v. 28

THE

University of Oregon Bulletin

CATALOGUE NUMBER

For the Year 1903-1904

AND

ANNOUNCEMENTS

For the Year 1904-1905

EUGENE, OREGON
PUBLISHED BY THE UNIVERSITY
1904

LIBRARY EUGE

CALENDAR FOR 1904-1905

1904

JULY

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

AUGUST

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

SEPTEMBER

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

OCTOBER

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

NOVEMBER

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

DECEMBER

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

1905

JANUARY

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

FEBRUARY

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

MARCH

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

APRIL

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

MAY

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

JUNE

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

LIBRARY

CONTENTS

University Calendar 1904-05 5
The Board of Regents 8
Administrative Officers 9
The General Faculty 10
Committees of the Faculty 16
The University 18
History and Organization 19
Building and Grounds 20
General Information 21
The Graduate School 31
The College of Literature, Science and the Arts, The College of Science and Engineering, The School of Mines and Mining .. 35
State High School Course 67
The School of Music 68
The School of Medicine 133
The School of Law 146
Students 151
Summary of Officers, Instructors, and Students 165
Index 167

The University Bulletins are published by authority of the Board of Regents during the University year. Bulletins will be sent gratuitously, postage paid, to all persons who apply for them. In calling for Bulletins please state the department of the University concerning which you desire information. Requests for Bulletins, or for general information in regard to the University, should be addressed to

THE REGISTRAR,
University of Oregon, Eugene, Oregon.

CALENDAR

Academic Year 1904—1905.

First Semester—September 14 to February 3.

Second Semester—February 6 to June 14.

Examination of Candidates for Admission—September 12—13.

Baccalaureate Sermon—Sunday, June 11.

Field Day—Monday, June 12.

Alumni Day—Tuesday, June 13.

Commencement—Wednesday, June 14.

Academic Year 1904—1905 in Detail.

September 12, Monday; September 13, Tuesday—Entrance Examinations at Eugene for the Academic Colleges.

September 14, Wednesday—First semester in Academic Colleges opens.

September 14, Wednesday—Filing of applications and credentials from accredited schools, and of applications for admission to advanced and graduate standing and to rank as special students.

September 15, Thursday, to September 19, Monday—Payment of incidental fees and registration.

September 15, Thursday; to September 19, Monday—Committees of the Faculty and Instructors in Academic Schools and Colleges keep office hours for consultation with upper class, special, and graduate students.

September 16, Friday, 8 P. M.—Reception to new students by Christian Associations.

September 19, Monday—Enrollment in classes of students in Academic Colleges. Instruction in classes begins.

September 22, Thursday—Session of the School of Law begins in Portland.

September 25, Sunday, 3 P. M.—Address before Y. M. C. A. and Y. W. C. A.

September 26, Monday—Session of the School of Medicine begins in Portland.

October 1, Saturday, 8 P. M.—Piano and song recital.

October 8, Saturday, 8 P. M.—Annual reception of Literary Societies to Students, Alumni, and Faculty.

October 12, Wednesday, 10 A. M.—Annual address by President of the University.

November 22, Tuesday, 8 P. M.—Annual Glee Club Thanksgiving Concert.

November 23, Wednesday, 12 M., to November 27, Sunday—Thanksgiving recess of three and one-half days.

December 10, Saturday, 8 P. M.—Students' recital.

December 21, Wednesday; January 3, Tuesday—Christmas Vacation.

January 21, Saturday, 8 P. M.—Students' Recital.

January 25, Wednesday—Midyear examinations in Academic Colleges begin.

February 3, Friday—First semester ends.

February 6, Monday—Second semester begins.

March 11, Saturday—Treble Clef Concert.

March 25, Saturday—Students' Recital.

March 27, Monday—Graduating exercises of the School of Medicine.

March 27, Monday—Session of the School of Medicine ends.

April 15, Saturday; April 23, Sunday—Easter vacation.

April 24, Monday—Final applications of graduate students who are candidates for degrees to be filed with Registrar.

May 5, Friday, 8 P. M.—Junior Exhibition.

May 15, Monday—Session of School of Law ends.

May 30, Tuesday—Memorial day; a holiday.

May 31, Wednesday—All theses for advanced degrees to be filed with Registrar.

May 31, Wednesday—Final examinations in the Academic Colleges begin.

June 11, Sunday, 11 A. M.—Baccalaureate Sermon.

June 12, Monday, 10 A. M.—Class Breakfast.

June 12, Monday, 2 P. M.—Field Day.

June 12, 8 P. M.—Recital of the School of Music.

June 13, Tuesday, 10 A. M.—Alumni Business Meeting and Class Reunions.

June 13, Tuesday, 2 P. M.—President's reception.

June 13, Tuesday, 5 P. M.—University Dinner to Alumni.

June 13, Tuesday, 8 P. M.—Address before the University.

June 14, Wednesday, 9:30 A. M.—Commencement.

OFFICERS OF THE REGENTS

HON. ROBERT S. BEAN, President.
HON. STUART B. EAKIN, Treasurer
HON. JOSHUA J. WALTON, Secretary.

EXECUTIVE COMMITTEE

HON. SAMSON H. FRIENDLY, Chairman.
HON. CHARLES B. BELLINGER,
HON. CYRUS A. DOLPH.

THE REGENTS OF THE UNIVERSITY

NAME AND ADDRESS.	TERM EXPIRES
HON. ROBERT S. BEAN, Salem	April 15, 1905
HON. CHARLES HILTON, The Dalles	April 15, 1905
HON. SAMSON H. FRIENDLY, Eugene	April 15, 1907
HON. CHARLES B. BELLINGER, Portland	April 15, 1909
HON. NEHEMIAH L. BUTLER, Monmouth	April 15, 1911
HON. JAMES W. HAMILTON, Roseburg	April 1, 1913
HON. CYRUS A. DOLPH, PORTLAND	April 15, 1915
HON. WILLIAM SMITH, Baker City	April 15, 1915
HON. FREDERICK V. HOLMAN, Portland	April 15, 1915

ADMINISTRATIVE OFFICERS

THE UNIVERSITY

P. L. CAMPBELL, A. B. - - - President

ARTHUR GAMBER, A. B., Registrar and Secretary to the President.

LOUIS H. JOHNSON, - - - - - Steward and Superintendent of Buildings and Grounds.

THE COLLEGES AND SCHOOLS

JOHN STRAUB, A. M., - - - - - - Dean of the College of Literature, Science and the Arts.

EDWARD HIRAM McALISTER, A. M., - - - - - Dean of the College of Science and Engineering.

FREDERICK GEORGE YOUNG, A. B., - - - - - - - Dean of the Graduate School.

SIMEON EDWARD JOSEPHI, M. D., - - - - - - - - Dean of the School of Medicine.

C. U. GANTENBEIN, - - Dean of the School of Law.

LUELLA CLAY CARSON, A. M., - - Dean of Women.

IRVING MACKAY GLEN, A. M., - Dean of School of Music.

THE LIBRARY AND GYMNASIUM

CAMILLA LEACH, - - - - Librarian

CHARLES ARTHUR BURDEN, - Director of the Gymnasium

THE GENERAL FACULTY*

P. L. CAMPBELL, A. B., Harvard University, 1886.
President of the University.

JAMES FRANCIS BELL, M. D., L. R. C. P. (LONDON),
Professor of Materia Medica and Therapeutics.

OTTO SALY BINSWANGER, Ph. D., M. D.,
Professor of Chemistry and Toxicology.

WILLIAM PINGRY BOYNTON, Ph. D.; A. B. Dartmouth College, 1890; A. M. 1893; Ph. D. Clark University, 1897; Professor of Physics and Assistant Professor of Latin, University of Southern California, 1890-1893; Assistant in Physics and Graduate Scholar Dartmouth College, 1892-1894; Scholar and Fellow in Physics Clark University 1894-1897; Instructor in Physics University of California, 1897-1901; Professor of Science and Mathematics and Dean of the Faculty, California College, 1901-1903.
Assistant Professor or Physics and Mathematics.

LUELLA CLAY CARSON, A. M., University of Oregon and Pacific University.
Dean of Women and Professor of Rhetoric and American Literature.

THOMAS CONDON, Ph. D.; A. M., Pacific University; Ph. D. University of Oregon,
Professor of Geology.

RICHARD HAROLD DEARBORN, B. L.; A. B., Portland University, 1895; B. L. Cornell University, 1900.
Assistant Professor of Electrical and Mechanical Engineering.

EDGAR EZEKIEL DECOU, M. S.; B. S. University of Wisconsin, 1894; Principal High School, Evansville, Wisconsin, 1894-1896; Graduate Student University of Chicago, 1896-1897; M. S. University of Chicago, 1897; Professor of Mathematics, Bethel College, Russelville, Kentucky, 1897-1899; Graduate Student University of Chicago, 1899-1900; University Scholar Yale University, 1900-1901; Professor of Mathematics Bethel College, Russelville, Kentucky, 1901-02; Acting President Bethel College, 1902.
Professor of Mathematics.

