Wooden Crystal Models.
- (6) A set of Colored Plaster Crystal Models.

PETROLOGY. A working collection of hand specimens of rock is examined and identified by each student. The department also maintains apparatus for grinding thin sections of rocks, and is equipped with petrographical microscopes, thin sections, and the Krantz collection of rocks.

PHYSIOGRAPHY. The department has equipment for making relief maps as well as numerous charts and models for the illustration of physical features.

PALEONTOLOGY. The laboratory is especially well equipped for studying the paleontology of Oregon, and is rapidly acquiring working collections of the fossils of all geological ages, as well as collections representing the faunas of neighboring states.

ECONOMIC GEOLOGY. The department is well equipped with minerals and ores for introductory work in this subject. A complete equipment for field geology has been added, including transits, plane tables, hypsometers, compasses, levels, etc., for instruction in every phase of topographical and geological mapping.

PHYSICS

The rooms occupied by the department of physics are located on the first and second floors of Deady Hall. The lecture room and laboratories for elementary and general work on the second floor are provided with the standard equipment necessary for effective teaching. A rather unique feature is a large dark room equipped especially for instruction in photography. On the first floor are rooms devoted to advanced work, particularly in elec-

tricity, and to research. The equipment for electrical work is unusually complete. The department has provided some equipment especially for advanced work and research. Among these may be mentioned a Michelson interferometer, a Kraus mercury jet pump for high vacua, and an equipment for research in the thermo-electric properties of pure metals and alloys.

In recent years experimental researches have been carried out by members of the staff and students of the department on the following topics: The Resistances of Electric Sparks, Cadmium Standard Cells (unpublished), and a series of papers on the Thermo-electric properties of Bismuth and Bismuth-Tin Alloys. In addition there have already been published by members of the department, or are ready for publication, standard texts and theoretical research articles on topics in Thermodynamics, and Kinetic Theory of Gases, and the Correlation of the Electrical and Thermal Properties of Metals.

PSYCHOLOGY

The psychological laboratory in McClure Hall, is fortunate in the possession of a suite of small rooms so that delicate laboratory work and mental testing can be done with proper isolation. All of these rooms, nine in number, are connected by an intercommunicating system of wires and speaking tubes, and all are supplied with gas, compressed air and power circuits. Four additional rooms, not so equipped, are also available. The equipment of apparatus is ample for undergraduate purposes and for a certain amount of research.

Original investigations are always in progress in this laboratory. Recently most unique work has been done on the learning processes of the blind, which is now being checked by similar work on sighted youths. The development of several tests for the determination of individual mental differences among college students is also in progress and work is constantly done on the more obscure motivations of conduct.

In these researches all students are frequently privileged to participate. Advanced and graduate students are permitted to work independently upon phases of the problems studied, and for their needs the best of facilities are available.

ZOOLOGY

The laboratories of the department occupy the third floor of Deady Hall. The department has an equipment of all the ordinary apparatus for work in the several courses offered. The policy is to keep on hand all materials, glassware and chemicals necessary for regular class work and to furnish such special materials for advanced courses and research as the occasion may demand. The laboratory has furnished the opportunities for several pieces of research, some of which have been published by the students or members of the department, and others in preparation for publication.

GRADUATE WORK IN THE SUMMER SCHOOL

The University regularly offers a considerable number of graduate courses at each session of the summer school in Eugene. It is intended to offer these in such sequence that a student can pursue a coherent course for a series of summer sessions. Students of some advancement and ability who can work with a fair degree of independence are encouraged to remain for an additional period of summer work after the regular session. To such students the University offers work in its library and laboratories under the supervision of members of its graduate faculty. Ordinarily arrangements can be made which will ensure the student regular conference periods with the instructor in charge of his work.

GRADUATE WORK IN THE EXTENSION DIVISION

Under certain conditions a portion of the work required for a master's degree may be taken at the Portland Extension Center or by correspondence study. The details of this arrangement are stated under the requirements for master's degrees.

GRADUATE WORK IN COMMERCE

The School of Commerce offers advanced work under the supervision of the Graduate Council leading to a Master's degree. Students who have a preparation equal to that required for graduation from the regular course of the School of Commerce may

make Commerce their major subject, earning the degree of Master of Business Administration. Advanced work in Commerce may also be taken as a minor for the degree of Master of Arts.

GRADUATE WORK IN THE LAW SCHOOL

Under certain conditions some of the courses given by the law school may be taken with credit toward an advanced academic degree by graduate students in economics and political science.

GRADUATE WORK IN THE SCHOOL OF MEDICINE

The master's degree may be earned in the medical school of the University at Portland through graduate work in the laboratory sciences. The requirements for this degree are those specified by the committee on education of the American Medical Association, with such adaptations only as are made necessary by the administrative organization of the graduate school of the University, and are substantially the same as those for students resident in Eugene.

FINANCIAL

All graduate students not members of the instructional staff pay in three installments of \$6.00 each the University registration fee for each year in which they do resident work. Members of the instructional staff registering for graduate work pay a registration fee of \$3.00 each term. Laboratory fees are given in detail in the schedule of courses published at the beginning of each year or term.

The fees for graduate work done in the summer session or through the Portland Extension Center are ordinarily the same as for undergraduate courses, and are announced in their special bulletins. The fees for graduate courses taken through correspondence depend upon the length of the course, with \$2.00 as the minimum fee.

Graduate students have the same opportunity as undergraduates to secure room and table board in the University dormitories. These are administered by the University without profit. The cost for each student during the past year has been \$8.00 per week.

Ex-service men registered in the graduate school for resident work are entitled to state aid on the same basis as in the other schools and colleges.

GRADUATE ASSISTANTS

The University has established graduate assistantships in many departments, open to graduate students taking their major work in those departments. These assistantships ordinarily pay \$500.00 per year on first appointment, and are subject to an increase to \$600.00 on reappointment. Other minor positions, as readers or assistants, are also open to graduate students. Graduate students employed in such instructional work have the benefit of a reduction in their fees.

The duties of a full time graduate assistantship will require from sixteen to twenty hours per week of the students time, and hence the graduate council recommends that such full time assistants, whose duties consist of instructional or other work not contributing directly towards their degree, should not register for more than eight hours work each term, and does not permit them to carry over ten hours. Such students are strongly urged to seek reappointment, and to take two full years of work for their master's degree.

Those interested in securing such positions should correspond either with the Dean of the graduate school, or directly with the head of the department in which they expect to work.

ORGANIZATIONS

On the campus are a considerable number of organizations making their appeal to the graduate student.

Chief of these is the GRADUATE CLUB, which aims to include in its membership all resident graduate students, to bring these students together for social and other meetings, to emphasize the common interests of the graduate students of the different departments, and to cultivate an interest in graduate work.

A considerable number of organizations are associated either with departments or groups of departments. Some of these are of especial interest to certain groups of graduate students.

The SCIENCE CLUB, consisting of the faculty members of the science departments, admits graduate students to its membership,

and elects to honor membership seniors and graduates of high scientific attainments and promise.

The SOCIAL SCIENCE CLUB consists of faculty members of the social science departments.

DEPARTMENTAL CLUBS, whose affiliations are largely indicated by their names, are the Chemistry Club; the Condon Club of the department of geology, now a chapter of the Geological and Mining Society of American Universities; Le Foyer Francais; El Circulo Castellana; Phi Kappa Delta, a national organization of mature men interested in education; The Women's Education Club, a similar organization of women; Mu Phi Epsilon, a women's musical organization.

The YOUNG MEN'S CHRISTIAN ASSOCIATION and the YOUNG WOMEN'S CHRISTIAN ASSOCIATION, each have buildings of their own as headquarters, and welcome graduate as well as undergraduate students to their membership.

ADMISSION

Any graduate holding a Bachelor's degree or its equivalent from a reputable college or university, will be admitted to the graduate school without examination.

The applicant should file with the Registrar, his application for admission, on forms provided, accompanied by a copy of the catalog of the institution from which he graduated and official credentials showing (1) all preparatory work, (2) all undergraduate work, (3) all graduate work, and (4) degrees received.

College graduates who simply desire to take additional work either of graduate or of undergraduate character without seeking an advanced degree may be admitted to the graduate school and enjoy the privileges and exemptions of that school.

In case the student has received his first degree from an institution whose rating is below that of a standard college, or his specific preparation in either his major or his minor subject is less than that necessary for bona fide graduate work, he will be expected to take the necessary undergraduate courses without graduate credit, and may be advised to take the baccalaureate degree from this University, without, however, forfeiting his graduate status.

REGISTRATION

When a student has filed his credentials and received his card of admission from the registrar, he will choose an adviser, who if the student is a candidate for a degree, will be the head of his major department. This adviser will make out and sign the student's study card, which must be presented, together with the receipt for the registration fee for the term, at the registrar's office, where the card must be filed not later than Friday of the second week of the term.

DEGREES GRANTED

The University offers the following advanced degrees: Master of Arts, Master of Science, Master of Business Administration (in the School of Commerce) and in certain departments Doctor of Philosophy.

REQUIREMENTS FOR THE MASTER'S DEGREES

(1) Prerequisites. Before beginning the work which is to count for this degree the student should have the general preparation indicated by a degree from a standard college. Further, he should have considerable specific preparation in the line of both his major and minor subjects and any collateral or contributory subjects which are necessary for the successful prosecution of his advanced work. This will ordinarily mean at least two years of undergraduate work of upper division grade in his major subject, besides the collateral work; although a lesser amount may be accepted in certain cases.

(2) Admission to Candidacy. The candidate for an advanced degree should not only have adequate general and specific training for his work, but should also bring to a worthy program of work intellectual capabilities beyond those necessary to secure the ordinary baccalaureate degree. A formal petition must be filed with the registrar for the council, accompanied by a statement from the major professor of the program of work outlined by him for the student, which is to be followed substantially in the pursuit of the degree. This program must include at least one year-course of strictly graduate grade, of the type numbered

above 200. Except in the case of graduates of this institution whose preparation and ability are already known, formal acceptance as a candidate is deferred until the applicant has spent in residence at least a term of the regular year, or a summer session. This delay however does not prejudice the counting of work done during or even before this probationary period towards the degree, if satisfactory in advancement and quality. No officer or representative of the University is authorized to make any promises with regard to the conditions on which the degree will be granted, or even that it will be granted at all, in advance of this formal acceptance by the graduate council.

(3) Residence Requirements. The regular minimum residence requirement for candidates for the master's degree is one year. This does not imply that the work prescribed for the degree can always be completed within the limits of one academic year. In case of inadequate preparation compelling the taking of prerequisite courses, or when considerable demands are made upon the students time by outside activities such as self support, or a teaching appointment, a considerably longer time will be required. However, if the candidate's major and minor subjects lie in departments which offer the requisite graduate courses at the summer school or through the Portland Extension Center and through correspondence study, so as to make possible the earning of the credits necessary to meet the requirements for the master's degree, the following modified residence requirements will be accepted, subject to the approval of the graduate council:

(a) The minimum residence requirement made of candidates offering a combination of approved graduate courses taken in the summer school or the Portland Extension Center and by correspondence study shall be 27 term hours, involving not less than 18 weeks spent in actual resident study, of which 18 term hours at least must be earned in summer school courses or in courses of the Portland Center, and the remainder of the residence requirement may be fulfilled through study in the libraries and laboratories of the University under the direction of the head of the department in which the candidate is preparing his thesis.

(b) In order that courses taken in summer school or the Portland Center and through correspondence study may be acceptable toward an advanced degree, they must be listed either as "courses

for graduates" or "for graduates and advanced undergraduates," and must be sanctioned by the resident heads of the respective departments. Work not done in residence shall be registered and recorded through the correspondence study department. This may be of three types: courses regularly outlined and organized, and specifically announced as graduate courses; courses of reading and study especially outlined for the candidate by the head of the department concerned, such courses being permitted only in the case of students who have established their candidacy for the degree by some amount of residence work, and then only by special action of the council, the credit in these courses to be established by sufficiently severe examinations; and the thesis, which in many cases can be worked out advantageously by utilizing local material. But the standards for such work done in absentia shall not be lower than for work done in residence.

(4) Scholarship Requirements. The amount of work required for the master's degree is 45 term hours of approved graduate courses, to be divided between a major and a minor subject, the former receiving approximately 30 term hours and the latter 15. Nine of these 45 hours may be assigned to the thesis, two copies of which must be filed with the registrar for the graduate council on or before Monday of the third week before the close of the university year in which the degree is to be conferred. A special committee of not less than three members, of which the head of his major department is chairman, and the head of the minor department also a member, has the general charge of his course, having the power to designate the amount of credit to be assigned to the thesis, and being charged with the duty of subjecting the candidate to a public oral examination, at the close of which they shall certify to the graduate council their approval or disapproval of the conferring of the degree. The chairman of the committee acts as the student's adviser, making out and signing his study card, and certifying to the acceptability of his thesis.

The mere earning of the prescribed number of graduate credits is not held to be a sufficient basis for the granting of the degree. To ensure satisfactory quality of work it is provided that no credit toward the degree is granted for courses with a grade below "III," and that at least one third of the credits required must be of the grades designated as "I" or "II." The graduate council

further reserves to itself the right, and actually does scrutinize each student's card to determine whether he appears to have adequate preparation for his work, and whether the work offered for credit is of genuine graduate character, and constitutes an adequate and coherent program of study for the degree. It also expects the major professor and special committee to require of the candidate some degree of ability to do independent work, as well as faithfulness in assigned tasks as a basis for a favorable recommendation for the degree.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

(1) Departments. A department, to be permitted to offer major candidates for the degree of Ph. D., must first present to the graduate council a detailed statement showing that it has the personnel and equipment which will enable it to offer all necessary work satisfactorily. At present the council recognizes the departments of Psychology and Physics as prepared to give the necessary work for this degree. Other departments are expected to seek and receive this recognition from time to time.