*With the exception of the President, the Faculty are arranged in alphabetical order.

FREDERIC STANLEY DUNN, A. M.; A. B., University of Oregon, 1892; A. B. Harvard University 1894; A. M. University of Oregon 1899. Graduate Student Harvard University 1902-1903.

Professor of Latin Language and Literature.

WILLIAM DAVID FENTON,

Lecturer on Medical Jurisprudence.

CHARLES FRIEDEL, Ph. D.; A. B. University of Wisconsin 1883; Student at University of Leipsic, 1887-89 and 1893-95; Student Johns Hopkins University, 1892-93; Ph. D. University of Leipsic 1895. Graduate Student University of Leipsic 1903-04.

Professor of Physics.

C. U. GANTENBEIN,

Dean of the School of Law, and Professor of the Common Law and the Law of Contracts and Evidence.

ANDREW JACKSON GIESY, M. D.,

Professor of Clinical Gynæcology.

WILLIAM BALL GILBERT, United States Circuit Court of Appeals,

Lecturer on Constitutional Law.

IRVING MACKAY GLEN, A. M.; Graduate California School of Elocution and Oratory, 1889; Graduate California State Normal School, San Jose, 1890; Graduate Elwood Conservatory of Music, 1890; A. B. University of Oregon, 1894; Graduate Student at Johns Hopkins University, 1894-96; A. M., University of Oregon, 1897.

Professor of English Language and Early English Literature. Dean of Department of Music.

BENJAMIN JAMES HAWTHORNE, A. M.; Randolph Macon College, 1861,

Professor of Psychology.

HERBERT CROMBIE HOWE, A. B., Cornell University, 1893; Graduate Scholar Cornell University, 1893-94, 1894-95.

Professor of English Literature.

JAMES MACDONALD HYDE, A. B., Stanford University 1901; Instructor in Assaying Stanford University 1899-1900; Curator California Mining Bureau Museum 1901-1902; Field Assistant California Mining Bureau 1902.

Assistant Professor of Economic Geology and Mining.

HENRY E. JONES, M. D.,

Emeritus Professor of Clinical Gynæcology.

WILLIM JONES, M. D.,

Professor of Clinical Surgery.

SIMEON EDWARD JOSEPHI, M. D.,

Dean of School of Medicine and Professor of Obstetrics and Nervous Diseases.

EDMUND JOHN LABBE, M. D.,

Acting Professor of General Anatomy.

KENNETH ALEXANDER J. MACKENZIE, M. D., C. M., L. R. C. P. & L. R. C. S. (Edin.),

Professor of Theory and Practice of Clinical Medicine.

EDWARD HIRAM McALISTER, A. M.; A. B., University of Oregon, 1890; A. M., University of Oregon, 1893.

Dean of the College of Science and Engineering and Professor of Applied Mathematics and Civil Engineering.

HENRY H. NORTHUP, LL. B., Columbia University, 1868,

Lecturer on Pleadings.

RICHARD NUNN, A. B., B. C. H., M. D.,

Professor of Diseases of Eye, Ear, Nose, and Throat.

WILLIAM HENRY SAYLOR, M. D.,

Professor of Diseases of Genito-Urinary Organs and Clinical Surgery.

ALFRED F. SEARS, Judge of the Circuit Court of Multnomah County; A. B., Dartmouth College, 1875; LL. B., Boston University, 1877,

Lecturer on Equity.

JOSEPH SCHAFER, M. L.; B. L. University of Wisconsin, 1894; Instructor State Normal School, Valley City, North Dakota, 1894-98; Graduate Student Chicago University, Summer 1895; M. L., University of Wisconsin, 1899; Fellow, University of Wisconsin, 1900.

Assistant Professor of History.

FREDERICH GEORGE G. SCHMIDT, Ph. D.; Student at University of Erlangen, 1888-90; Student at Johns Hopkins University, 1893-96; University Scholar, 1894-95; Fellow, 1895-96, and Ph. D., 1896.

Professor of Modern Languages and Literatures.

HENRY DAVIDSON SHELDON, Ph. D.; A. B., Stanford University, 1896; A. M. Stanford University, 1897; Instructor in Pedagogy, Stanford University 1896-97; Lecturer in Education, Clark University Summer School, 1898-99; Ph. D. Clark University, 1900.

Assistant Professor of Philosophy and Education.

ORIN FLETCHER STAFFORD, A. B., University of Kansas, 1900.

Assistant Professor of Chemistry.

GEORGE BURNSIDE STORY,

Professor of Physiology.

JOHN STRAUB, A. M.; A. B., Mercersburg College, 1876; A. M., Mercersburg College, 1879.

Dean of the College of Literature, Science, and the Arts, and Professor of Greek Language and Literature.

ALBERT RADDIN SWEETSER, A. M.; A. B., Wesleyan University, 1884; A. M. Wesleyan University, 1887. Instructor in Cryptogamic Botany, Radcliffe, College, 1895-1897.

Professor of Biology.

ERNEST FANNING TUCKER, A. B., M. D.,

Professor of Gynaeology.

GEORGE MILTON WELLS, M D.,

Professor in Paediatrics.

JOHN WILLIAM WHALLEY,

Lecturer on Pleading.

HOLT COUCH WILSON, M. D.,

Professor of Principles and Practice of Surgery.

GEORGE FLANDERS WILSON, M. D.,

Professor of Military and Operative Surgery and Clinical Surgery.

FREDERIC GEORGE YOUNG, A. B.; Johns Hopkins University, 1886; University Scholar, Johns Hopkins University, 1886-87, Dean of the Graduate School and Professor of Economics and Sociology.

INSTRUCTORS, ASSISTANT INSTRUCTORS AND OTHER OFFICERS

PERCY PAGET ADAMS, B. S.; A. B., University of Oregon 1901; B. S. 1902.

Instructor in Civil Engineering.

JOHN F. BOVARD, B. S., University of California 1903.

Assistant Instructor in Biology.

CHARLES ARTHUR BURDEN,

Director of Physical Education.

FRANK D. FRAZER, A. M.; B. S. University of Washington 1897; A. M. Princeton University 1898; Tutor in Mathematics, University of Washington, 1899-1900; Graduate student at Harvard University and Chicago University 1900-1902.

Instructor in Mathematics.

ARTHUR L. FRAZER,

Assistant Instructor in Music.

HARVEY BRUCE DENSMORE, A. B., University of Oregon 1903.

Assistant Instructor in Latin.

EDWARD PAYSON GEARY, M. D.,

Lecturer on Physical Diagnosis.

ROSE MIDGLEY HOLLENBECK,

Instructor in Music.

THOMAS HOWELL,

Collector in Department of Biology.

CAMILLA LEACH,

Librarian and Instructor in History of Art.

ALBERT EDWARD MACKAY, M. D.,

Lecturer on Bacteriology.

ALEXANDER DONALD MACKENZIE,

Lecturer on Clinical Medicine.

SUSIE FENNEL PIPES,

Instructor in Music.

ROEMER REX RENSHAW, M. S.; B. S. University of Oregon 1902; M. S. University of Oregon 1903.

Assistant Instructor in Chemistry.

IDA BEL ROE, A. B., University of Oregon 1897,

Instructor in English.

LOUIS ARTHUR SHANE, M. D.,

Assistant Demonstrator of Anatomy.

RALPH S. SHELLEY, B. S., University of Oregon, 1904,

Assistant Instructor in Physics.

BERTHA ELLSWORTH SLATER, A. B., University of Oregon 1899.

Assistant Instructor in Rhetoric and English Literature.

ANDREW CHARLES SMITH, M. D.,

Lecturer on Clinical Surgery.

EVA I. STINSON, B. M.,

Instructor in Music.

SYBIL THURSTON, A. B. University of Oregon 1898,

Assistant Instructor in Romanic Languages.

CORTES HOLIDAY WHEELER, M. D.,

Lecturer on Hygiene.

WALTER LINCOLN WHITTLESEY, A. B., University of Oregon 1901,

Assistant Instructor in Economics.

JAMES OSCAR WILEY, M. D.,

Lecturer on Osteology and Syndesmology.

PETER IRVING WOLD, E. E.; B. S. University of Oregon 1901, E. E. 1902.

Assistant Instructor in Physics.
(Resigned Nov. 23, 1903.)

ROBERT CLARK YENNEY, M. D.

Lecturer on Histology and Pathology.

JAMES CULLEN ZAN,

Lecturer on Dermatology.

COMMITTEES OF THE FACULTY*

THE UNIVERSITY COUNCIL.—Consisting of the President of the University and all the full professors and assistant professors of departments at Eugene, who together constitute the legal Faculty of the University.

THE ACADEMIC COUNCIL.—The Executive Committee of the University Council—the President, Professors Young, Straub, McAlister, Carson, and Stafford.

THE GRADUATE COUNCIL.—Professors Young, Friedel, Condon, Schmidt, Glen, and Howe.

UNIVERSITY EXTENSION.—Professors Sheldon, Dunn, Schmidt, Howe, and Hyde.

ATHLETICS.—Professors Hawthorne, Dearborn, Young, Glen, and Mr. Burden.

CREDENTIALS.—Professors Sheldon, Young, and Schafer.

*The President of the University is ex-officio a member of all Committees.

APPOINTMENTS.—Professors Sheldon, Sweetser, Carson, Hawthorne, and Straub.

EXAMINATIONS AND SENIOR CREDITS.—Professors Hawthorne, Glen, and McAlister.

SPECIAL STUDENT.—Professors Carson, Young, and the President.

PUBLICATIONS.—Professors Friedel, Glen, Sheldon, and Boynton.

LIBRARY.—Hon. R. S. Bean, President of the Board of Regents, and the Librarian.

ADVISORY.—The President, Professors Young, McAlister, Straub, and Schafer.

STUDENT AFFAIRS.—Professors Hawthorne, Glen, and Carson.

THE UNIVERSITY

The University of Oregon comprises the following colleges and schools.

THE GRADUATE SCHOOL.

THE COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS:

- The General Classical Group.
- The General Literary Group.
- The General Scientific Group.
- The Civic Historical Group.
- The Philosophical—Educational Group.
- The School of Commerce.

THE COLLEGE OF SCIENCE AND ENGINEERING:

- The School of Applied Science.
- The Courses Preparatory to Medicine and Dentistry.
- The School of Engineering.

THE SCHOOL OF MUSIC.

THE SCHOOL OF MEDICINE, at Portland.

THE SCHOOL OF LAW, at Portland.

THE GRADUATE SCHOOL.—In each of the colleges there are advanced courses leading to graduate degrees. These courses are open to graduates of any reputable college, upon presentation of diploma, provided the preparation of the candidate is satisfactory to the Graduate Council.

THE COLLEGE OF LITERATURE, SCIENCE, AND THE ARTS contains the general groups of studies leading to the degree of Bachelor of Arts. Each group covers four years.

THE SCHOOL OF COMMERCE will offer a four years' course, with special reference to administration of large commercial and manufacturing interests.

THE COLLEGE OF SCIENCE AND ENGINEERING contains the courses in science and engineering that lead to the degrees of Bachelor of Science, and Civil, Mechanical, Electrical, Chemical, and Mining Engineer. These courses cover four and five years.

THE COURSES PREPARATORY TO MEDICINE AND DENTISTRY cover four years and prepare students for the School of Medicine of the University of Oregon and other standard schools. The course enables students to anticipate one year of the course in the Schools of Medicine and Dentistry.

THE SCHOOL OF MINES AND MINING offers advanced work in mining, especially with reference to the applications of chemistry and electricity to mining.

THE SCHOOL OF MUSIC offers instruction in various branches of instrumental and vocal music and in the theory of music.

THE SCHOOL OF MEDICINE offers a course covering four years, one of which may be anticipated by the Courses Preparatory to Medicine. The Degree M. D. follows the course in the School of Medicine.

THE SCHOOL OF LAW offers a two years' course leading to the degree of Bachelor of Law.

HISTORY AND ORGANIZATION

The University of Oregon is an integral part of the public school system of the state, and embraces (exclusive of the Graduate School) the thirteenth, fourteenth, fifteenth, and sixteenth grades of the public school system. The University simply finishes the work begun in the grammar and public schools and continued in the high schools.

Practically the institution opens its doors to all the sons and daughters of the state, and to all students, wherever their homes, without discrimination. The broad, helpful spirit of a real university is seen in its organization and its provisions for meeting as many of the needs of the young men and women of the state as possible, provided only they are prepared for the courses offered.

The University of Oregon was founded by legislative act in 1872, by which act the University was located at Eugene. Regular instruction began in 1876. Eugene is 123 miles south of Portland, on the Willamette river and at the head of the Willamette valley. It is on the direct line of the Southern Pacific railroad. Eugene is the county seat of Lane County, has 6,000 population, a large high school and excellent grammar schools. The church and society privileges for students are excellent, and the cost of living is low.

BUILDINGS AND GROUNDS

The University campus is in the southeastern part of Eugene, and covers twenty-seven acres. It is beautifully situated on rising ground, close by the Willamette river, with both the Cascade and Coast ranges in full view.

The following buildings are located on the University grounds:

DEADY HALL, a three-story brick building, with basement. It was erected and presented by the citizens of Lane county to the state, and named in honor of the late Matthew P. Deady, the first President of the Board of Regents. It contains the biological and physical laboratories. It also has the departments of Latin, Greek, French, German, and English Literature, together with the halls of the literary societies.

VILLARD HALL was named in honor of Henry Villard, of New York City, the greatest benefactor of the University. It is an imposing cemented brick building, and contains the offices of the President, the Registrar, the Steward, the Assembly Hall of the University, the very valuable geological collection, and the departments of Rhetoric and English, Early English Literature and Oratory, Economics and Sociology, Geology, and Mathematics.

MCCLURE HALL was built in 1900. It is devoted to the departments of Chemistry and Mining, and is admirably adapted to its purpose. It has three floors, with laboratory facilities for 200 students, and contains the latest appliances for research work in all lines of mining and manufacturing chemistry. It has hoods and ventilators for carrying off gases, and conforms in arrangement to the most approved methods in the modern teaching of chemistry. It will contain all the departments of Chemistry and Mining, and will make possible a great expansion in mining, metallurgy and assaying. The upper floor for the present is used as class rooms in philosophy and education, in history, psychology, and also for the psychological laboratory.

THE DORMITORY, a three-story brick building, affords accommodations for about seventy young men. The rooms are well lighted and ventilated, and will accommodate two students each. The whole building is heated by steam and lighted by electricity. Board and rooms range in price from $3.25 to $3.50 per week. Students desiring rooms are advised to apply at once to the Steward.

The Dormitory also contains the general Library, the reading rooms, and music rooms.

COLLIER HALL, the President's House, is situated upon the part of the campus south of Thirteenth street, and is surrounded by grounds covering nine and one-half acres.

THE UNIVERSITY operates its own electric light and water plants, and gas plant for furnishing gas for chemical, physical, and biological laboratories.

THE GYMNASIUM is a brick building of fair size, well equipped for indoor athletic work.

THE POWER PLANT AND HALL OF ENGINEERING was finished in November 1901. It contains the boilers from which all the present buildings on the campus are heated. It also contains the dynamos and appliances of the electric light plant, and the pumping apparatus for supplying the University with water. The shops, both wood and iron, are located in this building, as is the forge shop. All the shop work in electrical and mechanical engineering is done here, and the facilities in this line are much greater than ever before.

A WEATHER STATION is located on the campus, from which regular reports are sent to the chief weather observer at Portland.

GENERAL INFORMATION

The University year consists of forty weeks, beginning in 1904 on Wednesday, the 14th of September. Commencement day occurs on Wednesday, June 14th, 1905. The year is divided into two Semesters of twenty weeks each.

REGISTRATION

Students are requested to present themselves immediately upon arrival at the office of the Registrar, in Villard Hall, for the purpose of registration. By a rule of the Board of Regents, no student can register without having first paid the incidental fee. Students will register for the number of hours required in their course or group.

TUITION AND FEES

There is no tuition at the University of Oregon. The incidental fee, payable each year by students in all departments of the University, is $10.00. There is also a Student-Body tax of $5.00 per year for the support of student enterprises. The fees in the School of Music vary with the instruction.

A diploma fee of $10.00 is charged for the first degree taken, and of $10.00 for each succeeding degree. The rules prescribe that no person shall be recommended for a degree until he has paid all dues, including the diploma fee.

LABORATORY FEES

In all laboratory courses, in whatever department, a deposit is required to cover waste and breakage. At the end of the year the balance of the deposit, over and above waste and breakage, will be returned to the student. The amount of the deposit varies according to the courses taken.

EXPENSES

The expenses for one person for a year vary according to the circumstances of the case, but in general are very low. The following estimate is probably substantially accurate: Room, from $.50 to $1.50 per week; board from $2.50 to $4.00 per week; board and room in Men's Dormitory, $3.25 to $3.75 per week; books from $5.00 to $12.00 per year. Many students rent rooms and do light housekeeping, thus reducing the cost of living to a very low point. A fair estimate of the yearly expense of those who hire lodgings and board, either in the Dormitory or outside, is $175.00 to $250.00 per year. For those who do light housekeeping the cost is materially less.

Parents expecting to come to Eugene to live while their children attend the University, or expecting to send members of their families to rent rooms to do light housekeeping, are invited to address the President of the University or the Dean of the College of Literature, Science and the Arts, or the Dean of Women, who will render all the assistance possible.

REMUNERATIVE EMPLOYMENT

There are many ways of earning money while at the University, and in general no young man or woman with determination and

sufficient preparation need hesitate about entering the University. The University employs a considerable number of students. There is opportunity for young men or women to help themselves by securing employment in private families, as stenographers and typewriters, in offices and stores. Students looking for such work should be on the ground early, ready to take advantage of any opening. Address the President of the University, the Deans of the Colleges, the Dean of Women, or the Secretaries of the Y. M. C. A. and Y. W. C. A.