(2) Prerequisites. The prerequisites for undertaking graduate work leading to the doctor's degree are the same as those stated under the requirements for the master's degrees, 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.

(3) Amount of Work. The minimum amount of work for a fully prepared student is three full 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 toward this requirement. Requirements of time, however, are wholly secondary. The degree of Doctor of Philosophy is based upon attainments and proven ability, and does not rest on any computation of time or any enumeration of courses, although no student may receive the degree until he has fulfilled the requirements of residence and study for the prescribed periods.

(4) Standards of Scholarship. The standards of scholarship required for the degree shall in no case be lower than for the

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 to his promise of intellectual productivity, in addition to satisfactory attainments in such courses as he may take.

(5) Residence. At least two full years must have been devoted to resident graduate study beyond the master's degree in some institution of recognized graduate standing. At least one full academic year, usually the last year, must have been spent in resident graduate work at the University of Oregon. But on the other hand it is not 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 University.

(6) Major and Minor Subjects. A student working for the doctor's degree registers for one major and one or two minor subjects. Approximately 60 per cent of his time is to be devoted to his major subject, including the thesis, and 40 per cent to the minor subjects. Work in the major subject, beyond the requirements for the master's degree, must be taken exclusively from courses designated as primarily for graduates. Further, the work of the student, especially in his major subject, should be not 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.

(7) Promotion to Formal Candidacy. Not less than six months before his final examination for his degree the candidate must pass an examination showing his reading knowledge of French and German. The purpose of this examination is to demonstrate the ability of the candidate to read the important literature of his subject in the language in which it was originally written, and the test shall be mainly upon the literature of his major subject. At the request of a major department another modern language may be substituted for one of those specified, when it appears that it will be of more value to the candidate. This examination is conducted by a committee of at least three, including representatives both of 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 should normally come at least one academic year before the time for the conferring of the degree, and at least two terms must intervene between the promotion and the degree; but no such promotion is made until the student has through actual work in residence established his title to such promotion.

(8) Thesis. The candidate must present a thesis embodying the results of his own original investigations. The general field, and if possible the subject of this research should be selected and such preliminary investigation of the field made as will justify an expectation of its fruitfulness before and as one of the grounds of the promotion to candidacy. Not later than three weeks before the date set for his final examination the candidate shall deposit at the registrar's office his thesis, in complete form, typewritten in triplicate, unless it has already been printed, in which case three printed copies are to be so submitted, for the use of the members of his examining committee. The thesis, if approved, shall be printed in such form as the graduate council shall approve, and not less than fifty copies shall be deposited in the University library. The degree shall not actually be conferred nor the diploma delivered until these copies have been deposited, or a sufficient financial guarantee made to ensure their printing and delivery.

(9) Examination. The final examination of the candidate shall be before a committee of not less than five, appointed by the graduate council on the nomination of the head of the major department. At least one member of this committee shall be some person of high standing in this major department, usually from some other institution of recognized graduate standing, if the attendance of such can be secured. There shall be an oral examination of three hours duration, duly advertised, and open to all interested persons, which may be preceded by such written examinations as may be prescribed by the department or the committee. These shall include both an examination upon the research work of the candidate, based upon his thesis, and upon his attainments in his major and minor subjects.

DEPARTMENTAL ANNOUNCEMENTS

The following is the statement of the Graduate courses now offered for the year 1921-22. Courses not carrying graduate credit are also listed as showing the desirable preparation for the work for advanced degrees, and the opportunity for making up any deficiencies in prerequisites. Such courses are merely listed without description

Numbers between 1 and 99 indicate courses intended primarily for lower division students, which can in no case receive graduate credit; those between 100 and 199 indicate courses intended primarily for upper division students, although many of this group may be taken for graduate credit by candidates for a Master's degree, or in the first year of work for the Doctorate; while those numbered 200 and above are exclusively graduate courses. Each program for the Master's degree must contain at least one year-course from the last group, and all work above the Master's degree must be taken from this group.

Not all the courses here listed are offered in any one year, although practically all the lower division courses and many of the upper division are so given. The work presented will however be open to the student during a reasonable period of residence. It is not intended to list any courses which the departments are not in a position to give whenever qualified students need them.

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

Detailed information regarding fees in laboratory courses is given in the Schedule of Courses distributed at the beginning of the year or term.

BOTANY

Professor SWEETSER

Miss SANBORN

Students planning to take graduate work in Botany should, in addition to an adequate preliminary preparation in this subject, have a working knowledge of General Chemistry, and more

than an elementary acquaintance with General Zoology and Animal Biology. The large plant collections in the possession of the department furnish very unusual opportunities for a study of the flora of the State and coast, and for work in Systematic Botany generally.

GRADUATE DIVISION

- 213. RESEARCH. Botanical problem.
- 214. RESEARCH. Bacteriological problem.
- 215. GRADUATE SEMINAR.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

103a, b, c. PLANT HISTOLOGY. A study of plant tissues. The technique of killing, embedding, sectioning, staining, and mounting of plant tissues. Sanborn. *Three or four hours, each term.*

104. MEDICAL AND ECONOMIC BOTANY. Plants used in medicine and the powdered drugs made from them. Plants used for food and in the arts. Sweetser. *Three hours.*

105. PLANT PHYSIOLOGY. A study of life phenomena as manifested in the plant. Pre-requisites, Courses 1 a, b, c. Lectures and laboratory. Sweetser. *Four hours, winter term.*

106. BACTERIOLOGY. Two lectures and two laboratory periods a week. Sweetser and Sanborn. *Four hours, winter and spring terms.*

107. BACTERIOLOGY. Continuation of Bacteriology 106. Two lectures and two laboratory periods a week. *Four hours, spring term.*

117. ADVANCED LABORATORY WORK IN BACTERIOLOGY. A continuation of Courses 106 and 107. Two laboratory periods to be arranged. *Two hours, spring term.*

108. SYSTEMATIC BOTANY. The classification of as many plant forms as possible. Two lectures and one laboratory period a week. Sweetser. *Three hours, fall term.*

109. FIELD AND SYSTEMATIC BOTANY. Analysis and classification of spring plant forms. Sweetser.

Three hours, spring term.

110. ADVANCED WORK IN BOTANY. Thesis.

Hours and credit to be arranged.

111. SEMINAR.

One hour.

112. PEDAGOGY. Practical study of methods of instruction in Botany. Sweetser.

Three hours, winter term.

114. RESEARCH. Work in Systematic Botany.

Hours and credit to be arranged.

COURSES NOT CARRYING GRADUATE CREDIT

1a, b, c. PLANT BIOLOGY AND GENERAL BOTANY.

Four hours each term.

11. SANITARY HYGIENE.

Three hours, fall term.

CHEMISTRY

Professor STAFFORD

Professor SHINN

Professor WILLIAMS

Students undertaking graduate work in Chemistry should have at least two year-courses of Chemistry of upper division grade, and in addition an adequate grounding in Physics and Mathematics. This will include a working knowledge of Calculus, a year of college Physics and preferably a year of upper division Physics.

A reading knowledge of German or French is almost indispensable.

Courses listed in the upper division will be accepted for graduate credit from students taking their minor work in Chemistry. For major work, only courses numbered 118 and higher receive graduate credit.

GRADUATE DIVISION

201. RESEARCH AND THESIS LABORATORY. Students are assigned to suitable problems for investigation under the supervision of a member of the staff.

205. SEMINAR. The Staff.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

105a, b, c. ORGANIC CHEMISTRY. Three lectures and one laboratory period. Williams. *Four hours, each term.*

No credit will be given for less than two terms work in Course 105.

106a, b, c. ADVANCED INORGANIC CHEMISTRY. The subject is handled largely from the point of view of the periodic table, the chemistry of the rarer elements being emphasized especially. Lectures and laboratory work. Stafford.

Three hours, each term.

112a, b, c. ADVANCED ANALYTICAL CHEMISTRY. The student may select work in the following subjects: water analysis, food analysis, electro analysis and spectroscopic analysis. Shinn.

Three or four hours, each term.

116a, b, c. PHYSICAL CHEMISTRY. Three lectures and one laboratory period. Stafford.

Four hours, each term.

118. ELECTROCHEMISTRY. Two lectures and one laboratory period. Stafford.

Three hours, winter term.

119. ADVANCED PHYSICAL CHEMISTRY. Special topics to be determined by the interests of those enrolled. Stafford.

Three hours, winter term.

120a, b. ADVANCED ORGANIC CHEMISTRY. Special topics are dealt with in more detail than in the elementary course, such as tautomerism, directed valence forces, stereochemistry of benzene and of the sugars, constitution of the proteins and enzyme action. In the laboratory special stress is placed on laboratory technique. Williams. *Three hours, winter and spring term.*

121. SANITARY CHEMISTRY. The chemistry of water purification, sewage treatment, preservation of foods. Stafford.

Hours to be arranged, spring term.

131. ADVANCED LABORATORY AND THESIS. The Staff.

Hours to be arranged.

COURSES NOT CARRYING GRADUATE CREDIT

1a, b, c. GENERAL CHEMISTRY. *Four hours, each term.*

3a, b, c. ANALYTICAL CHEMISTRY. *Four hours, each term.*

4a, b. ORGANIC CHEMISTRY FOR PREMEDICAL STUDENTS.

Four hours, fall and winter terms.

7. PHYSICAL CHEMISTRY FOR PREMEDICAL STUDENTS.

Four hours, spring term.

COMMERCE

Dean ROBBINS

Professor BASS

Professor BOLITHO

Assistant Professor HOGAN

Assistant Professor McDUGLE

The degree of Master of Business Administration is conferred upon students taking their major work in the School of Commerce who successfully complete a prescribed program of graduate work. A knowledge of the principles of economics and of legal procedure underlie sound business administration, and in this regard exceptional opportunities for advanced study in Commerce are afforded at Oregon, due to the presence on the campus of the department of Economics and the Law School. Generally speaking graduate students majoring in Commerce will find it advantageous to select either Economics or Law as a minor.

Commerce may be taken as a minor subject for the degrees of Master of Arts and Master of Science.

ACCOUNTING GROUP

The demands made upon the professional accountant today are so great and the examinations given by the state boards of accountancy are on such a high plane that it has been found advisable to offer a five year course in Accounting. The aim of this course is to prepare the student to pass the examination of the State Board of Accountancy in much the same manner as law and medical students are prepared to pass the State Medical and the State Bar examinations. Students who have not taken the four-year course in accounting offered by the University of Oregon or who have not had equivalent preparation cannot secure adequate preparation by taking one year of graduate work.

GENERAL BUSINESS AND FOREIGN TRADE GROUPS

The fifth years in General Business and Foreign Trade are arranged to suit the needs of the individual students. Whenever practicable the campus study will be combined with actual, supervised business experience. Only the exceptional student can hope to secure an advanced degree in one year. Persons who have not had a thorough grounding in Economics, Commerce and Law will find it necessary to complete such studies before proceeding to regular graduate work. In all cases of doubt write direct to Dean of the School of Commerce for detailed information.

LAW-COMMERCE COMBINED SIX-YEAR COURSE

Present day business conditions make it highly essential for the business manager to have an adequate knowledge of Law. Likewise, it is also essential for the lawyer to have adequate knowledge of the principles of sound business administration. In order to provide such training for commerce and law students, the School of Commerce and the School of Law are offering a combined six-year course in Commerce and Law. Students completing this work will receive the degrees of

Bachelor of Business Administration and Bachelor of Law. Detailed information regarding the curriculum may be secured either from the Dean of the Law School or from the Dean of the School of Commerce.

GRADUATE DIVISION

200 a, b, c. C. P. A. PROBLEMS AND SOLUTIONS. This course is an intensive study of the problems and questions asked by the examining boards of the various states as well as the American Institute of Accountants' examinations. The student is given extensive practice in the solution of numerous problems. The problems are so selected that the student is trained to analyze correctly and gain correct form and desired speed in solving difficult problems, involving a knowledge of partnerships, executors' accounts, corporation accounts, revenue accounts, fire insurance, real estate accounts, manufacturing cost accounts, mergers, reorganizations, statement of affairs, realizations and liquidations as well as law, income tax procedure and auditing. Prerequisite, graduate standing with adequate preparation to be determined by the instructor; Advanced Theory and Practice. *Four hours, each term.*

201 a, b. INCOME TAX PROCEDURE. An intensive study is made of the income and excessive profits tax laws of the United States. The student will be required to solve many problems involving personal, partnership and corporate returns. A thorough study is made of the forms, law, regulations, treasury decisions, involving all the modern points of law as well as decisions and rulings which affect business at present.

Pre-requisite, graduate standing, Advanced Accounting Principles, or equivalent practical experience.

Five hours, fall and winter terms.

202. REPORT WRITING. This course provides special training in the technique of good accounting reports as well as how to make proper analysis of audit papers. The styles and forms

of many large firms will be studied so that the student will be familiar with the many forms in use. The ability to form correct conclusions and give sound business advice from data given by audit papers is essential to the professional accountant.

Problems and research work, class discussions, report writing and library assignments will form the major part of this work.

Prerequisites, Graduate Standing, Auditing, Advanced Accounting, Theory and Practice.

203a, b, c. GRADUATE SEMINAR IN ACCOUNTING. Seminar and research in accounting. *Each term.*

210.a, b, c. GRADUATE SEMINAR IN GENERAL BUSINESS. Seminar and research in the problems of general business. *Each term.*

215a, b, c. GRADUATE SEMINAR IN FOREIGN TRADE. Seminar and research in foreign trade. *Each term.*

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

109a, b, c. LABOR MANAGEMENT. This course is intended primarily for those who expect to deal with large groups of labor. It is a survey of the scope and work of the labor manager including a study of the technique of the various types of trade agreements, the application of scientific management to labor and the attitude of organized labor toward it and a consideration of the various means of industrial betterment employed by representative firms throughout the country. Prerequisite, Labor Problems and senior or graduate standing. *Each term.*

110 a, b, c. INDUSTRIAL RELATIONS. This course traces the growth and historical development of industrial relations. Special emphasis is placed upon the work of the employer and labor leader during the war and a broad wage policy is outlined for present day and future industrial relations. The course emphasizes the respective interests of the employer, the employee and the public. *Each term.*

122a, b. CORPORATION FINANCE. A specific study of corporate securities; promotion; administration of income; expansion; receivership; bankruptcy and reorganization of the business enterprise. *Winter and spring terms.*

152. ADVANCED COST ACCOUNTING. This course is designed to meet the needs of students wishing to specialize in cost work and general auditing. Intensive study is made of basis of cost; cost control, cost records, inventories, payrolls, stock, flow of costs, materials, overhead burden and distribution, analysis of expenses, factory records, factory organization; financial and cost statements and exhibits; accounts; reports and systems. Theories of cost will be discussed and the practical value of each studied.

Lectures, text assignments, library references, charts, problems and general class discussion required. Prerequisites, Principles of Economics, Accounting Theory and Business Organization. *Fall term.*

156a, b. ADVANCED ACCOUNTING THEORY AND PRACTICE. A comprehensive study is made of the fine points in accounting theory and technique of practice. The student is expected to do a required amount of research work. Subjects, such as actuary science, sinking funds, reserves, capital stock, funded debt, contingent items, suspense accounts, interpretation of statements, corporations, mergers, consolidations etc., will be discussed. Problems, text assignments, research, library assignments, class discussion and reports are required of the student. Prerequisites, Accounting Theory and Practice, Business Finance, and technical law prescribed by instructor. *Five hours, fall and winter terms.*

158a, b, c. AUDITING. A study is made of the methods and procedure in connection with detailed, continuous and balance sheet audits. Careful study is made of the details in arrangement of working papers and carrying out an audit for business concerns. It is presumed that the underlying theory of accounts is well understood and that the student will be able to apply the theories. Text assignments, library references, a complete audit with all working papers and report, short problems, C P. A. questions and problems, quiz work and class discussions will require

the major part of the work. Pre-requisite, Advanced Accounting or training equivalent to it, and law courses as prescribed by instructor. *Five hours, each term.*

159. ACCOUNTING SYSTEMS. This course includes the practical application of all the accounting courses in so far as it gives the student the opportunity to express himself in the construction of accounting systems for both small and large business concerns. The student is required to write the procedure for installing accounting systems, methods of controlling general and branch store systems and factory cost systems. Special business concerns will be studied and systems worked out to fit peculiar situations as well as standard business practices. It is hoped to meet the demands of the modern business men by doing research work and establishing systems to meet the particular needs of the various kinds of business enterprises. The University reserves the right to publish the results of any research work done in this or other classes. Pre-requisites, Advanced Accounting Theory and Practice. *Five hours, spring term.*

COURSES NOT CARRYING GRADUATE CREDIT

The undergraduate curricula of the School with lists and descriptions of its courses which carry only undergraduate credit are given in full in the Bulletin of the School of Commerce, which will be sent on request.

ECONOMICS

Professor GILBERT Professor CROCKATT Professor CAMERON

The candidate for a Master's degree with a major in Economics should previous to registration have completed the equivalent of the Lower Division work including the Principles of Economics, and one Upper Division course of four or five term hours. Any of the Upper Division courses taken with supplementary work assigned by the instructor may be counted for graduate credit. Graduate students with a major in Economics

may carry a minor in any of the following departments or schools: Sociology, Political Science, History, Education, Commerce, and Psychology.

GRADUATE DIVISION

201, 202, 203. RESEARCH IN ECONOMICS. Original work for thesis purposes. Gilbert. *Each term.*

210, 211, 212. ECONOMICS SEMINAR. *Each term.*

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

105. LABOR PROBLEMS. Treats of the conditions under which laborers work since the advent of the industrial revolution. Topics especially emphasized are: child labor, immigration, strikes and lockouts, industrial arbitration, social insurance, remedial legislation, etc. Open to students who have taken Principles of Economics or Principles of Sociology. *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, Labor Problems. *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. *Four hours, winter 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 are considered. The monetary history of the United States and the present monetary system are treated. Principles underlying sound banking and the use of credit are analyzed and the history causes and remedies for crises and panics are discussed. Prerequisite, Principles of Economics. Gilbert.

Five hours, spring term.

115. HISTORY OF ECONOMIC THOUGHT. The evolution of economic doctrines from the Greek and Roman period to the more advanced ideas of today will be considered and the relation to contemporary economic conditions indicated. Special attention will be given to the classical school and the transmission and criticism of their theories by subsequent writers. Prerequisite, Principles of Economics. Gilbert. *Three hours, spring term.*

118 a, b. PUBLIC FINANCE. The aim of this course is 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 are considered and a constructive plan for fiscal reform outlined. At all points special consideration will be given to Oregon problems. Prerequisite, Principles of Economics. No credit for one term. Gilbert. *Four hours, fall and winter terms.*

123. TRUSTS AND INDUSTRIAL COMBINATIONS. This course deals with 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 are considered and plans for safeguarding the public interest are outlined. Prerequisite, Principles of Economics. Cameron. *Five hours, fall term.*

124. GOVERNMENT CONTROL OF NATURAL MONOPOLIES. This course aims to consider sound lines of policy in regulating, controlling or owning natural monopolies or public utilities other than steam railways. Special attention will be given to municipal ownership in America and Europe and the economic and political problems incidental thereto. Prerequisite Principles of Economics. Cameron. *Five hours, winter term.*

135. RAILWAYS AND RATE REGULATION. The study of transportation by land as a factor in modern economic life, the tendency toward combination and the problems of discriminating rates will be treated. Special consideration is given to the prin-

ciples underlying rate making, public regulation, war time control and government ownership. Prerequisite, Principles of Economics. Crockatt. *Five hours, fall term.*

141. CONSERVATION OF NATIONAL RESOURCES. An inventory of our resources in mineral wealth, water, soil, timber, etc., will be taken and practices which lead to waste and extravagance will be considered. An effort will be made to develop sound lines of public policy which will arrest needless waste, promote restoration and encourage conservation. Prerequisite, Principles of Economics. Gilbert. *Three hours, spring term.*

162. INTERNATIONAL TRADE AND TRADE POLICIES. The principles underlying international trade and its effects on the industrial life of trading nations will be examined and the advantages of international trade discussed. Special attention will be given to the trade policies of America, England and Germany and the effect of the war on future trade policies of the nations. Prerequisite, Principles of Economics. Crockatt.

Five hours, spring term.

163. PRINCIPLES OF OCEAN TRANSPORTATION. The history of the ocean carriers is studied as an introduction to the underlying principles of the present problem of the merchant marine and ocean traffic. Special attention is given to subsidies and aids and the regulation of ocean commerce and transportation. Prerequisite, Economic History and Principles. Crockatt.

Five hours, winter term.

COURSES NOT CARRYING GRADUATE CREDIT

1. ECONOMIC HISTORY. *Four hours, fall or winter term.*

3a, b. THE PRINCIPLES OF ECONOMICS.

Four hours, fall and winter terms.

4. BUSINESS ORGANIZATION.

Four hours, spring term.

EDUCATION

Dean SHELDON

Professor DEBUSK

Professor GREGORY

Professor DOUGLAS

Professor STETSON

Students expecting to do graduate work in Education should have completed at least two years of consecutive work in the subject as undergraduates. The courses which are ordinarily taken in the undergraduate years are enumerated below and are not counted for graduate credit. It is not supposed that students expecting to do graduate work should have had all of these courses dealing with introduction to Education and with teaching technique. It is supposed, however, that they have had enough work of this type in Education to prepare them for the more advanced courses. In evaluating the courses taken in other institutions, such subjects as philosophy, sociology, and psychology will be taken into consideration.

GRADUATE DIVISION

201a, b, c. PROBLEMS IN THE HISTORY OF NINETEENTH CENTURY EDUCATION. A technical course involving the preparation and historiography dealing with special problems in the field of English and American education during the nineteenth century. The library is equipped with the requisite sources of material for the study of: a. Educational history of Oregon; b. History of Methods and Ideals in American Education; c. History of state education in Great Britain during the nineteenth century. Sheldon.

Three hours, each term.

202a, b, c. ADVANCED EDUCATIONAL PSYCHOLOGY. The psychology of endowment, of learning and of individual differences. DeBusk.

Three hours, each term.

203a, b, c. PROBLEMS IN SCHOOL ADMINISTRATION. The problems to be selected will depend upon the previous training and future plans of the students taking the course. Each student will be expected to work at some phase of school administration which will not only make him an authority in that field

but will also make a contribution to the facts and data now extant. Open only to students with at least one years' graduate training who have had courses 171, 172, 173, or their equivalents. Gregory. *Two hours, each term.*

204. EXPERIMENTAL PROBLEMS IN TEACHING. A research course in investigation of problems and methods of instruction. Douglas.

205. RESEARCH COURSE IN SECONDARY EDUCATION. Open only to qualified graduate students who wish to do constructive work or carry on investigations in the secondary field. Due emphasis will be given to methods of procedure in research. Stetson. *Three hours, each term.*

206. RESEARCH IN EDUCATION. Research problems in elementary education. Gregory.

207. RESEARCH IN EDUCATION. Problems in educational hygiene. DeBusk.

208. CURRICULA IN GEOGRAPHY AND UNITED STATES HISTORY. The scientific determination of the materials to meet the aims of education in geography and United States history. Study and criticism of aims, processes and results. Comparison of courses now extant with aims. The development of methods and actual gathering of materials for different phases of these subjects. Individual problems after a technique is developed. Open to students with one year graduate standing or equivalent, who have had courses 171, 172, 173 in education. Gregory.

Three hours, fall term.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

151a, b, c. 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. a. Colonial period, 1607-1775; fall quarter. b. Early national, 1775-1860; winter quarter. c. Recent period, 1860-1920, spring quarter. Sheldon.

Three hours, each term.

152. WORLD PROBLEMS IN EDUCATIONAL REORGANIZATION. A study of the educational expansion of Europe and America with special attention to primitive peoples and to conditions in the Orient. Sheldon. *Four hours, spring term.*

153. 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. Sheldon. *Four hours, fall term.*

154. EDUCATION AND ETHICS. A consideration of education from the point of 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 153. Sheldon. *Four hours, winter term.*

155. EDUCATION SYSTEM OF OREGON. A study of the history and larger administrative problems of the state of Oregon. The course will consist of a few lectures outlining the field and of thesis topics, worked up by members of the class. Should be taken in connection with 151. Sheldon. *Two hours, each term.*

156. EDUCATIONAL CLUB AND SEMINAR. Reports of current educational meetings, book reviews, discussion of special topics investigated by members. Sheldon and departmental staff. *Two hours, each term.*

161. PSYCHOLOGY OF CHILDHOOD. A study of the mental processes of the child with special emphasis on the changes that take place during learning. Open to students who have had Education 51, 52 and 53 or equivalent and to those students who are specially prepared for social service work. DeBusk. *Three hours, spring term.*

162. HYGIENE OF THE SCHOOL CHILD. Growth and its disorders. The hygiene of learning. Preventive mental hygiene. Open to students who have had Education 51, 52 and 53 or

equivalent and those regularly enrolled in preparatory medicine or physical education and hygiene. DeBusk.

Three hours, fall term.

163. MENTAL TESTS. A survey of the literature of tests of value in the measurement of the intelligence of the child. Practice in mental testing and the treatment of results. Open to seniors and graduates who have had general psychology or Education 53 and 161. DeBusk,

Three hours, fall term.

164. EXCEPTIONAL CHILDREN. A study of the defective, delinquent, retarded and superior children. Their social and educational treatment. Open to seniors and graduate students who have had Education 163 or Psychology 108. DeBusk.

Three hours, winter term.

165. SCHOOL HEALTH WORK. The problems involved in health supervision and examination and in the teaching of hygiene. Prerequisites, Education 51, 52 and 53 or equivalent. DeBusk.

Three hours, spring term.

166. THE SCHOOL PLANT. The physical environment of school children. Problems in the construction and sanitation of school buildings. Prerequisites, Education 51, 52, and 53 or equivalent. DeBusk.

Three hours, winter term.

167. HYGIENE OF LEARNING. A study of physiological and environmental factors that affect the learning of the child. Prerequisites, Education 51, 52, and 53 or equivalent. DeBusk.

Three hours, spring term.

171. SCHOOL ADMINISTRATION. State, county, town, township, and district organization. The school district and its problems of organization, administration, supervision, instruction and measurement. Reorganization of county and state school administration. Gregory.

Four hours, winter term.

172. EDUCATIONAL TESTS AND MEASUREMENTS. This course is designed to give the student a comprehensive view of the field of educational measurements. The use of tests and surveys will be taken up. Special study will be made of the need for measuring the materials, processes and products of education. Literature dealing with conferences on educational measurements will be

discussed. The advantages and limitations of tests will be given special attention. Enough of the mathematics will be given to understand measures of central tendency and measures of variation. Gregory. *Four hours, spring term.*

173. ORGANIZATION OF COMMON SCHOOL CURRICULA. Principles underlying the development of the course of study. The content of the course of study. The scientific determination of what we shall teach with special reference to spelling, reading, United States History and arithmetic. Evolving curricula from the functional point of view; from other points of view. Quantitatively determining the materials of instruction. Gregory.