GOVERNMENT

The government of the institution rests upon the inherent obligations of students to the University and to the state. The University is maintained at the public expense for the public good. Those who participate in its benefits are expected, as a matter of honor, not only to fulfill the obligations of loyal members of the institution, of the community, and of the commonwealth, but actively to aid in promoting intellectual and moral interests. Every student owes to the public a full equivalent for its expenditure in his behalf, in the form of superior usefulness to it, both while in the institution and afterwards. Students, therefore, can not claim any exemption from the duties of good citizens and loyal members of the community and of the University; on the contrary, they are under peculiar obligations loyally to fulfill every duty. As members of the institution, they are held responsible for regular attendance and the proper performance of their duties. The interests of faithful students and the well-being of the University demand that those who do not conform to these manifest obligations should withdraw from the institution or be excluded. As members of the community, students are amenable to the law; and, if guilty of its infraction, are liable to a termination of their relations with the University. The University recognizes its civic relations and rests its administration upon civic obligations.

STUDENT SOCIETIES

LITERARY

THE LAUREAN AND EUTAXIAN CORPORATION

The corporation of the Laurean and Eutaxian Societies was organized with a state charter in 1877. It was organized to further the literary interests of the Societies of the University. It has a hall in which the two societies meet, and a well selected library of several hundred volumes. The corporation elects annually a corps of

officers, whose duty it is to look after the interests of the library of the organization.

PHILOLOGIAN SOCIETY

The society was organized October 21, 1893. Its object is to discuss questions of general interest, and to secure for its members proficiency in debate and a thorough knowledge of parliamentary usage. The usual exercises are a short literary programme, and a debate open to all members, with leaders appointed two weeks in advance. The officers are elected for a term of ten weeks, and the meetings are held in the Physical lecture room at 7:30 on Friday evenings.

RELIGIOUS

YOUNG MEN'S CHRISTIAN ASSOCIATION

The Young Men's Christian Association has its rooms in Deady Hall. It endeavors to promote growth in grace and fellowship among its members, and stands for Christian life and work in the University. It holds regular prayer meetings on Friday evenings at 6:45 o'clock.

The Association maintains an employment bureau in connection with the Administrative Office, the services of which are free to students in all departments of the institution.

The Association has a committee to help students to find comfortable rooms and boarding places. Students will be more apt to secure rooms as they desire them if they send word before coming to the University, telling the price they wish to pay.

A Student's Handbook, containing items of information especially valuable to new students, is issued at the end of the college year. A copy will be sent free to any address. Apply to the General Secretary.

Address all inquiries to the General Secretary of the Y. M. C. A. of the University of Oregon, Eugene, Or.

THE YOUNG WOMEN'S CHRISTIAN ASSOCIATION

The Young Women's Christian Association was organized in March, 1894. Its purpose is to crystalize the Christian element in the University, and make the influence of that element felt among all the young women. Its social function is an important part of its work. New students are met as they come from the trains, and everything is done to make them welcome. Informal prayer meetings are held every Wednesday afternoon at 3:00 o'clock in the Association parlors. Officers are chosen the first week in January to serve

one year. Any young woman wishing information in regard to the Association is invited to correspond with the General Secretary of the Association at Eugene.

ATHLETIC

THE ATHLETIC COUNCIL

The Athletic Council of the University of Oregon, consisting of three members of the Faculty and the President ex-officio, three members of the Alumni Association, and three members of the Student Body, exercises control over all athletic interests of the University. Under its supervision is the football team, the track team, the baseball nine, basketball team, tennis club and indoor baseball club.

The University of Oregon has become a member of the Northwest Intescollegiate Athletic Association, representing the leading universities and colleges of Oregon, Idaho, and Washington.

MUSICAL

THE UNIVERSITY OF OREGON GLEE CLUB

The club is a student organization, open to all students who are successful in the tryout held during the first week of each University year.

A yearly Thanksgiving concert is given by the club, and a tour is usually made during the Christmas holidays by a team of sixteen, selected by the director.

The yearly selection of officers is held at the beginning of each school year. All officers except the director are chosen from the membership of the club.

The club is under the direction of Irving M. Glen, Professor of Early English Literature and Dean of the School of Music.

TREBLE CLEF

The Treble Clef, a musical club for women, was organized during the year 1900. It consists of sixteen voices, four on each part, and is under the direction of Miss Stinson, of the University School of Music. Regular practice is held throughout the year, and an annual concert is given just before the Easter holidays.

MISCELLANEOUS

SOCIETAS QUIRINALIS

A classical club, composed only of advanced students in Greek and Latin, for the purpose of furthering and fostering the pursuit of classical studies and for the social intercourse of students in this department of work. The Quirinalis meets on the first Tuesday of each month during the college year, social sessions alternating with public lectures and meetings, at which papers on special topics are read by selected members.

UNIVERSITY ASSEMBLY

A general assembly of the University is held each Wednesday at 10:00 A. M. Appropriate exercises are held and interesting and important addresses made by invited guests, or by the President and members of the Faculty of the University.

UNIVERSITY LECTURES AND RECITALS

Frequent lectures by invited guests from Oregon and other states are given to students upon subjects allied to the courses given in the University. These lectures are by those fitted by training and experience to speak with authority.

The School of Music gives recitals at stated times during the year, to which all students of the University are invited.

ALUMNI ASSOCIATION

The Alumni Association of the University of Oregon was organized in 1879. The membership consists of all the graduates of the literary departments of the University. The objects of the association are to "advance the cause of higher education, to promote the interests of the University of Oregon, and to encourage mutual acquaintance and good-fellowship among the alumni."

STUDENT BODY

The Student-Body exercises general control over all student affairs within the University. The general management of its affairs is entrusted to an Executive Committee, consisting of a President, Vice President and Secretary. Officers are elected on the third Friday in May of each year.

UNIVERSITY AFFILIATION

The University of Oregon is arranging for a close affiliation with other colleges and universities of the state, whereby their graduates shall pass into the State University upon graduation, with a specified number of credits, and without examination. Such graduates may then pursue advanced courses, either in the Graduate School, or elsewhere, with or without being candidates for a degree.

APPOINTMENT OF TEACHERS

The University, through the proper committee, conducts an Appointment Bureau for the recommendation of teachers to school officers and superintendents desiring capable teachers. Only such teachers as are graduates of, or students in, the University, and especially such as are members of the Department of Philosophy and Education, will be recommended. The University has many calls for competent teachers at good salaries. The calls are for principals as well as teachers, and the demand is almost always in excess of the supply. This will probably be more and more true because of the rapid development of high schools in the state and of the general school system calling for men and women experienced as principals and superintendents.

School Officers are invited to correspond with Dr. H. D. Sheldon, the Chairman of the Appointment Committee of the University Faculty. All such assistance will be without any expense whatever to school officers and students.

UNIVERSITY EXTENSION

With a view to the extension of the advantages of the University to teachers and other persons whose engagements will not permit of residence at the University, extension courses of instruction by correspondence are offered.

Persons who offer to do systematic work in these courses, and to take examinations in them, will be enrolled as students in Extension Courses. Those who pass satisfactory examinations are entitled to receive from the University Certificates of Record of the work done, which may be credited to them upon their scholarship records, if they subsequently become regular students of the University.

It should be clearly understood that instruction by correspondence is by no means regarded as the equivalent of residence study. It is not so valuable to the student. Experience has shown, however, that earnest students may do good work at a distance from the University by correspondence when properly guided.

Those who wish this work to count on the books of the University toward a degree, must pass the regular examination for admission to one of the regular courses or groups of the University. They must also pass, ordinarily at the University, a special examination on the work done by correspondence.

For the Bachelor's degree not more than one-third of the required work may be performed by correspondence.

For the Master's degree not more than one-half of the required work may be performed by correspondence, except in the case otherwise provided for of the Master's degree *in absentia.*

For the Doctor's degree not more than one-third of the required work may be performed by correspondence.

For particular information, address the President of the University or Assistant Professor H. D. Sheldon, the Chairman of the Committee on University Extension, University of Oregon, Eugene, Oregon.

PRIZES AND HONORS

The following prizes in Oratory are annually offered:

The Failing prize, not to exceed one hundred and fifty dollars, is the income from a gift of twenty-five hundred dollars made to the University by Hon. Henry Failing, of Portland. It is awarded "to that member of the Senior Class in the Classical, the Scientific, or the Literary Course prescribed by the University, or such courses as may, at the time, be substituted for either of said courses, who shall pronounce the best original oration at the time of his or her graduation."

The Beekman Prize, not to exceed one hundred dollars, is the income of a gift of sixteen hundred dollars made to the University by Hon. C. C. Beekman, of Jacksonville. It is awarded under the same conditions as the Failing prize, for the second-best oration.

The regulations governing the competition may be had on application to the Registrar.

HONORS

Honors will be assigned to graduates as follows:

Students shall graduate *summa cum laude* when at least half their credits rank A and not more than three credits C; none

below; *magna cum laude* when not more than three credits rank below B, and none below C; *cum laude* when not more than three credits rank below C; when a student's credits rank lower than any of the above, he graduates *rite*.

LIBRARY AND READING ROOM

The Libraries of the University contain about 16,000 volumes. The Dewey system of classification has been adopted, and a card catalogue enables students to make ready use of the books. The Library is a depository for all documents published by the Government at Washington, and receives a large number every year.

Special Department Libraries are being accumulated which are provided with reserve shelves in the General Library. Poole's Index and the annual library indexes have been provided, and there is a valuable collection of bound periodicals. The list of encyclopedias and strictly reference books numbers over 200 volumes. The Literary Societies of the University have accumulated libraries of considerable value, which are accommodated in special alcoves of the General Library. The Society Libraries number nearly 1,000 volumes.

The General Library is especially strong in economics and history. Instructors in the University, students and resident graduates are entitled to draw books from the Library. To others it is a Reference Library only. Students may draw three volumes at a time, to be retained for three weeks, with the privilege of one renewal. The Library is open every day during term time, from 8:30 A. M. to 5 P. M., and on Saturday from 8:30 A. M. to 12:00 M.

The University Reading Room contains a large assortment of American and foreign newspapers and periodicals. They include weekly and monthly magazines and reviews on General Literature, Sociology, Political Science, History, Economics, Chemistry, Biology, Physics, Engineering, Education, Philosophy, Psychology, French, German, etc.

The reading room will be open every day in term time, from 8:30 A. M. to 5 P. M., excepting Sunday.

PUBLICATIONS

THE UNIVERSITY OF OREGON BULLETINS are published bi-monthly. They furnish definite information in regard to the current work of the University, including the results of special research under-

taken by the various departments. They are sent free on application to the Registrar.

THE OREGON WEEKLY is published each Monday during the College year by the student body of the University. The paper is devoted to general college news, and aims to keep the students, faculty and alumni posted concerning the every-day happenings at the University and neighboring institutions. The staff consists of an editor-in-chief, with two associate editors, and a managing editor, with two assistants. The various members of the staff are elected during the second semester of each year.

THE UNIVERSITY OF OREGON MONTHLY is a monthly magazine published by the student body of the University. It is confined to literary articles written by students, alumni and other persons connected with the institution. The aim of the Monthly is to arouse and cultivate among the students practical literary ability; and also to serve as a medium between the University and its alumni.

GRADUATE SCHOOL

FACULTY

The faculty of each school or college consists of the President of the University, and the resident professors and other teachers giving instruction in the college.

ORGANIZATION

The Graduate School of the University of Oregon was organized to offer advanced instruction upon the basis of work completed in the College of Literature, Science and the Arts, the College of Science and Engineering, and the School of Mines and Mining. It meets the threefold purpose of extending general culture, for which the degree Master of Arts is granted; of encouraging the mastery of a specialty, for which the degrees of Master of Science and of Doctor of Philosophy and the different Engineering degrees are granted; and of providing for those who desire a more thorough acquaintance with particular subjects than is offered in undergraduate work, but are not candidates for degrees.

ADMISSION

Graduates of the University, or other colleges or universities regularly authorized to grant Bachelor's degrees, and others who can give satisfactory evidence that they have an equivalent preparation, are admitted to the Graduate School on the recommendation of the President and the Graduate Council; provided always, that the President and Council may prescribe for the candidate such preliminary work as they may deem necessary for entrance upon his course.

The candidate shall present his diploma and other credentials to the President and Council with an application showing his proposed work, as approved by the heads of the departments in which his major and minor subjects lie.

REGISTRATION

The applicant shall, in order to register, file with the Registrar his registration card granted by the Council, and pay the incidental

fee of ten dollars and the student body tax. If the applicant is a non-resident student, or is taking only one course in the University, he is required to pay the incidental fee only.

DEGREE OF DOCTOR OF PHILOSOHY

Beginning with the year 1900-1901, the degree of Doctor of Philosophy was opened to graduate students under the following conditions:

1. The candidate must be a baccalaureate graduate of this University or of a college or university whose degrees are accepted as equivalent to its own; or he must give satisfactory evidence to the Graduate Council that he possesses an equivalent preparation for graduate work.

2. He must make application to the Dean of the Graduate School before the first day of October preceding the commencement at which he intends to present himself for the degree, and must then give satisfactory evidence of his ability to read such German and French as may be necessary for the proper prosecution of his studies.

3. He must have spent at least three full years in graduate work at this or some other approved university; the last year must be spent as a resident student of this University. The time spent in attaining the degree A. M. may be counted toward satisfying this time condition.

4. He must present a thesis showing the results of original research of a high character, and must pass acceptable examinations, both written and oral, in one chief or major study and two allied, subsidiary, or minor studies, not more than two of which may be in the same department. The oral examination shall be before the Faculty of the Graduate School, where he may be required to defend his thesis. The thesis, embodying the results of original research in some subject connected with his major study, must be presented to the head of the department in which the work was done not later than the 1st of May preceding the Commencement at which the degree is to be conferred, and if approved by him is to be placed on file for inspection in the Library for at least two weeks. If finally approved, not less than 100 printed copies must be delivered to the Librarian of the University, before graduation, or proper security be given for the printing of that number; provided, that if the thesis has already been printed, ten copies only shall be deposited with the Librarian.

THE MASTER'S DEGREE

The Degree of Master of Arts or Master of Sciences will be granted only after at least one full year's graduate work. The candidate must have completed with *high credit* seventeen hours per week or their equivalent (of which the thesis may count as high as seven) chosen from the courses of graduate study; other courses may be offered only by the special consent of the departments concerned, and with the approval of the Graduate Council; but courses for which a professional certificate or diploma is given will not be counted toward this degree. Work may be confined to a single department, and may not be distributed among more than three. Not later than the first of June preceding the Commencement at which the degree is to be taken, he must present to the head of the department in which his major study has been a type-written thesis which must embody scholarly research on some topic connected with that study. The thesis must be favorably passed upon by a committee made up of the heads of departments in which he has worked. The candidate must, before the degree is granted, pass a satisfactory examination, either oral or written, and, if required, before the committee which passed on his thesis.

Until further notice, in exceptional cases the degree of Master of Arts will be granted for work in *absentia* to those who fulfill the conditions for entrance to the Graduate School and pay the incidental fee, provided the candidacy be approved by the President and Graduate Council; that the proposed outline of work cover a full college year, and be approved in advance by the department concerned; that the candidate shall present himself at the University for examination, deposit a type-written thesis embodying scholarly research, and pay the diploma fee.

ENGINEERING DEGREES

Bachelors of Science in Engineering of this University, or other colleges or universities of equal rank, may receive at the expiration of one additional year of study the professional degree of Civil Engineer, Electrical Engineer, Chemical Engineer or Mining Engineer, which is appropriate to the undergraduate course, in accordance with the rules laid down for the five-year courses in the College of Science and Engineering.

Bachelors of Science in Engineering may receive the professional degrees named above without the additional year of study at the University, who have spent at least three years actual time in pro-

fessional practice in positions of responsibility, in the designing, construction or operation of engineering works, and who shall furnish details of satisfactory evidence as to the nature and extent of this practice.

They must submit an engineering thesis accompanied by detailed explanations, drawings, specifications, estimates, etc., embodying the results of their work or observations. If approved, the thesis and all accompanying material shall be the property of the University. All theses for any degree must be delivered to the Dean of the College of Science and Engineering on or before the 15th day of May.

All candidates for degrees of any kind must upon being recommended for such degree pay the diploma fee.

COURSES OF STUDY

The Courses of Study offered to graduate students are given under the various departments of instruction.

Students contemplating graduate work are invited to address the President of the University or the Dean of the Graduale School.

THE COLLEGE OF LITERATURE, SCIENCE AND THE ARTS; THE COLLEGE OF SCIENCE AND ENGINEERING; THE SCHOOL OF MINES AND MINING.

THE FACULTY

The Faculty of each school or college consists of the President of the University and the resident Professors, Assistant Professors, Lecturers and Instructors, giving instruction in the college.

REQUIREMENTS FOR ENTRANCE

There are two ways of entrance to the University; first, by examination; second, by recommendation from accredited schools without examination. All students from schools not accredited to the University are subject to examination at the University. The examinations will be held during the first week of the college year.

ENTRANCE OF HIGH SCHOOL STUDENTS INTO THE UNIVERSITY AND ACCREDITING OF HIGH SCHOOL WORK BY THE UNIVERSITY

The whole matter of accrediting high school work has been placed in the hands of the President of the University, to act after consultation with the heads of departments.

It is the policy of the University to so adjust its standard of entrance requirements as not to be out of touch with the schools of the state that do earnest work, and at the same time to protect the scholarship of the University. It will also be the policy, as far as possible, to make the accrediting uniform for the various departments. Schools, therefore, that have a nine months' year with subjects running for a half year or more, five times per week, with recitations forty minutes long, and which have the subjects in the state high school course, or their equivalent, will, as far as possible, have their students admitted to the next higher class in the University.