Four hours, spring term.

174. GRADING AND EVALUATING THE MATERIALS OF INSTRUCTION. This course seeks to discover the underlying principles for grading and evaluating the materials of instruction for the elementary school. The biological, psychological and sociological principles governing grading will be given special attention. An attempt will be made to discover not only what principles are now operative in grading the materials of instruction but what principles ought to govern such procedure. This is a library course and presupposes a general acquaintance with educational literature. Gregory.

Four hours, one term.

175. STATISTICAL METHODS APPLIED TO EDUCATION. This is the method of statistical analysis. The mathematical formulae applied to educational measurements will be developed. Much drill in reading and interpreting statistics will be given. Enough problems will be assigned to develop the technique of the subject. Drill will be given in the graphic representation of results. Gregory.

Four hours, one term.

181. HIGH SCHOOL ADMINISTRATION AND SUPERVISION. This course will deal directly with such problems as the following: Organization of the school for instruction and for socialization; teacher and pupil assignments; school finances; standardizing routine; problems of health; publicity, and community relations; equipping the school; the principal as supervisor; teachers' meetings; measuring school efficiency; school morale; the high school and other institutions. 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 achievement 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.

COURSES NOT CARRYING GRADUATE CREDIT

105. HIGH SCHOOL PROBLEMS.

106. THE THEORY AND OBSERVATION OF TEACHING.

107a. SUPERVISED TEACHING.

107b. EDUCATIONAL LITERATURE AND LIBRARY WORK.

108. CIVIC EDUCATION.

109. METHODS IN THE TEACHING OF HIGH SCHOOL SCIENCE.

51. AN INTRODUCTORY COURSE TO EDUCATION.

52. HISTORY OF MODERN EDUCATION.

53. EDUCATIONAL PSYCHOLOGY.

ENGLISH

Graduate students taking their major work in English may register either with the Department of Rhetoric and American Literature, or with that of Modern English Literature. They should have made English their major subject for their first degree, or at least have pursued it to approximately this extent, and should have a reading knowledge of modern languages. The choice of a minor subject should be made after consultation with the adviser. It may be in the other department of English, or may conceivably be selected from such departments as Philosophy, History, Economics, Psychology, one of the Foreign Languages, or Music or the Fine Arts. The program of a student making English his minor subject will vary according to the nature of his major work.

RHETORIC AND AMERICAN LITERATURE

Professor BATES	Professor THACHER	Professor BURGESS
Professor PERKINS		Miss TURNEY

The normal program of a graduate major during the first year will consist of Courses 207 (Principles of Criticism), 150 (General Literature, Classicism, Romanticism and Realism), in addition to 203 (Seminar) and 204 (Thesis).

GRADUATE COURSES

203. SEMINAR. Devoted to research problems. Open to graduate students and to occasional seniors who obtain special permission. Bates. *Two hours, each term.*

204. THESIS.

207. PRINCIPLES OF CRITICISM. A course, primarily designed for graduate students, affording a comparative study of critical theory and the application of theory to special problems. Bates. *Three hours, each term.*

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

114. ADVANCED WRITING. A course of seminar character. Open only to advanced students who desire to become professional writers. Thacher. *Two hours, each term.*

115. **TECHNIQUE OF DRAMA.** Advanced course in playwriting. Composition of one-act, two-act, and three-act plays. Bates.

Two hours, each term.

126. **ANGLO-SAXON.** Grammar and translation of selected passages. Bright's Anglo-Saxon reader will be used. Two years of German a prerequisite. Perkins.

Three hours, fall and winter terms.

127. **CHAUCEER.** As much of Chaucer's work is read as time permits, with careful attention to his sources of material, poetical forms, pronunciation and grammar. Perkins.

Three hours, spring term.

128. **HISTORY OF THE ENGLISH LANGUAGE.** The development of the English language from the Anglo-Saxon period to the present time. The historical basis of English grammar, spelling, pronunciation, and usage. Perkins.

Three hours, fall term.

166. **EMERSON.** The influence of Plato, Goethe, Coleridge, Carlyle and others upon Emerson; parallels with Marcus Aurelius, Epictetus; the effect of Emerson upon modern thought. Reading from poems, essays, Representative Men and English Traits. Burgess.

Three hours, winter term.

172. **CONTEMPORARY AMERICAN POETRY.** Recent regular verse, free verse, polyphonic prose. Students will read with a view to understanding the work of the period, and also with a view to collecting, editing and presenting the work of their especially assigned authors. Burgess.

Three hours, spring term.

176. **WALT WHITMAN; A STUDY OF ROMANTIC OPTIMISM.** Transcendentalism; the ideals of democracy; Whitman's great program; his degree of attainment; his influence on the literature of today. Lectures and discussions. Burgess.

Three hours, winter term.

182. **AMERICAN DRAMA.** Reading of representative American plays. Study of some recent movements in the development of American drama. Turney.

Three hours, winter and spring terms.

COURSES NOT CARRYING GRADUATE CREDIT

111. ADVANCED SHORT STORY WRITING. *Two hours, each term.*
 113. TECHNIQUE OF POETRY. *Two hours, each term.*
 121. ANGLO-SAXON LITERATURE IN TRANSLATION.
Three hours, spring term.
 152. TEACHERS' COURSE. *Two hours, fall and winter terms.*
 174. CONTEMPORARY AMERICAN FICTION.
Three hours, spring term.
 175. EDGAR ALLAN POE. *Three hours, winter term.*
 178. AMERICAN PHILOSOPHY. *Three hours, each term.*
 159. AMERICAN ORATORS. *Two or three hours, spring term.*
 160. GREAT HISTORIANS *Two or three hours, each term.*
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1. ENGLISH COMPOSITION. *Three hours, each term.*
 4. MAGAZINE WRITING. *Two hours, each term.*
 5. NARRATION. *Three hours, winter and spring term.*
 7. THE STUDY OF WORDS. *Two hours, spring term.*
 9 a, b, c. BUSINESS ENGLISH—WRITTEN AND SPOKEN.
Three hours, each term.
 11. SHORT STORY WRITING. *Two hours, each term.*
 15. ELEMENTARY PLAY WRITING.
Two hours, winter and spring terms.
 59. AMERICAN LITERATURE. *Three hours, each term.*

ENGLISH LITERATURE

Professor HOWE

Professor WATSON

Miss DOBIE

GRADUATE DIVISION

201. SURVEY OF THE ENGLISH CRITICS. Watson.
Three hours, each term.
 205. SEMINAR. For graduates and honor students. Problems
 in research. Howe, Watson, Dobie. *Three hours, spring term.*
 210. THE PHILOSOPHICAL FOUNDATIONS OF ENGLISH LITERA-
 TURE. Selections from Bacon, Hobbes, Locke, Berkeley, Hume,

the Deists, the Economists, the Utilitarians, the Evolutionists and the Pragmatists will be read by the class. Watson.

Three hours, each term.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

110. SHELLEY. His more important works in their order as written, with attention to his importance both as philosopher and as poet. Howe.

Three hours, fall term.

115. BROWNING. The Ring and the Book and the important shorter poems. The aim is to give the student facility in reading Browning understandingly, and to acquaint him with the author's outlook on life. Dobie.

Three hours, spring term.

133. MILTON. *Paradise Lost* entire and the minor poems. Watson.

Three hours, fall term.

140, 141, 142. ENGLISH PROSE WRITERS OF THE EIGHTEENTH CENTURY. Gibbon, Burke, Samuel Johnson, Boswell, Hume and others. Howe.

Three hours, each term.

145, 146, 147. ENGLISH PROSE WRITERS (NOT NOVELISTS) OF THE NINETEENTH CENTURY. De Quincey, Lamb, Hazlitt, Carlyle, Ruskin, Mill, Huxley, Matthew Arnold, Pater. Courses in sequence, but may be taken separately. Dobie.

Three hours, each term.

155, 156, 157. LIVING ENGLISH WRITERS. Kipling, Shaw, Wells, Arnold Bennett, Galsworthy, Chesterton, Granville Barker, St. John Hankin, Dunsany, Davies, W. H. Hudson; poetry, essay, short story, drama, and novel. Courses in sequence, but terms may be taken separately. Howe.

Three hours, each term.

160, 161, 162. CONTEMPORARY EUROPEAN LITERATURE. English in its relation to other European literatures, to Ibsen, the Russians, Maeterlinck, and others. Howe.

Three hours, each term.

170, 171. HISTORY OF ENGLISH LITERATURE. This course, planned for honor students and intending teachers, is advised for junior year. Dobie.

Three hours, fall and winter terms.

175. TEACHING OF ENGLISH LITERATURE. Lectures, papers and conferences. Required of all who expect to teach English. Should be taken in junior year, preparatory to practice teaching in senior year. Howe and Dobie. *Five hours, spring term.*

185, 186, 187. REPRESENTATIVE ENGLISH NOVELISTS. Richardson, Fielding, Smollett, Scott, Jane Austen, Dickens, Thackeray, George Eliot, Meredith, Hardy. Watson. *Three hours, each term.*

190, 191, 192. SOCIAL PROBLEMS IN THE ENGLISH NOVEL. Miss Edgeworth, Dickens, Kingsley, and other nineteenth century and contemporary novelists who have made the novel the vehicle of social criticism. Watson. *Three hours, each term.*

COURSES NOT CARRYING GRADUATE CREDIT

101, 102, 103. ENGLISH POETRY. *Three hours, each term.*

120. THE ROMANTIC POETS. *Three hours, fall term.*

130. THE VICTORIAN POETS. *Three hours, winter term.*

135, 136, 137. ENGLISH DRAMA. *Three hours, each term.*

195. THE ENGLISH NOVEL, ITS EVOLUTION AND SCOPE.
Three hours, each term.

165. FORERUNNERS OF ROMANTICISM.
Three hours, winter term.

1, 2, 3. OUTLINES OF ENGLISH LITERATURE.
Three hours, each term.

25. WORDSWORTH. *Three hours, spring term.*

30. WILLIAM MORRIS. *Three hours, winter term.*

50, 51, 52. SHAKESPEARE. *Three hours, each term.*

WORLD LITERATURE

Professor BATES

Professor HOWE

All of the courses listed below must be taken for three consecutive terms in order to obtain credit.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

150 a, b, c. CLASSICISM, ROMANTICISM AND REALISM. A study of the meaning of these critical terms, their philosophical sig-

nificance and their expression in the various literary and artistic movements of history considered in relation to national life. Open to graduate students and to undergraduates who have obtained a grade of I or II in Courses 97, 98, 99 or 100, 101, 102. Bates. *Two hours, each term.*

COURSES NOT CARRYING GRADUATE CREDIT

97. ORIENTAL LITERATURE. *Two hours, fall term.*
98. GREEK AND ROMAN LITERATURE. *Two hours, winter term.*
99. MEDIEVAL AND RENAISSANCE LITERATURE.
Two hours, spring term.
100. SEVENTEENTH AND EIGHTEENTH CENTURY LITERATURE.
Two hours, fall term.
101. LITERATURE FROM 1800 TO 1850. *Two hours, winter term.*
102. LITERATURE FROM 1850 TO THE PRESENT.
Two hours, spring term.

GEOLOGY

Professor SMITH

Professor PACKARD

Professor HODGE

Two quite different lines of advanced work are offered by this department: Geology, which largely depends upon and is closely related to Physics and Chemistry; and Paleontology, which is more closely related to and dependent upon Zoology and Botany. The student's preparation should hence be differentiated to conform to his choice between these lines.

It is very desirable that students planning to take their major line of graduate study in this department should have had the full preparation received by an undergraduate majoring in the department. The minimum adequate preparation would include one year of general Chemistry, one year of either Physics or Zoology, Geology 1 a, b, c, Mineralogy 4 a, b, c, courses 111 and 116, and at least one other Upper Division course in the line of special interest.

The student planning to take Geology as a minor subject should have had either Zoology or Chemistry, Geology 1, and at least one other year-course in Geology, depending on his line of interest.

Upper Division courses, when taken for graduate credit will be supplemented by additional assignments of work. For major work only the following will be accepted: 102, 103, 106 a, b, c, 109b, 113, 118, 119, 121, 122, 170.

GRADUATE DIVISION

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. *One hour, each term.*

202. ADVANCED GEOLOGY. Special work assigned to meet the requirements of advanced students.

208. ADVANCED PALEONTOLOGY. Special work assigned to meet the requirements of the advanced student.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

101. STRUCTURAL GEOLOGY. A laboratory and field study of joints, faults, folds, and other rock structures, and typical geologic sections. Pre-requisites: Geology 1 or 2, and 111.

Two hours, spring term.

102 a, b, c. ADVANCED ECONOMIC GEOLOGY. The geology of the valuable non-metals including their occurrence, association and genesis. In the non-metals, particular attention will be paid to the fuels and to materials of construction. Under metals will be considered the methods employed in prospecting and the developing of ore bodies. Reasons for and methods of conservation of the various mineral resources will also be given special emphasis. Pre-requisites: Geology 1, 4, 111, 116.

Three hours, each term.

103. OIL GEOLOGY. A study of the geologic principles affecting the petroleum industry with a survey of the principal oil fields and a consideration of field methods employed in their development.

Two hours, spring term.

104. PHYSIOGRAPHY (*Teachers' Course*). An advanced course in Physiography with special emphasis upon the practical problems confronting a teacher of Physical Geography. Pre-requisite: Geology 1. Two lecture and recitation hours, and one laboratory period.

Three hours, spring term.

105. THE TOPOGRAPHY AND PHYSIOGRAPHY OF THE UNITED STATES. A study of the typical physiographic features of the United States. Open to both lower and upper division students.
Two hours, spring term.

106a. OPTICAL MINERALOGY. The study of thin sections of rock minerals by means of the petrographic microscope. Special emphasis is laid on the determination of opaque economic minerals. Pre-requisite: Geology 1, 4, 116. One laboratory period.
Three hours, fall term.

106 b, c. PETROGRAPHY. The continuation of 106a. This course takes up the study of rocks and their identification by means of thin sections. Laboratory work in the making of thin sections.
Three hours, winter and spring terms.

107. FIELD GEOLOGY. A general course in geologic mapping and survey methods. The major portion of the time will be devoted to the topographic and geologic mapping of an assigned area. A written report on the area mapped will be required in this course. Pre-requisites: Geology 111, 116, and Architecture 62.
Two hours, spring term.

108a. INVERTEBRATE PALEONTOLOGY. A laboratory and lecture study of the main groups of recent invertebrates and comparison with fossil specimens. Two laboratory and two lecture periods a week.
Four hours, spring term.

108b. INVERTEBRATE PALEONTOLOGY. A continuation of course 108a, using Zitte's Textbook in Paleontology.
Four hours, fall term.

109 a, b. VERTEBRATE PALEONTOLOGY. A study of the osteology and history of a few selected groups of vertebrates.
Three hours, fall and winter terms.

111. PRINCIPLES OF STRATIGRAPHY. The genesis and subsequent history of stratified rocks, including a study of the geologic processes concerned with sedimentation, cementation, diastrophism, and weathering; and the consideration of methods of entombment of organic remains and their significance in geologic correlations.
Four hours, fall term.

113. COAL. A study of the properties of coal, its geologic occurrence, and the general methods of production.

Two hours, winter term.

116. PETROLOGY. A study of the common rock forming minerals and the microscopic determination of common types of rocks.

Four hours, winter term.

118. TERTIARY FAUNAS. A study of the faunal aspects of the principal West Coast horizons, and the determination of characteristic index fossils. Pre-requisites: Geology 111, and 108.

Four hours, winter 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. Pre-requisites: Geology 111, and 108.

Four hours, spring term.

120. GEOLOGIC HISTORY OF NORTH AMERICA. The geologic development of North American continent. Pre-requisites: Geology 111 and 108a.

Three hours, fall term.

121. GEOLOGIC HISTORY OF THE PACIFIC COAST. The geology of the Pacific Coast of North America. Pre-requisite: Geology 111, 108a.

Three hours, winter term.

122. GEOLOGIC HISTORY OF OREGON. A study of the geology of Oregon and the discussion of local geological problems. Pre-requisite: Geology 121.

Three hours, spring term.

140. PRINCIPLES OF ASSAYING. Principles of fire assaying and the determination of gold, silver and lead in ores.

Four to six hours, winter term.

170. ADVANCED FIELD GEOLOGY. A detailed field study of a small selected area. This work is conducted in a summer camp of three weeks. Recommended for all majors and graduates. May be taken with full credit for a series of summers, as a different area is studied each season.

Five hours.

COURSES NOT CARRYING GRADUATE CREDIT

- 1 a, b, c. GENERAL GEOLOGY. *Three or four hours, each term.*
2. DYNAMIC GEOLOGY. *Four hours, spring term.*
- 4 a, b, c. MINERALOGY. *Three hours, each term.*
- 5 a, b, c. ECONOMIC GEOGRAPHY. *Three hours, each term.*
8. THE DEVELOPMENT AND HISTORY OF LIFE.
Three or four hours, winter term.
9. GEOLOGIC HISTORY OF MAN. *Three hours, spring term.*
10. GEOLOGY OF STRUCTURAL MATERIALS.
Three hours, spring term.

GERMANIC LANGUAGES AND LITERATURE

Professor SCHMIDT

Professor THORSTENBERG

The pre-requisite for graduate work in German is two full years of upper division work approved by the department. Upper division courses which are taken for graduate credit will have additional assignment of work, and appointments will be made at special intervals for special reports and conferences.

Graduate students making Germanic Languages and Literature their major subject will be permitted to elect a minor in one of the following departments: English, Romance Languages, Classical Languages, Music, Philosophy, History.

GERMAN LANGUAGE AND LITERATURE

GRADUATE DIVISION

201. MIDDLE HIGH GERMAN. Michels, *Mittelhochdeutsche Grammatik*, 1910; Henrici, *Proben der Dichtungen des Mittelalters*, Berlin, 1898; Selections from *Nibelungenlied*; Walter von der Vogelweide; *Parsifal*; Lexer, *Mittelhochdeutsches Taschen-Woerterbuch*.
Three hours, two terms.

202a. 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.

202b. OLD ICELANDIC. Noreen's Altislaendische and Alt Norwegische Grammatik is used.

203. GOTHIC AND THE ELEMENTS OF COMPARATIVE GERMAN GRAMMAR. Braune, Gotische Grammatik, latest edition (1914). Heyne's Ulfilas, 9. Auflage, von F. Wrede, Paderborn, 1896; Streitberg's Urgermanische Grammatik. This course is required for advanced degrees in English Philology.

204. 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 Vietor's Kleine Phonetik (London, J. M. Dent & Co., 1913); Kleines Lesebuch in Lautschrift von Vietor; Sweet, A Primer of Phonetics (Oxford, Clarendon Press, 1890); lectures. Each student will make a special study of his English vowels.

Two hours, one term.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

103. MODERN GERMAN DRAMA. Some of the following dramas: 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. Thorstenberg.

Three hours, each term.

104. GERMAN POETRY. Poems of Goethe, Schiller, Uhland, Heine, etc. Hours to be arranged.

Two hours, winter and spring terms.

105. GOETHE'S FAUST. Part I with commentary. Schmidt.

Three hours, winter term.

106. GOETHE'S FAUST. Part II with commentary.

Three hours, spring term.

110. 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 term.

114. THE NINETEENTH CENTURY NOVELS. Freytag's Soll und Haben, or Rittmeister von Alt-Rosen; Meyer's Juerg Jenatsch; Sudermann's Der Katzensteg; Frenssen's Joern Uhl; Storm's Der Schimmelreiter; Riehl's Kulturgeschichtliche Novellen; Paul Heyse's Das Glueck von Rothenburg; Scheffel's Ekkehard; Ludwig's Zwischen Himmel und Erde; Dahn's Ein Kampf um Rom. In addition to this, suitable selections from Ganghofer, Rosegger, Auerbach, Ebner-Eschenbach, Spielhagen and others will be assigned for outside reading. Schmidt. *Three hours, each term.*

COURSES NOT CARRYING GRADUATE CREDIT

101 a, b, c. CLASSICAL GERMAN. *Three hours, each term.*

102 a, b, c. GERMAN FICTION AND CONTEMPORARY LITERATURE. *Three hours, each term.*

107 a, b. HEINE'S PROSE. *Two hours, fall and winter terms.*

108. HISTORICAL AND PHILOSOPHICAL GERMAN.

109. COMMERCIAL GERMAN. *Two hours, one term.*

111 a, b, c. ADVANCED GERMAN COMPOSITION. *Two hours, each term.*

112 a, b, c. GERMAN CONVERSATION. *Two hours, each term.*

113 a, b, c. HISTORY OF GERMAN LITERATURE. *Two hours, each term.*

1 a, b, c. ELEMENTARY GERMAN. *Five hours, each term.*

2 a, b, c. INTERMEDIATE GERMAN. *Five hours, each term.*

3 a, b, c. SECOND YEAR GERMAN. *Four hours, each term.*

4 a, b, c. SCIENTIFIC GERMAN. *Three hours, each term.*

SCANDINAVIAN LANGUAGE AND LITERATURE

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

124, 134. ADVANCED NORWEGIAN OR SWEDISH. Study of works, in the original, or representative Scandinavian authors, supplemented by advanced prose composition and conversation.

Two hours, fall and winter terms.

COURSES NOT CARRYING GRADUATE CREDIT

123. SCANDINAVIAN LITERATURE (conducted in English).

Two or three hours, each term.

21. ELEMENTARY NORWEGIAN (Dano-Norwegian).

Three hours, each term.

31. ELEMENTARY SWEDISH.

Three hours, each term.

GREEK

Dean STRAUB

Professor H. A. CLARK

Students desiring to proceed to the Master's degree in Greek should have had a minimum of 48 hours of Greek in the original, of which one-half must have been of third and fourth year grade. Candidates from the University of Oregon are advised to present Courses 1 a, b, c; 50 a, b, c; 51 a, b, c; either 100 a, b, c, or 101a,b,c; 102 a, b, c; 150 a, b, c, and 151 a, b, c. Candidates from other institutions will be expected to present the equivalent of these courses.

For a minor in Greek, candidates for the Master's degree should have completed Courses 1 a, b, c; 50 a, b, c; 51 a, b, c, and one upper division course in the original, or the full equivalent of these if Greek has been taken in other institutions; and thereafter for a minor will be expected to complete fifteen hours of courses in the original from the curriculum of the fourth year or graduate division.

GRADUATE DIVISION

200 a, b, c. PINDAR, THEOCRITUS AND AESCHYLUS. Pindar, Olympian and Pythian Odes; Theocritus, Idylls and Epigrams; Aeschylus, Prometheus Bound and Agamemnon; study of Greek elegiac, iambic and lyric poetry.

Three hours, each term.

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

202 a, b, c. THE GREEK DRAMA. A reading of numerous plays in the original is expected, and is incidental to a detailed study of the rise, development and genius of the Greek drama.

203 a, b, c. THE GREEK HISTORIANS. Students will be expected to know the original throughout of Xenophon, Thucydides and Herodotus. This is essentially a study of Greek history through the documents provided by the Greeks themselves.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

150 a, b, c. PLATO AND ARISTOTLE. Plato, The Republic, Books I to X; Aristotle, Ethics, Books I to IV and Book X, Chapters 5 to 9. Brief outline of Greek philosophy of the period; students are advised, however, to elect the course in history of philosophy in the department of Philosophy. *Three hours, each term.*

COURSES NOT CARRYING GRADUATE CREDIT

151 a, b, c. Advanced Greek Prose Composition, Sight Translation and Selected Readings, *Two hours, each term.*

101 a, b, c. HOMER, THUCYDIDES AND HERODOTUS. *Three hours, each term.*

102 a, b, c. EURIPIDES, ARISTOPHANES, SOPHOCLES. *Two hours, each term.*

102 a, b, c. GREEK MYTHOLOGY, ART, LIFE AND LITERATURE. *Hours and credits to be arranged.*

100 a, b, c. XENOPHON AND GREEK TESTAMENT. *Three hours, each term.*

1 a, b, c. BEGINNING GREEK. *Five hours, each term.*

50 a, b, c. XENOPHON, HOMER, AND GREEK GRAMMAR. *Three hours, each term.*

51 a, b, c. GREEK GRAMMAR, GREEK PROSE AND GREEK SIGHT TRANSLATION. *Two hours, each term.*

HISTORY

Professor R. C. CLARK Professor DUNN Professor BARNES
Assistant Professor GRIFFIN

The department requires at least one Lower Division year-course, or its equivalent, for admission to Upper Division courses, and at least one year-course of Upper Division grade as a basis for work with graduate credit. Students taking History as a major subject should have had two such Upper Division courses.

GRADUATE DIVISION

202. THE TEACHING OF HISTORY. A course designed for major students and others who are preparing to teach history in high schools.
Three hours, fall term.

241. FORERUNNERS OF THE FRENCH REVOLUTION. A source study of the influence of the leading 18th century writers upon the ideas of the French Revolutionists. A reading knowledge of French almost indispensable. Pre-requisite either 131c or 141a.
Three hours, winter term.

276. 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.
Three hours, spring term.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

101. THE HISTORY OF HISTORY. A study of the greatest historians of the past as they show the development of the art of writing history. Pre-requisite two years of history.
Three hours, winter term.

114 a, b, c. HISTORY OF ROME. From the founding of the city to the end of the empire. (Not given 1921-1922.)
Three hours, each term.

146. THE RUSSIAN REVOLUTION. A brief account of the revolutionary movement in Russia since 1870 as illuminated by comparison with the French Revolution. Pre-requisite 141a.

Two hours, fall term.

162. THE ENGLISH STRUGGLE FOR LIBERTY. A study of the times of the Stuarts, with especial consideration of the rule of Cromwell and the Revolution of 1688 as efforts of the House of Commons to control the government.

(NOTE.—Only one of the courses 146 and 162 will be given in 1921-1922.)

172. AMERICAN DIPLOMACY. A history of the relations of the United States with other powers and the development of American foreign policies since 1789.

Four hours, spring term.

176. THE TRANS-MISSISSIPPI WEST. Exploration, settlement, and development of the region of the United States lying west of Mississippi river, with emphasis on Pacific Northwest.

Four hours, fall and winter terms.

181. LATIN AMERICAN HISTORY. A study of the history, together with political, social, and economic conditions of the "Other Americas." (Not given in 1921-1922.)

Four hours, spring term.

191 a, b, c. PACIFIC ORIENT. China, Japan, and other Pacific countries, their history, organization, policies, with a consideration of their relations to the Pacific states of America.

Three hours, each term.