Schools which do not have a nine months' year, five recitations a week, with forty minutes to each recitation, and which have short time subjects running ten, twelve or fourteen weeks each, will be given proportional accrediting, depending upon the time given and the quality of the work done. The state high school course is the

basis of the requirements for entrance to the University and the adoption of the state course would at once simplify the passage of students from high schools into the University, and settle almost, if not quite, all the questions as to accrediting. It is earnestly hoped, therefore, that all high schools will adopt the state course.

It must be borne in mind, however, that the work of the University is exacting and difficult. Schools, therefore, must make their preparation, especially in Mathematics, just as exhaustive, exacting, and thorough as possible. The work on principles and problems in Algebra must be done in an exacting manner. The same is true of original problems in Geometry, which should be solved in large numbers.

If the preparation of the schools is weak, the student when he enters the University will find himself unable by the end of the first semester to do the work, and will have to take the subject over again, or be otherwise conditioned. In case students from any school for two consecutive years are poorly prepared in any subject, the school authorities will be notified, and the accrediting will be withdrawn in that subject, at the discretion of the President of the University. The accrediting will not be restored until the standard of work in the subject noted is brought up.

In this connection, the notice of school anthorities is called especially to the fact *that abundant experience has shown that a short school year of six, seven or eight months, and short time subjects running for ten, twelve, fourteen or sixteen weeks, with only thirty or thirty-five minutes to a recitation, do not provide adequate preparation for any high grade university work*, and that the credit given for such work can not fairly be as great as credit for work on the basis of a year of thirty-six weeks, with recitations forty minutes long.

CHANGE IN METHOD OF ACCREDITING

Beginning September, 1902, the University changed its method of accrediting for entrance from the credit to the subject or unit plan. A subject (like algebra, for instance) running one year, i. e. thirty-six weeks, five times per week, with forty minutes for each recitation, constitutes a unit.

This will make the University articulate perfectly with the State Course of Study for High Schools, each of whose subjects run for a year or a half year, i. e. constitutes a unit or a half unit. There should be four units in each year, each requiring five recitations per week and forty minutes to a recitation.

The requirements for entrance, therefore, will no longer be calculated on a set number of credits, but will be determined by the satisfactory completion for the length of time required of the subjects specified below as necessary for entrance.

The evidence of the satisfactory completion of the different subjects will be the *certificate of the superintendent or principal of schools, or clerk of the school board*, or an examination at the University, or the recommendation of the President of the University.

Students wishing to avoid examinations at the University should come from an accredited school, and bring a certificate of work done. *Therefore school boards are urged to have their high school work accredited at the University*, and to that end the proper blank will be sent by the University and should be filled out and returned promptly to the President of the University.

College credit will not be granted for preparatory or high school work; except that where the student has finished the entrance requirements, and in addition to them, extra work in Latin, Greek, French, or German, this additional work will be counted as college work, provided it has been followed consecutively for a year or more; and certain conditional credits are given for Physics and Chemistry at the discretion of the heads of the departments.

REQUIREMENTS FOR ENTRANCE TO THE UNIVERSITY

The following requirements for admission to the University show the subjects that ought to be included in the four year high school courses, and indicate the length of time necessary in order to best fit for the University. They follow closely the state high school course.

Especial attention is called to the fact that two years of Latin are required for entrance to the Freshman Class; or, in the Engineering groups, two years of either Latin, German, or French.

A UNIT means a study running one year (36 weeks) five times a week, with recitations forty minutes long.

For entrance to the Freshman Class, fifteen units will be required; provided, that conditions amounting to two units may be allowed, if the applicant's work is otherwise satisfactory.

English	4	units.
Algebra (Wells' Essentials)	1½	"
Geometry, Plane and Solid	1½	"
History, Greek and Roman, and Mediæval with special reference to England, or American History and Constitution	2	"
Physical Geography	1	"
*Botany or Physics	1	"
†Latin	2	"
	13	units.

The balance of the fifteen units must be made up from the following:

Latin	1 or 2	units.
German	1 or 2	"
Botany	1	"
Physics or Chemistry	1	"
History, Modern	1	"
History, American and Constitution	1	"
Zoology	½ unit.	
Astronomy	½ "	
Geology	½ "	
Physiology	½ "	
Higher Arithmetic	½ "	
Elementary Political Economy	½ "	
Book Keeping	½ "	
Drawing, Mechanical or Free Hand	½ "	
By combining any two	1	"

DETAILED LIST OF ENTRANCE SUBJECTS

(A University bulletin treating of preparatory English in detail will be sent on application.)

ENGLISH. No candidate will be accepted in English without condition whose written work is notably defective in spelling, punctuation, grammar, and structure of sentences and paragraphs.

---

*In the Engineering groups, Physics is required; in the Pre-Medical course, Botany is required.

†French or German may be substituted for Latin as an entrance requirement in the Engineering groups.

ENGLISH COMPOSITION. All candidates from schools not accredited to the University in English Composition will be required to write not less than one hundred words on each of three topics chosen by him from a considerable number, perhaps ten or fifteen; and two of the topics chosen must be from the books assigned for general reading and composition work under English Literature.

ENGLISH LITERATURE. This work includes (1) the reading of books for general reading which are also to be used as a basis for composition work; and (2) the reading of a few masterpieces for thorough study. The written statement of the teacher that the books in (1) have been read will usually be accepted; otherwise tests in addition to the work under English Composition will be required. In regard to books in (2), all candidates from schools not accredited in English Literature will be required to write not less than two hundred words on some one topic, and a paragraph or two on a second topic, chosen by him from a list selected from Books for Thorough Study. These books are to be critically read and studied in class, with reference to the following points: (a) The language, including the meaning of words and sentences, the important qualities of style, and the important allusions; (b) The plan of the work, i. e., its structure and method; (c) The place of the work in literary history, the circumstances of its production, and the life of its author; and that all details be studied, not as ends in themselves, but as means to a comprehension of the whole.

Exercise books, properly certified by the instructor, sent direct to the University by schools accredited in English Literature, will be accepted in lieu of the examination.

NINTH GRADE.

I. Books for General Reading and Composition Work:

Dickens: Christmas Carol.
Lowell: Vision of Sir Launfal.
Goldsmith: Vicar of Wakefield.
Hawthorne: The House of the Seven Gables.
Whittier: Snowbound and other poems.

II. Books for Thorough Study.
Shakespeare: Merchant of Venice.
Franklin: Autobiography.

TENTH GRADE

I. Books for general Reading and Composition Work:

Longfellow: Tales of the Wayside Inn.

Addison: Sir Roger de Coverly.
Shakespeare: Julius Cæsar.
Holmes: Selected Poems.

II. Books for Thorough Study.

Burke: Conciliation of America.
Lincoln: Gettysburg, Second Inaugural and other Speeches.
Macaulay: Essay on Addison.
Pope: Homer's Iliad, I, VI, XXII, XXIV.

ELEVENTH GRADE.

I. Books for General Reading and Composition Work:

Tennyson: Enoch Arden and Other Poems.
Emerson: Two Selected Essays.
Carlyle: Essay on Burns.
Burns: Cotter's Saturday Night and Other Poems.
Hanson: Essay on Burns and Selected Poems from Burns.
De Quincey: Revolt of the Tartars.

II. Books for Thorough Study.

Webster: Reply to Hayne.
Shakespeare: As You Like It.
Macaulay: Essay on Milton.
Milton: L'Allegro, Il Penseroso, Comus and Lycidas.

TWELFTH GRADE.

I. Books for General Reading and Composition Work:

Cooper: Last of the Mohicans.
Elliott: Silas Marner.
Tennyson: The Princess.
Coleridge: Ancient Mariner.
Scott: Ivanhoe.
Bunyan: Pilgrim's Progress.

II. Books for Thorough Study.

Shakespeare: Macbeth.
Emerson: The American Scholar.
Milton: Paradise Lost, I and II.
Western Authors: Five Selected Poems.

ALGEBRA.—The requirements in Algebra embrace the following subjects: Factors, common divisors and multiples, fractions, involution, including the binominal theorem for positive integral exponents; evolution, theory of exponents, radicals and equations involving radicals, ratio and proportion, elementary logarithms; the ordin-

ary methods of elimination, and the solution of numerical and literal equations of the first and second degrees, with one or more unknown numbers, and of problems leading to such equations.

Work based on any of the following text-books will be accepted, the work to have five full recitation periods per week for a year and a half, a school year to be at least thirty-six weeks, and a recitation to be at least forty minutes in length.

Wentworth's Complete Algebra, completed, except chapters 22 to 34 inclusive; Well's New Higher Algebra, completed, except chapters 36 to 40 inclusive; and Well's Essentials of Algebra, the state text-book.

PLANE AND SOLID GEOMETRY.—A course based on any one of the following text-books will be accepted; the work to cover five recitations per week for one and a half years.

Wentworth's Plane and Solid Geometry, edition for 1899, completed, including two-thirds of the exercises; Phillips and Fisher's Abridged Geometry, completed, including all problems; Well's Essentials of Plane and Solid Geometry, completed, including all exercises.

The student should be required to state definitions clearly, whether in the language of the text-books or not, and in solving a problem or proving a proposition he should be able to prove every statement made. All figures should be constructed by the student with strict accuracy, on correct geometrical principles, using rule and compass; and this should be persisted in until it can be done with ease. Pains should be taken that original demonstrations be given in good form. Besides oral recitations, the student should be required carefully to write out his own demonstrations, and to apply geometrical principles to the solution of practical and numerical examples. He should be required to demonstrate propositions and solve problems without the aid of the text-book.

HISTORY.—Five recitations a week for two years. Any two of the following:

1. Greek and Roman, with connected geography. (a) Greek History to death of Alexander; (b) Roman History to A. D. 800. Botsford's Greek History and Botsford's Roman History are the state texts.

Students preparing for the University in History are strongly urged to take Greek and Roman History.

2. Mediæval and Modern History.—The following indicate the preparation required: Myers' Mediæval and Modern History, Fischer's Growth of Nations, Adams' European History.

3. English History—Ground covered in History of England by Coman and Kendall.

4. American History and Constitution.—Montgomery's Student's History of the United States, Channing's Student's History of the United States, or some book of like nature, provided a more elementary History has been previously studied. Otherwise some briefer standard high school History. Strong and Schafer's Government of the American People.

In all cases the text-book should never be depended upon entirely; supplementary work should be done with one or two other text-books, and at least one large General History for reference. See the Report of Committee of Seven on the Study of History in Schools.

SCIENCE.—Five recitations per week for a year in each subject.

Science work, to be accepted for entrance to the University, must be from a standard high school text book; thorough laboratory practice is absolutely necessary when the subject allows. Laboratory manuals and note books must be in constant use, and students coming from schools not accredited to the University must present their laboratory note-books, signed by the teacher. In Chemistry, some text equivalent to Remsen's Briefer Course must be used; in Physics, a text equivalent to Carhart and Chute; in Botany, to Bergen's Elements; and in Physical Geography, any standard text.

1. CHEMISTRY.—In cases where the chemistry offered is considered by the head of the department of chemistry to be the equivalent of Course 1, (see list of courses in Chemistry) the student will be admitted to Course 2, satisfactory work in which will entitle him to one unit college credit in case the preparatory chemistry was used to fulfill entrance requirements, or to two units college credit in case it was not so used, and in either case all college requirements in Courses 1 and 2 will be considered to be satisfied.

Should the chemistry offered not be equivalent to Course 1, but to at least a half unit, the last semester's work in Course 1 will be required, for satisfactory work in which, if the preparatory work was applied upon entrance requirements, one-half unit of college credit will be granted, and all college requirements in Course 1 will be considered satisfied; but if the preparatory work was not used upon

entrance requirements, or if the student elects to take the full year in Course 1, one unit of college credit will be granted.

The whole of Course 1 will be required of students whose preparatory work in the subject seems to be equivalent to less than one-half unit.

2. PHYSICS.—All students who offer for entrance a half year or more of physics, as laid down in the State High School Course, will receive credit therefor, provided they elect physics in the Freshman or Sophomore year.

All candidates for the A. B. degree, except those of the General Scientific Group, who offer physics for entrance, will, subject to the discretion of the head of the department, take the first semester in the Freshman or Sophomore year as it is laid down in their chosen group.

All candidates for the A. B. degree in the General Scientific Group, and all candidates for the B. S. degree, who offer physics for entrance, will, subject to the discretion of the head of the department, take a full year in physics as laid down in their chosen group.

All students, for whatever degree they may be candidates, who do not offer physics for entrance as above, and of whom it is required as college work, will take a full year of physics as laid down in their chosen group.

Provided, in all cases, students may take an examination on the work covered by the half year or year of University physics and for satisfactory work in examination be excused from and accredited with the subject.

Schools with laboratory facilities, doing four years of high school work as laid down in the State High School Course, or its equivalent, may, at the discretion of the head of the department, be exempt from the requirement of extra work.

Students entering the Course Preparatory to Medicine and Dentistry must either offer both chemistry and physics for entrance according to the above arrangement or take one or both during their course.

LATIN.—Five recitations a week each year.

First Year—Latin lessons and grammar, and Viri Romae, or Nepos, or Cæsar's Gallic War begun.

Second Year—Cæsar, four books.

Third Year—Cicero, six or seven orations, including the four against Cataline, and Sallust's Jugurtha.

Fourth Year—Vergil, six books of the Aeneid.

GREEK—Five recitations per week each year.

First Year—Greek lessons and Zenophon's Anabasis begun.

Second Year—Zenophon, four books of the Anabasis.

Third Year—Homer, first three books.

FRENCH—Five recitations per week for one year. Written exercises and grammar work; systematic work in French pronunciation, and as much practice in reading as possible to give facility in reading easy French prose.

GERMAN—Five recitations per week for one year. Written exercises and grammar work and systematic training in German pronunciation. As much drill as possible in rapid reading of German prose and poetry.

ELECTIVES—The time and work required in the elective subjects as indicated in the State High School Course of Study.

LATIN. All students entering in 1904 must have two years of Latin before beginning the Freshman year, except in the engineering groups, in which two years of either French or German will be accepted in place of Latin.

In the General Scientific, Civic Historical, and Philosophical-Educational groups students entering the Freshman year in 1904 and after, the choice (1) of continuing Latin for three years, making five years of Latin in all; or (2) of electing either French or German, for three years; or (3) of taking two years of either French or German, and then two years of the other by electing it in the Senior year. In case option 3 is taken, students must elect either French or German in the Senior year to carry out above arrangement.

In the regular groups in the School of Applied Science, the same options as above will be open to students.

In 1904 Latin will not be required in the Senior year of the General Classical and General Literary groups; and neither Latin, French nor German will be required in the Senior year of the General Scientific, Civic Historical, and Philosophical-Educational groups; except as French or German may be a necessary elective under the options given above.

PROBATIONARY STATUS OF STUDENTS

All students admitted on certificates are on a probationary status for the first half year of residence, and the credits or units allowed them are not placed permanently upon their record until such time as they have shown themselves able to do the work of the University.

SPECIAL STUDENTS

The privileges of a Special Student are not granted to those who come from the schools with insufficient preparation for regular standing. They are intended for those who for any reason are unable to complete a college course, but who are qualified by age, character, practical experience, purpose, and habits of study, to profit by university courses. Such properly qualified persons not candidates for a degree, who fulfill all the requirements for entrance to the Freshman year, may be admitted to the University to pursue one or more college subjects for which they may be fitted; provided, that persons of maturity, twenty years of age or over, and teachers in public or private schools, may, at the discretion of the Committee on Special Students, enter as special students without conforming to the above requirements, upon presenting satisfactory credentials and testimonials. These requirements shall not apply to special collegiate or other courses where requirements for entrance are specified.

The Committee reserve the right to discuss the programme proposed by the student and to require such changes as may in their judgment seem wise. Students other than those of mature years are always required to furnish the committee with evidence that the course proposed subserves a definite object which they have in view.

No student can be accepted without condition whose written English work is seriously defective in point of penmanship, spelling, punctuation, grammar, sentence structure and paragraphing.

Special Students are subject to the same University regulations as regular undergraduates, and they may become candidates for graduation upon fulfilling all University requirements, including those for entrance.

The failure on the part of any Special Student to maintain a good standing in the studies to which he is admitted will at once sever his connection with the University; and a Special Student suspended for failure in University work may be readmitted only upon attaining regular undergraduate standing.

GENERAL REGULATIONS

REGISTRATION—On the appointed Registration Days, at the opening of the session in September, each student must present himself at the University Office, pay the entrance fees, and receive a certificate of registration.

STUDY CARD—At the time of registration, each student receives a Study Card for the selection of studies for the year. This Card, properly filled out by the student's Dean, and approved by the Instructors whose courses are selected, must be filed with the Registrar within one week after registration.

CHANGE OF STUDIES—A student desiring to drop a subject once taken up, or to take up a new subject after the study card has been filed, must file with the Registrar the written approval of his Dean and of the Instructors whose subjects are to be taken or dropped.

CONDITIONS AND FAILURES—All failures must be made up within one year.

Examinations for the removal of Conditions will be held on the first Monday and the following Tuesday in December, and on the Monday and Tuesday preceding the regular examination period in the second semester.

ENTRANCE CONDITIONS—Entrance conditions may be made up either at the High School, or under a private tutor approved by the head of the department.

MINIMUM AMOUNT OF WORK—Students are required to carry successfully at least nine hours of work during the first semester in order to be allowed to continue in the University during the remainder of the year; and, should a student carry only nine hours successfully during the first semester, he must carry at least twelve hours successfully during the second semester.