COURSES NOT CARRYING GRADUATE CREDIT

111 a, b. ANCIENT HISTORY. *Three hours, fall and winter terms.*

121. THE MIDDLE AGES. *Four hours, spring term.*

131 a, b, c. THE GROWTH OF THE NATIONAL MONARCHIES.
Three hours, each term.

141 a, b, c. MODERN EUROPEAN HISTORY.
Four hours, each term.

171 a, b, c. AMERICAN HISTORY. *Four hours, each term.*

1 a, b, c. OUTLINES OF WORLD HISTORY. *Three hours, each term.*

2 a, b, c. OUTLINES OF WORLD HISTORY. SECOND YEAR.
Three hours, each term.

51. EUROPE OF THE LAST FIFTY YEARS.
Five hours, spring term.

61 a, b, c. HISTORY OF ENGLAND AND GREAT BRITAIN.
Three hours, each term.

LATIN

Professor DUNN

Professor H. A. CLARK

For graduate major work in Latin, Courses 21-26, 101-103, and 191-193, or their equivalent, are prerequisite. Greek, the Romance Languages, German, and History are recommended as acceptable subjects for the minor. An acquaintance with Greek is strongly urged upon all graduate students in Latin.

GRADUATE DIVISION

207, 208, 209. HISTORY OF LATIN LITERATURE. Part I (Poetry)
Dunn.

210, 211, 212. HISTORY OF LATIN LITERATURE. Part II (Prose)
Dunn.

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.

219, 220, 221. 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. Dunn.

222, 223, 224. THE REIGN OF TRAJAN. Trajan's Reign will be studied from Pliny's Letters, from inscriptions, from monumental remains, and other sources. Dunn.

251, 252, 253. HISTORICAL LATIN GRAMMAR. A study of the development of Latin sounds, inflections, and syntax. Clark.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

101, 102, 103. SELECTED READING COURSE. To be arranged. This course is purposely left indefinite in order that different authors may be read and various epochs treated, either in whole or in part. Dunn. *Three hours, each term.*

111, 112, 113. LATIN PEDAGOGY. This is intended to be a "laboratory" course for prospective teachers in Latin and includes a rapid survey of the four years of High School Latin, the discussion of all problems concerned with the authors themselves, and a review of first principles. Dunn. *Three hours, each term.*

Courses 141-146 may receive graduate credit only in case the student completes additional work assigned by the instructor.

141. THE PRIVATE LIFE OF THE ROMANS. Lectures, readings and reports. Knowledge of Latin not a pre-requisite. Clark. *Three hours, fall term.*

142. ROMAN LITERATURE. Lectures and readings. Dunn. *Three hours, winter term.*

144. OUR INHERITANCES FROM THE GRÆCO-ROMAN CIVILIZATION. Lectures, readings and reports. Stereopticon lectures with required readings and reports. Dunn. *Three hours, fall term.*

145. COMPARATIVE MYTHOLOGY. Lectures and reports. Ovid's Fasti is made the basis of research and discussion. Dunn. *Three hours, winter term.*

146. TOPOGRAPHY OF ROME. Lectures and readings. Lectures illustrating in chronological order the monumental growth of Rome from prehistoric times to the Fall of the Western Empire. Dunn. *Three hours, spring term.*

191, 192, 193. THE REIGN OF NERO. Suetonius' Life of Nero and Tacitus' Annals are made the basis of a thorough study of this particular epoch. Clark.

COURSES NOT CARRYING GRADUATE CREDIT

- 1, 2. BEGINNING LATIN. *Five hours, fall and winter terms.*
5, 6. CICERO. *Four hours, winter and spring terms.*
7, 8, 9. VERGIL. *Four hours, each term.*
21. CICERO'S DE AMICITIA. *Three hours, fall term.*
22. TERENCE'S ANDRIA. *Three hours, winter term.*
23. SALLUST'S JUGURTHA. *Three hours, spring term.*
24. TACITUS, AGRICOLA AND GERMANIA. *Three hours, fall term.*
25. MARTIAL'S EPIGRAMS. *Three hours, winter term.*
26. SUETONIUS' LIFE OF AUGUSTUS. *Three hours, spring term.*

MATHEMATICS

Professor DeCOU

Professor MILNE

Professor McALISTER

The department of mathematics offers a considerable range of important courses for those who are working for the Master's degree. A number of upper division courses are acceptable for graduate credit, while several new courses of distinctively graduate type are offered. Additional courses will be offered as the need develops.

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

The University has a carefully selected collection of the best modern mathematical works in English, French, German and other foreign languages.

It has also copies of a considerable number of the most important mathematical books published during the past two centuries in addition to all the standard histories of mathematics, 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.

The library has complete sets of all the American mathematical journals; also of *Mathematische Annalen*, *Circolo Matematico di Palermo*, *L'enseignement Mathématique* and the *Proceedings of the London Mathematical Society*.

It has on file the current numbers of these journals in addition to the *Jahrbuch ueber Fortschritte der Mathematik*.

GRADUATE DIVISION

201 a, b, c. **THEORY OF FUNCTIONS.** An introduction to the theory of functions of real and complex variables, with applications. Prerequisites, courses 103, 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. Milne. *Three hours, fall term.*

203 a, b. **ELASTIC VIBRATIONS.** The mathematical theory of simple harmonic motion, of vibrating strings and membranes. The elementary theory of Fourier's series and of Bessel's Functions is developed in connection with the concrete physical problems. Prerequisite, course 202. Milne.
Three hours, winter and spring term.

204 a, b, c. **MATHEMATICAL SEMINAR.** Conferences and reports on assigned subjects. DeCou, Milne.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

103 a, b. **DIFFERENTIAL EQUATIONS.** A practical course in the solution of Ordinary and Partial Differential Equations. Prerequisite, Course 102, 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. (Not given in 1921-1922.) De Cou.

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 discussions of surfaces in general. Not given in 1921-1922. De Cou. *Three hours, one term.*

107 a, b. 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, Course 102. Milne. *Three hours, fall and winter terms.*

108. ANALYTICAL TRIGONOMETRY. Prerequisite, Plane Trigonometry. Not given in 1921-22. DeCou. *Three hours, one term.*

110. PROJECTIVE GEOMETRY. Prerequisite, Courses 5 and 102. DeCou. *Three hours, one term.*

113. ADVANCED ANALYTICAL GEOMETRY. A more advanced treatment of the subject, pre-supposing Course 4, and intended for students of fair mathematical maturity. DeCou. *Three hours, winter term.*

139. APPLIED MATHEMATICS. This course is intended for students of Chemistry and Physics, and embraces a rapid review of Differential and Integral Calculus, with applications 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.*

COURSES NOT CARRYING GRADUATE CREDIT

101. TEACHING AND HISTORY OF MATHEMATICS. *Three hours, spring term.*

102 a, b, c. DIFFERENTIAL AND INTEGRAL CALCULUS. *Four hours, each term.*

1. SOLID GEOMETRY. *Four hours, fall term.*

2. ADVANCED ALGEBRA. *Four hours, any term.*

3. PLANE TRIGONOMETRY. *Four hours, winter or spring term.*
4. ANALYTICAL GEOMETRY. *Four hours, fall or spring term.*
6. MATHEMATICAL THEORY OF INVESTMENT.
Four hours, winter or spring term.
- 7 a, b. DIFFERENTIAL AND INTEGRAL CALCULUS.
Four hours, winter and spring terms.
8. ELEMENTS OF STATISTICAL METHODS; THEORY AND USE
OF THE SLIDE RULE. *Three hours, one term.*

MECHANICS AND ASTRONOMY

Professor McALISTER

MECHANICS

GRADUATE DIVISION

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.*
202. 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, one or two terms.
203. ADVANCED ANALYTICAL MECHANICS. Topics selected according to the needs of students, in relation to previous work and work contemplated in the future. *Four hours, one term.*
204. SPECIAL PROBLEMS. Advanced work in the applications of Mechanics, and problems relating thereto.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

- 101 a, 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.*

102 a, b, c. APPLIED MECHANICS. A course for students of architecture, including analytical statics, and strength of materials. Calculus prerequisite. *Three hours, each term.*

COURSES NOT CARRYING GRADUATE CREDIT

11 a, b. ELEMENTARY MECHANICS.

Three hours, winter and spring term.

ASTRONOMY

GRADUATE DIVISION

205. CELESTIAL MECHANICS. The fundamentals of the subject, with such applications as time may permit; including some consideration of the theory of perturbed orbits.

COURSES NOT CARRYING GRADUATE CREDIT

101a. GENERAL ASTRONOMY. Descriptive in character not involving mathematical discussions. Three lectures or recitations per week with an occasional evening of observation substituted for a lecture. *Three hours, winter and spring terms.*

102. PRACTICAL ASTRONOMY. Determination of time, latitude, longitude, and azimuth by astronomical methods. A working knowledge of trigonometry is necessary. One afternoon period and one evening period. *Three hours, spring term.*

MUSIC

Dean LANDSBURY

Graduate work in Music leading to the degree of Master of Arts is open only to students already holding the degree of Bachelor of Arts who have had a sufficiently extended and thorough training in music both theoretical and practical.

GRADUATE DIVISION

201. SEMINAR. A study of present day musical conditions with particular reference to the adjustment of music to the curriculum. Lectures will be given occasionally. 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 to 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; he must have completed courses 1a, 1b, 1c, 2, 3, 4, 10, 101a, 101b, 102, 103; 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.

COURSES NOT CARRYING GRADUATE CREDIT

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|---|------------------------------|
| 101a. COUNTERPOINT. | <i>Two hours, one term.</i> |
| 101 b, c. DOUBLE COUNTERPOINT, CANON AND FUGUE. | <i>Two hours, two terms.</i> |
| 102 a, b, c. FREE COMPOSITION. | <i>Two hours, each term.</i> |
| 103. MUSICAL INTERPRETATION. | <i>Two hours, one term.</i> |

- 1 a, b, c. THE ELEMENTS OF MUSICAL SCIENCE.
Three hours, each term.
2. CONTRAPUNTAL ANALYSIS. *Three hours, one term.*
3. FORMAL ANALYSIS. *Three hours, one term.*
4. HARMONICAL ANALYSIS. *Three hours, one term.*
- 5 a, b, c. THOROUGH BASS. *Two hours, each term.*
6. KEYBOARD HARMONY AND EAR TRAINING.
Two hours, one term.
- 10 a, b, c. HISTORY AND APPRECIATION OF MUSIC.
Two hours, each term.
- 12 a, b, c. PUBLIC SCHOOL MUSIC. *Three hours, each term.*
- 13 a, b, c. SCIENTIFIC MUSIC READING AND CHORAL TRAINING.
One hour, each term.

PHILOSOPHY

Dean REBEC

Professor BATES

GRADUATE DIVISION

201 a, b, c. PHILOSOPHICAL SEMINAR.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

110. PLATO'S REPUBLIC. Given every second year, alternating with Course 111. *Three hours, fall term.*

111. ARISTOTLE'S ETHICS. Every second year, alternating with Course 110. *Three hours, fall term.*

112. CONTINENTAL PHILOSOPHY OF THE 17TH AND 18TH CENTURIES. Descartes, Discourse on Method, Meditations, Selections from Principles; Spinoza, Ethics; Leibnitz, New Essays and Monadology. Every second year, alternating with Course 113.

Three hours, winter term.

113. BRITISH PHILOSOPHY OF THE 17TH AND 18TH CENTURIES. Locke's Essay, Berkeley's Principles, Hume's Enquiry. Every second year, alternating with Course 112. *Three hours, winter term.*

114. THE PHILOSOPHY OF KANT. The Critique of Pure Reason. Every second year, alternating with Course 115.

Three hours, spring term.

115. THE PHILOSOPHY OF HEGEL. The Logic. Every second year, alternating with Course 114.

Three hours, spring term.

116 a, 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 hours, each term.

117. AESTHETICS. A philosophical study of the experience and import of Beauty in Nature and in Art.

Three hours, fall term.

118. POLITICAL PHILOSOPHY. Every second year, alternating with Course 119.

Three hours, winter term.

119. PHILOSOPHY OF RELIGION. Every second year, alternating with Course 118.

Three hours, winter term.

120. ADVANCED THEORETICAL LOGIC. Logic as presented in the treatments of Lotze, Bradley, Bosanquet, etc. Every second year, alternating with Course 121.

Three hours, spring term.

121. METAPHYSICS. A direct attack on central metaphysical problems, in Socratic fashion, by a group of students having sufficient previous preparation. Every second year, alternating with Course 120.

Three hours, spring term.

COURSES NOT CARRYING GRADUATE CREDIT

101 a, b, c. HISTORY OF PHILOSOPHY. *Four hours, each term.*

102. PHILOSOPHY OF HISTORY. *Three hours, fall term.*

103 SPECIAL AESTHETICS. *Three hours, fall term.*

104. ADVANCED PRACTICAL LOGIC. *Three hours, winter term.*

105. SECOND COURSE IN ETHICS. *Three hours, winter term.*

106. AMERICAN PHILOSOPHY. *Three hours, spring term.*

107. ORIENTAL PHILOSOPHY. *Three hours, spring term.*

51. ELEMENTARY LOGIC. *Four hours, fall term.*

52. ELEMENTARY ETHICS. *Four hours, winter term.*

53. INTRODUCTION TO PHILOSOPHY. *Four hours, spring term.*

PHYSICAL EDUCATION

Dean BOVARD

Professor CUMMINGS

Assistant Professor BOHLER

Professor THOMSON

Dr. SAWYER

Dr. STUART

The opportunities for advanced work in Physical Education and the aims of that work as given in the University are described in considerable detail in the Bulletin of the School of Physical Education, and are not here repeated.

The titles only are given of the courses announced in the Lower and Upper divisions, although many of the Upper Division courses are suitable for graduate students taking their minor work in Physical Education.

GRADUATE DIVISION

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. Dr. Stuart.

Three hours, each term.

202. RESEARCH IN CORRECTIVE GYMNASTICS AND PHYSIOTHERAPY. Specially qualified students may arrange for work of this kind on consent of Dr. Stuart. Dr. Stuart.

203. PHYSIOLOGY OF EXERCISE. Lectures and laboratory work. An advanced course in physiology covering the physiology of muscle and nerve activities with applications 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.

UPPER DIVISION

Courses Primarily for Women

101. ADVANCED GYMNASTICS.

One hour, each term.

102. PLAYGROUND SUPERVISION.

Three hours, each term.

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| 103. DANCING. | <i>One-half hour, each term.</i> |
| 104. TECHNIQUE OF TEACHING. | <i>One hour, fall term.</i> |
| 105. NORMAL INSTRUCTION. | <i>One hour, winter and spring terms.</i> |
| 106. EUGENICS. | <i>Two hours, winter term.</i> |
| 107. PHYSICAL EXAMINATION. | <i>Two hours, spring term.</i> |
| 108. THEORY AND PRACTICE OF CORRECTIVE GYMNASTICS. | <i>Three hours, fall and winter terms.</i> |
| 109. PLAYGROUND ACTIVITIES. | <i>Three hours, fall and winter terms.</i> |
| 110. THEORY AND PRACTICE OF PHYSICAL EDUCATION. | <i>Three hours, winter and spring terms.</i> |

Courses Primarily for Men

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| 151. HIGH SCHOOL COACHING. | <i>Two hours, any term.</i> |
| 152. PHYSICAL EDUCATION TECHNIQUE. | <i>One hour, any term.</i> |
| 153. THEORY AND PRACTICE OF CORRECTIVE WORK. | <i>Three hours, winter and spring terms.</i> |
| 154. PLAYGROUND ACTIVITIES. | <i>Three hours, spring term.</i> |
| 155. PHYSICAL DIAGNOSIS. | <i>Two hours, fall term.</i> |

Courses for Men and Women

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| 171. APPLIED ANATOMY. | <i>Four hours, winter term.</i> |
| 172. KINESIOLOGY. | <i>Five hours, spring term.</i> |
| 173. PLAYGROUNDS—MANAGEMENT AND PRACTICE. | <i>Three hours, fall and winter term.</i> |
| 174. MEDICAL SERVICE. | <i>Three hours, fall term.</i> |
| 175. THEORY AND PRACTICE OF PHYSICAL EDUCATION. | <i>Three hours, fall term.</i> |
| 176. HISTORY OF PHYSICAL EDUCATION. | <i>Two hours, fall term.</i> |
| 177. PHYSIOLOGY OF EXERCISE. | <i>Three hours, winter term.</i> |

LOWER DIVISION

1, 2, 3, 4, 5. PRESCRIBED COURSES FOR LOWER DIVISION WOMEN.

6. PERSONAL HYGIENE FOR WOMEN. *Three hours, any term.*

51, 52, 53. PRESCRIBED COURSES FOR LOWER DIVISION MEN.

54. INDIVIDUAL HYGIENE FOR MEN.

Three hours, fall or winter term.

55. DANCING.

71. GENERAL HYGIENE. *Three hours, winter or spring term.*

72. INTERGROUP HYGIENE. *Three hours, spring term.*

PHYSICS

Professor BOYNTON

Professor CASWELL

Assistant Professor PRUETT

Students taking Physics as their minor subject must have had a year-course in General Physics of lower division grade and the Calculus. A course in General Chemistry is almost indispensable.

Students making Physics their major subject must have a knowledge of General Chemistry, and in addition to the pre-requisites for minor work should have had two year-courses of Upper Division grade, although one year of such work may be accepted when the collateral preparation is sufficiently strong.

Courses numbered below 110 cannot be taken for graduate credit. Those numbered over 110 require the year of lower division Physics and the Calculus as pre-requisites, and may be taken for graduate credit.

Students taking Physics as their major subject will ordinarily select their minor work from the departments of Chemistry, Mathematics, Mechanics and Astronomy.

GRADUATE COURSES

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 Course 121 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, largely from the historical standpoint, of such topics as the Electromagnetic theory of light, the Electron theory, Relativity and the Quantum theory. Caswell.

207. ADVANCED ELECTRICAL THEORY. A study of the mathematical theory based upon Maxwell's work, with especial reference to electrical and magnetic fields, electrical oscillations and waves, and the basis of the electro magnetic theory of light. Boynton.

211. 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.

220. SEMINAR. Conferences and reports on assigned topics and current periodical literature. The Department staff.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

111 a, b, c. INTRODUCTION TO THEORETICAL PHYSICS. Intended particularly as a supplement to Course 7, 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. (Not given in 1921-1922.)
Three hours, each term.

114 a, b, c. ELECTRICAL MEASUREMENTS. A course intended to give a familiarity with the more important electrical quantities, mainly by measurements and intercomparisons, with some reference to their practical applications. Fall term, direct currents,

including a study of standards, the calibration of commercial instruments by the potentiometer, the intensity and distribution of illumination and the efficiency of incandescent lamps and the magnetic properties of iron; winter term, measurement of inductances and the introduction to alternating current theory and measurements; spring term, the measurement of capacity and the theory of transient electrical phenomena, electrical oscillations and waves, and wireless telegraphy. Two lectures and one laboratory period. Boynton. *Three hours, each term.*

120. ADVANCED LABORATORY. Including senior thesis. Department staff. *Hours to be arranged.*

121. THERMODYNAMICS. A study of heat and related forms of energy as applied to ideal gases, saturated vapors and other simple types of substances. Especially for students of physics and physical chemistry. Boynton. *Three hours, fall term.*

122. MOLECULAR PHYSICS. A continuation of Course 121, including the kinetic theory of gases and liquids, the deduction and further discussion of van der Waals' equation and the theory of solutions. Boynton. *Three hours, winter term.*

123. PHYSICAL OPTICS. A study of such typical phenomena as refraction, dispersion, interference, diffraction and polarization. Lectures and laboratory. Pruett. *Three hours, spring term.*

124. ELECTRON THEORY. An introductory course dealing with cathode, canal and X-rays, ionization of gases, photoelectricity, radioactivity, atomic structure, thermoelectricity metallic conduction and the fundamental phenomena of light from the standpoint of the electron theory. Caswell. *Three hours, each term.*

130. JOURNAL CLUB. Assigned readings with reports and conferences. The Department staff. *Hours to be arranged.*

COURSES NOT CARRYING GRADUATE CREDIT

100. LABORATORY ARTS.

101. HISTORY AND TEACHING OF PHYSICS.

Three hours, fall term.

104. SOUND.

Three hours, fall term

105. COSMIC PHYSICS.	<i>Three hours, winter term.</i>
106. PHOTOGRAPHY.	<i>Three hours, spring term.</i>
1 a, b, c. ESSENTIALS OF PHYSICS.	<i>Four hours, each term.</i>
4 a, b, c. GENERAL PHYSICS.	<i>Four hours, each term.</i>
7 a, b, c. PRINCIPLES OF PHYSICS.	<i>Three hours, each term.</i>

POLITICAL SCIENCE

Professor BARNETT

Course 1, Modern Governments, is pre-requisite for graduate students, whether Political Science is their major or minor subject.

Upper Division courses may be taken for graduate credit but will be supplemented by additional assignments of readings, conferences and thesis.

Students taking Political Science as their major subject will take either History, Economics or Sociology as their minor subject.

GRADUATE DIVISION

201 a, b, c. RESEARCH IN POLITICAL SCIENCE.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

101. CONSTITUTIONAL LAW. A study of the federal constitution as interpreted by the courts. Chiefly a discussion of leading cases. It is desirable that this course be preceded by Political Science 2. *Four hours, fall 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. *Three hours, winter 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. *Three hours, spring term.*

104. INTERNATIONAL LAW. The principles of international law. It is desirable that this course be preceded by Political Science 2. (Omitted 1921-1922.) *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. *Four hours, winter term.*

106. POLITICAL THEORY. A study of the main concepts of political theory, mostly from the works of modern writers. (Omitted 1921-1922.) *Four hours, spring term.*

107. LEAGUE OF NATIONS. The history and present status of the various forms of international organization, with special attention to the League of Nations. *Four hours, spring term.*

COURSES NOT CARRYING GRADUATE CREDIT

- 1 a, b, c. MODERN GOVERNMENTS. *Four hours, each term.*
2. INTRODUCTION TO LAW. *Four hours, fall term.*

PSYCHOLOGY

Professor CONKLIN Professor WHEELER

Assistant Professor CROSLAND Assistant Professor YOUNG

MISS HAGER

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.

The library collection includes, in addition to the standard works of reference in psychology, thirty-one complete sets of psychological journals domestic and foreign. There are also available complete sets of many journals in allied fields and still other incomplete sets of psychological and allied publications. Current subscriptions are made for practically all psychological journals. Additional sets are being purchased each year. Funds are usually available for the purchase of other material as needed. Graduate students are assigned individual tables in the library stack rooms to which they have constant access.

The laboratory, consisting of a suite of thirteen rooms, is well equipped for experimental researches on attention, certain phenomena of perception, learning, memory, the higher thought processes, music, standardization of tests and the theory of testing. A shop is available for the manufacture of special apparatus and funds to be had for the purchase of additional equipment to satisfy special research needs. So far as possible graduate students doing laboratory research are assigned rooms for their exclusive use.

In addition to the annual appropriations made for the purchase of psychological literature and apparatus, the University sets aside a fund for the subsidization of research. Appropriations from this fund are occasionally procurable for the assistance of research work requiring more expensive apparatus or materials.

Three graduate assistantships are assigned to the department by the Graduate Council. The income from each of these for the first year is five hundred dollars. They are open to qualified students from any institution. (For details concerning application and appointment, see section in this catalogue on graduate assistantships.)

Graduates of standard colleges will be accepted for graduate work in this department provided that their training satisfies the following requirements:

Candidates for major work in this department for the degree of Master of Arts must present evidence that they have satisfactorily completed at least two years of work in psychology, one year of which shall have included laboratory practice. Where there is evidence of exceptional scholarship, a year of some other laboratory science may be substituted for one of the years of psychological work.

Candidates for minor work in this department for the degree of Master of Arts must present evidence that they have satisfactorily completed one year of work in psychology, or its equivalent.

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. (See above.)

All candidates should read also the general regulations concerning requirements for admission to the graduate school and for formal acceptance as candidates for advanced degrees, to be found elsewhere in this catalogue.

An important feature of graduate work in this department is the opportunity for frequent informal conferences with the teaching staff, all of whom are actively at work upon research problems. The weekly seminary, in which all members of the staff participate, is an additional stimulus to psychological scholarship.

GRADUATE DIVISION

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.

Three hours, winter term.

202. SEMINAR IN HISTORY OF PSYCHOLOGY. A continuation of Course 201, for which that course or its equivalent is an indispensable pre-requisite. Here the history of special subjects or schools of thought is intensively studied by individual assignment. Conklin.

Two hours, spring term.

203. METHODOLOGY. A comparative study of the various methods used in psychological research. Conklin.

Three hours, fall term.

204. PSYCHOANALYTIC THEORY. An intensive study of the literature of psychoanalytic psychology. (Should be preceded by Course 122 or its equivalent.) Conklin. *Two hours, spring term.*

205. ADVANCED EXPERIMENTAL PSYCHOLOGY. An intensive training in the introspective method and its application to experimental problems. Designed to train the student to introspect. The student is introduced to an experimental problem which he must attempt to solve by the introspective method. The student acts as observer and the instructor as experimenter. The student is then

required to organize and interpret his own results. An analysis of the literature and criticisms of the introspective method. Wheeler. *Two hours, any term.*

206. ADVANCED PHYSIOLOGICAL PSYCHOLOGY. Devoted to the current experimental literature in the physiology of sensation and the emotions, to such neurological problems as directly affect an understanding of advanced psychology, involving the problems of nerve regeneration and degeneration, localization of function, the nerve structure and function underlying speech, etc. A continuation of the work offered in Systematic Psychology (103). Wheeler.

Two hours, spring term.

207. RESEARCH AND THESIS. Original work for thesis purposes under the direction of the instructor in charge. Conklin, Wheeler.

208. THE HIGHER THOUGHT PROCESSES AND VOLITION. An intensive study of judging, reasoning, the psychology of purpose and the psychology of volition. Each subject is considered historically and genetically, its relations to other mental processes discussed, and the experimental literature thoroughly reviewed. Each process is also studied from various angles—the introspective, the purely subjective, the behavioristic, the objective, the structural and dynamic. Wheeler. *Two hours, winter term.*

209. BEHAVIORISM. A historical approach to the problem of behaviorism, followed by a logical, philosophical, theoretical and experimental examination of its position. In this latter study the more general and fundamental points are first taken up, followed by a detailed application of these general principles to specific problems of sensation, affection, attention, memory, perception, learning and the higher intellectual processes. The course involves a critical analysis of psychophysical parallelism in its various forms and other attempts to envisage the mind-body relation, and a detailed discussion of the problem of structure versus function in psychology. (Offered alternately with Course 205.) Wheeler. *Two hours, fall term.*

210. 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. The course will also treat of the symbolic nature of memory phenomena tending toward a treatment of abstraction and conception. Crosland.

Two hours, winter term.

211. **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 apperception. Various points of view, of behaviorist, objectivist, centralist, subjectivist, idealist, realist, nativist and empiricist will be presented, and special attention will be given to the modern conception of attention and perception so influential in medicine, psychiatry, ethics, and education. The course will be primarily one dealing with cortical and cerebral mechanisms of an organized, assimilated, apperceptive nature; and the dynamic, perseverative, projective nature of these organized mechanisms in experience. The course will show how easily the phenomena of attention and perception, including the phenomena of apperception, can be regarded as stepping stones from normality to abnormality, as comprising a list of phenomena making the "borderland" between mental health and mental disease. Crosland.

Two hours, spring 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. (Not offered in 1921-1922.) Young.

Three hours, one term.

213. **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 in 1921-1922.) Young.

Three hours, one term.

215 a, b, c. **PSYCHOLOGY SEMINAR.** This meets weekly and is attended by all members of the teaching staff and graduate students. Topics for presentation and discussion are selected in general conference from term to term.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

The following courses, considered as Upper Division courses, are available for credit toward the degree of Master of Arts; but when so used extra assignments are required of the graduate student and an exceptionally high quality of work is expected.

103 a, b, c. **SYSTEMATIC PSYCHOLOGY.** An intensive study of the physiological correlate of psychology, of psychological systems and of the monographic literature on the more vital problems in experimental psychology. Wheeler. *Three hours, each term.*

104. **ABNORMAL PSYCHOLOGY.** Traits and theories of hysterical phenomena, insanity and the borderland phenomena. Conklin. *Three hours, one term.*

106 a,b. **ADOLESCENCE.** An elaborate study of genetic psychology and the writings of G. Stanley Hall. Conklin. *Three hours, two terms.*

108. **MENTAL MEASUREMENTS.** Principles and practice of testing intelligence and individual differences. Wheeler. *Three hours, one term.*

109. **PSYCHOLOGY OF LEARNING.** Genetic and comparative study of learning in the behavior of organisms from the lowest up to and including man. Wheeler. *Three hours, one term.*

110. **THE INDIVIDUAL AND THE GROUP.** An analysis of the behavior of individuals in groups. Young. *Three hours, one term.*

111. **CHARACTER AND PERSONALITY.** Concerns the growth of character and the integration of personality. Young. *Three hours, one term.*

112. **ETHNIC PSYCHOLOGY.** Racial differences in mental traits, racial development, and the spread of cultural areas. Young. *Three hours, one term.*

113. **VOCATIONAL PSYCHOLOGY.** Applications of psychology to employment problems, vocational testing, personnel work, etc. *Three hours, one term.*

114. **SPECIAL PROBLEMS IN SOCIAL PSYCHOLOGY.** Intensive reading on individually assigned topics. Young. *One to three hours, one term.*

117 a, b, c. ADVANCED LABORATORY. A thorough training in laboratory technique as used in the problems of general psychology. Crosland.
Two hours, three terms.

118. PSYCHOLOGY OF ADVERTISING. Crosland.
Three hours, one term.

122. PRINCIPLES OF PSYCHOANALYTIC PSYCHOLOGY. An introduction to the literature and concepts of psychoanalysis. Conklin.
Two hours, one term.

COURSES NOT CARRYING GRADUATE CREDIT

1 a, b, c. ELEMENTARY GENERAL PSYCHOLOGY.
Four hours, each term.

PUBLIC SPEAKING

Professor REDDIE

Two years of work of Upper Division grade or equivalent training is required as a basis for graduate training. In all the courses open for graduate credit the number of students admitted will be limited, and the permission of the instructor must be obtained for registration.

GRADUATE DIVISION

201. INTERPRETATION OF SHAKESPEARE. This course in the interpretation of Shakespearian tragedy is offered for the benefit of graduate students. Special emphasis is placed on the relation of tonal quality and rhythm of action to the subject matter, as well as the value of color and form in background as indispensable assets for the translation of the poetic ideal to the audience mind. An intimate research and study of the principles governing æsthetic production of these masterpieces of literature. Reddie.

Two hours, each term.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

103. TEACHERS' COURSE IN PLAY-PRODUCING. A course adapted to the needs of those who may be called upon to organize and produce entertainments, plays, pageants, etc., in secondary schools.

Three hours, fall and winter terms.

104. **TECHNIQUE OF THE SPEAKING VOICE.** The work in vocal technique covers the anatomy of the speech-producing organs, the control of pitch, the establishment of volume, the regulation of intensity and the development of quality, together with the application of these properties of sound to the practical enrichment and efficiency of the voice as a whole.

Three hours, fall and winter terms.

COURSES NOT CARRYING GRADUATE CREDIT

101. **ADVANCED DRAMATIC INTERPRETATION.**

Four hours, each term.

102. **THE COMPANY.**

Five hours each term.

1 a, b, c. **EXTEMPORE SPEAKING.**

Three hours, each term.

2. **ARGUMENTATION.**

Three hours, each term.

8. **DRAMATIC INTERPRETATION.** Laboratory course. One hour credit for three hours class work. *One hour, fall and winter term.*

ROMANCE LANGUAGES

Professor CLORAN

Three years of college work is the minimum pre-requisite for graduate work in either French or Spanish, even as a minor subject. As a preparation for major work as many as possible of the Upper Division courses in both languages should be taken. A wide acquaintance with cognate languages adds greatly to the value of the work.

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.

The demand for qualified teachers of Romance Languages at present far exceeds the supply.

GRADUATE DIVISION

206. **OLD FRENCH.** Reading of selected texts, grammar and phonology. (Not given in 1921-1922.)

207 a, b, c. **FRENCH LITERATURE.** Selected writings of great authors will be read, discussed and interpreted in class; two or

three authors will be studied in detail. Assigned readings in representative writers of each century, with detailed study of the history of French Literature. *Three hours, each term.*

217. SPANISH LITERATURE. A course similar in character and purpose to French 207. (Not given in 1921-1922.)

220. ADVANCED ITALIAN. The classic period of Italian literature. Readings from Dante, Boccaccio and Petrarch. (Not given in 1921-1922.) *Two hours, each term.*

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

104 a, b, c. FRENCH LITERATURE (FOURTH YEAR). French authors of the seventeenth and eighteenth centuries. History of French Literature. *Three hours, each term.*

114 a, b, c. SPANISH LITERATURE OF THE SEVENTEENTH CENTURY. (Not given in 1921-1922.) *Three hours, each term.*

COURSES NOT CARRYING GRADUATE CREDIT

103 a, b, c. FRENCH LITERATURE (THIRD YEAR). *Three hours, each term.*

105 a, b, c. FRENCH CONVERSATION AND COMPOSITION. *Three hours, each term.*

106 a, b, c. FRENCH CONVERSATION AND COMPOSITION, ADVANCED. *Two hours, each term.*

108 a, b, c. SCIENTIFIC FRENCH (THIRD YEAR). *Three hours, each term.*

113 a, b, c. SPANISH LITERATURE (THIRD YEAR). *Three hours, each term.*

115 a, b, c. SPANISH COMPOSITION AND CONVERSATION. *Three hours, each term.*

116 a, b, c. COMMERCIAL SPANISH (THIRD YEAR). *Three hours, each term.*

117 a, b, c. SPANISH COMPOSITION AND CONVERSATION, ADVANCED. *Two hours, each term.*

120 a, b, c. ELEMENTARY ITALIAN. *Three hours, each term.*

130. ELEMENTARY PORTUGUESE. *Three hours, winter term.*

1 a, b, c. FIRST YEAR FRENCH.	<i>Five hours, each term.</i>
2 a, b, c. SECOND YEAR FRENCH.	<i>Four hours, each term.</i>
3 a, b, c. SECOND YEAR FRENCH (SCIENTIFIC).	<i>Four hours, each term.</i>
11 a, b, c. FIRST YEAR SPANISH.	<i>Five hours, each term.</i>
12 a, b, c. SECOND YEAR SPANISH.	<i>Four hours, each term.</i>

SOCIOLOGY

Dean YOUNG

Professor PARSONS

The directing of any line of social work or the investigation of any social situation and analysis of any social problem call for the training received through graduate study in sociology. Professions also like those of the teacher and the minister and even those of the lawyer, physician, journalist and architect, are rapidly becoming affected with a predominant social welfare interest. Intelligent leadership in constructive social adjustment is impossible without clarity of view and insight into the process of democracy and social progress.

The student proposing to take graduate work in Sociology must have had the Lower Division courses of the department and the course in the Principles of Economics, as a foundation, and should at least meet the general standard of the graduate school of two year-courses of Upper Division grade.

The candidate for the Master's degree taking Sociology as his major subject must have included in his program either as an undergraduate or as a graduate, Courses 104, 136, and 202.

GRADUATE DIVISION

202 a, b. 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. Pre-requisite: Course 104.

Five hours, fall and winter terms.

203. SOCIAL SURVEY. Diagnosis of social problems and methods of social investigation; formulation of community programs; presentation of social facts and survey findings. Pre-requisite: Course 104. *Three hours, fall 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. Pre-requisite: Course 104. *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. Pre-requisite: Courses 104, 203, and 204. *Three hours, spring term.*

210. SEMINAR IN APPLIED SOCIOLOGY. Admission by permission of instructor. Parsons.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

104 a, b. PRINCIPLES OF SOCIOLOGY. The influences and factors determining human life in association are studied. A comprehensive view of the social process is developed. Young. *Five hours, fall and winter terms.*

110 a, b, c. INTRODUCTION TO PHILANTHROPY. The course is designed to give the student the social and economic backgrounds of the Social Problem as well as the development of the Modern Social Movements. In the first term the historic elements of the social problem will be considered; in the second, the development of modern social work, and in the third term, modern movements for social betterment will be studied. Pre-requisite: Course 104. Parsons. *Two hours, each term.*

114 a, b, c. SOCIAL PATHOLOGY. The problems of abnormal social groups will be studied in this course. The first term will be devoted to the study of the nature of social pathology and the problems of dependency. In the second term the defective groups

will be considered. In the third term, attention will be given to criminology. Prerequisite: Course 104. Parsons.

Two hours, each term.

134. 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. Young. *Five hours, spring term.*

136 a,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 of 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.

COURSES NOT CARRYING GRADUATE CREDIT

1 a, b. SOCIAL ORIGINS, EVOLUTION AND GROWTH.

Three hours, fall and winter terms.

2. SOCIAL PSYCHOLOGY.

Three hours, spring term.

ZOOLOGY

Professor TORREY

Assistant Professor YOCOM

Assistant Professor BEEKLEY

Thirty units, at least half of which shall be obtained from graduate courses, constitute a major in zoology for the Master's degree. An undergraduate major in zoology is pre-requisite to this major.

Fifteen units from graduate or Upper Division courses constitute a minor in zoology for the Master's degree. Zoology and Chemistry 1 are pre-requisite to this minor.

That candidates for the Master's degree 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; though minors are in no sense limited to these subjects.

GRADUATE DIVISION

201 a, b, c. SEMINAR AND JOURNAL CLUB. Torrey, Yocom.
Each term.

203. RESEARCH. Topics to be arranged upon consultation with the professor in charge of the student's work. Torrey, Yocom.

UPPER DIVISION COURSES CARRYING GRADUATE CREDIT

101 a, b. HUMAN PHYSIOLOGY. Pre-requisites, Course 1 and courses in elementary chemistry and physics. Three lectures and one laboratory period. Torrey, Yocom.

Four hours, fall and winter term.

103. GENERAL EMBRYOLOGY. Based on the development of the chick. Pre-requisite, Course 1. Yocom.

Five hours, winter term.

104. ADVANCED EMBRYOLOGY. Pre-requisite, Course 103.

Five hours, spring term.

105. ORGANIC EVOLUTION. Open to upper division students without pre-requisite.

Two hours, fall term.

106. HEREDITY AND EUGENICS. A continuation of 105.

Two hours, winter term.

107. CYTOLOGY AND COMPARATIVE HISTOLOGY. A study of the cell as the unit of structure and function in organisms. Pre-requisite, Course 1. Yocom.

Five hours, fall term.

108. MARINE ZOOLOGY. Studies may be pursued at the Marine Biological Laboratory, Friday Harbor, Washington, where, every summer, courses are offered in co-operation with the University of Washington, to whose circulars of information the student is referred for particulars.

COURSES NOT CARRYING GRADUATE CREDIT

1. ANIMAL BIOLOGY. *Four hours, each term.*

2. FIELD ZOOLOGY. *Three hours, spring term.*

5. MAMMALIAN ANATOMY. *Four hours, fall term.*

The University of Oregon

Includes the following Colleges and Schools, located at Eugene, except as stated:

THE GRADUATE SCHOOL
THE COLLEGE OF LITERATURE, SCIENCE AND THE ARTS
THE SCHOOL OF ARCHITECTURE
THE SCHOOL OF COMMERCE
THE SCHOOL OF EDUCATION
THE SCHOOL OF JOURNALISM
THE SCHOOL OF LAW
THE SCHOOL OF MEDICINE (Portland)
THE SCHOOL OF MUSIC
THE SCHOOL OF PHYSICAL EDUCATION
THE SCHOOL OF SOCIOLOGY
 Portland Division of Social Work (Portland).
THE SCHOOL OF EXTENSION STUDY
 Department of Extension Instruction.
 Department of Social Welfare.
 Portland Extension Center.
THE SUMMER SCHOOL
 Divisions at Eugene and Portland.

The University publishes Bulletins descriptive of its various Schools and Colleges, and a Bulletin of General Information which will be sent on request to any interested persons. The General Catalogue is printed only for purposes of exchange with other institutions.

Requests for bulletins or for general information should be addressed to

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