UNIVERSITY CREDIT FOR EXTRA ENTRANCE SUBJECTS—Credit for work done above entrance requirements, in subjects not preparatory, may be granted by the heads of departments at their discretion. An application blank for advanced standing will be furnished by the Registrar.

GYMNASIUM CREDITS

Two credits (four hours) of Gymnasium work are required, two hours in the Freshman year and two hours in the Sophomore year.

Students excused from the Gymnasium on physician's certificates of disability are required to make up the two extra credits in regular elective subjects.

THE COLLEGE GROUPS

In the College of Literature, Science and the Arts, the University offers six general groups; and in the College of Science and Engineering, seven general groups and three technical groups; and in the School of Mines and Mining, one general group with two subdivisions.

REQUIREMENTS FOR GRADUATION

Graduation is no longer determined by a calculation of a set number of credits. Graduation will follow the satisfactory completion of some one of the groups laid down, including the required subjects with the number of hours noted, and the elective work, subject to the approval of the Deans of the proper departments and of the Instructors of the various courses elected. The number of hours of elective work must conform to the requirements of the group chosen.

Applications from resident students for Senior standing must be delivered in writing to the Chairman of the Senior Credits Committee on or before the 30th of June preceding the opening of each University year.

HOURS (OR CREDITS)

The number of hours as set down in the groups and courses of the various colleges and schools refers to the number of hours of recitation or lecture per week for one year. Therefore, for example, when four hours of English work are called for, the work is to continue for one year.

A course running four times per week for one semester would thus be the equivalent of two hours only. It would take two such semester courses to satisfy requirements of four hours of work.

EXTRA HOURS

Mature students of excellent preparation and health, whose work is of a character to justify it, may, with the consent of the Committee of Deans, take more than the required number of hours and thus shorten the time for graduation, *subject to the following conditions:*

Students who shall be permitted to carry more than the required number of hours shall receive credit for the same at the end of the

semester or year, provided the extra credits for the semester or year shall be all of grade B, and provided no more than six credits of the required work for the same year shall fall below grade B, and none below grade C. Grades claimed under this proviso will not be granted during any other year than the one in which these extra studies are taken; and students wishing to avail themselves of this proviso must designate their extra hours, as such, at the time of filing their schedule cards—provided also that gymnasium credits shall not be counted.

Each student shall have to conform to all the requirements in regard to attendance, but shall be allowed to drop such extra studies at any time on notice to the instructor and the Dean of his department.

This rating of B for extra credit subjects is made on the basis of a strict adherence to the schedule of marks in force for the University; i. e., that A equals 95 to 100 per cent; B equals 90 to 95 per cent; C equals 80 to 90 per cent; D equals 70 to 80 per cent; E equals below 70 per cent. The passing mark is 70 per cent, and below 70 per cent. is failure.

MAJOR SUBJECT

Each student must choose at the beginning of the Junior year a major subject, which must consist of at least one-half of the number of elective credits in the Junior and Senior years in one department. The major may be selected at the beginning of the Sophomore year, in which case the student may substitute, with the advice of the head of his major department, one elective subject related to his major for any one required subject of the Sophomore year. The omitted Sophomore subject must be taken in the Junior year.

I

THE COLLEGE OF LITERATURE, SCIENCE AND THE ARTS

(Leading to the degree of Bachelor of Arts)

1. The General Classical Group.
2. The General Literary Group.
3. The General Scientific Group.
4. The Civic Historical Group.
5. The Educational Group.
6. Collegiate Course Preparatory to Law and Journalism.

All of the foregoing groups except 6 lead to the degree of Bachelor of Arts. The main difference between them is that the first two require two languages besides English, and the others but one, and devote the extra time to a more extended study of scientific subjects or topics in political science or history, or philosophy and education.

1. General Classical Group.

Freshman Year—	NO. OF HOURS
Latin (or Elective*)	4
Greek (or Elective*)	5
Plane Trigonometry, 1st semester three times per week History, 1st sem. twice a week, 2nd sem. five times	5
English	4
	18

*Students entering with four years of Latin will substitute elective work in the place of the Latin in the above list. Those entering with three years, will substitute an elective for one year of Latin.

Students entering with one, two or three years of Greek will substitute in like manner.

Sophomore Year—	NO. OF HOURS
Latin (or Elective*)	4
Greek (or Elective*)	4
English	5
Science	5
	18

Junior Year—	
Greek (or Elective)	4
Economics	3
Elective	10
	17

Senior Year—	
Elective	17

2. General Literary Group

Freshman Year—	
Latin (or Elective*)	4
French or German (or Elective*)	5
Plane Trigonometry, 1st sem., three times a week History, 1st sem., twice a week; 2d sem., five times,	5
English	4
	18

Sophomore Year—	NO. OF HOURS
Latin (or Elective*)	4
French or German (or Elective*)	4
English	5
Science	5
	18

*Students entering with Latin, French or German will substitute elective work for the years already taken (see note under General Classical Group.) Students taking French or German as college subjects may take two years of each or four years of one.

Junior Year—	NO. OF HOURS
French or German (or Elective*)	4
Economics	3
Elective	10
	17
Senior Year—	
Elective	17

3. General Scientific Group.

Freshman Year—	NO. OF HOURS.
Latin or French or German (or Elective*)	5
Science	5
Algebra, Trigonometry, Analytical Geom	5
English	4
	19
Sophomore Year—	
Latin or French or German (or Elective*)	4
English	5
Science	5
Economics	3
	17
Junior Year—	
French or German (or Elective*)	4
Elective	13
	17
Senior Year—	
French or German (or Elective*)	4
Elective	13
	17

*Students entering with Latin, French or German will substitute elective work for the years already taken (see note under General Classical Group). Students taking French or German as college subjects may take two years of each or four years of one.

4. Civic Historical Group.

	NO. OF HOURS
Freshman Year—	
Latin, French or German (or Elective*)	5
Plane Trigonometry, 1st semester three times a week History, 1st sem. twice a week, 2nd sem. five times	5
English	4
Science	5
	19†
Sophomore Year—	
Latin or French or German (or Elective*)	4
English	5
Economics	3
History	5
	17
Junior Year—	
French or German (or Elective*)	4
Elective	13
	17
Senior Year—	
French or German (or Elective*)	4
Elective	13
	17

*Students entering with Latin, French or German will substitute elective work for the years already taken (see note under General Classical Group). Students taking French or German as college subjects may take two years of each or four years of one.

†Students entering with a year or more of Latin, French or German will have but eighteen hours in Freshman year.

5. Educational Groups*

5a. Humanistic Group.

Freshman Year—	NO. OF HOURS.
Latin	5
English	4
Plane Trigonometry, 1st semester three times a week History, 1st sem. twice a week, 2nd sem. five times	5
Science	5
	19
Sophomore Year—	
Latin	4
Psychology or Education and Ethics	5
French or German	4
Rhetoric	5
	18
Junior Year—	
Latin	3
French or German	4
Economics	3
Education	3
History or English	4
	17
Senior Year—	
Latin	3
French or German	3
Education	3
History or English	8
	17

*Two outlines are given under the Educational Groups, one for students preparing to teach English, History, or Modern Languages, and the other for those preparing to teach Mathematics or Science. Either group leads to the degree of Bachelor of Arts. Elective work may be substituted for a part of the work outlined, in the Junior and Senior years, with the consent of the head of the department.

Special students preparing for teaching, who may not be able to take the four years' course, will make their selection of subjects under the advice of the head of the department of Education.

5b. Mathematics-Science Group.

	NO. OF HOURS
Freshman Year—	
Latin, French, or German	5
English	4
Plane Trigonometry, 1st semester three times a week History, 1st sem. twice a week, 2nd sem. five times	5
Science	5
	19
Sophomore Year—	
Latin, French or German	4
Mathematics	5
Science	5
Psychology, or Ethics and Education	5
	19
Junior Year—	
Rhetoric	5
Education	3
Economics	3
Science or Mathematics	6 or 8
	17 or 19
Senior Year—	
Education	3
Science or Mathematics	14
	17

7. Collegiate Course Preparatory to Law or Journalism.

Not leading to a degree.

This course presumes considerable maturity of mind and special preparation. Applicants for admission to the course must meet the requirements for admission to the Sophomore year of some one of the groups of the College of Literature, Science and the Arts. In exceptional cases, students of especial maturity and of strong powers of application may, at the discretion of the Committee on Special Students, be admitted to this course.

COURSE OF STUDY

The course of study includes two years of seventeen hours per week each. The work must be divided as follows.

1. American history and constitutional law, 10 hours.
2. English, 5 hours.
3. Economics, and sociology or political science, 8 hours.
4. English History, 3 hours.
5. Journalism, 4 hours.
6. Elective*, 4 hours.

THE SCHOOL OF COMMERCE

FACULTY

The Faculty of each College consists of the President of the University and the professors and instructors giving instruction in the College.

ORGANIZATION

The University offers the foundation of a School of Commerce, giving special educational facilities to those who expect to enter commercial life. It is intended to fit young men more thoroughly and definitely for the successful management of large manufacturing and commercial enterprises.

The University courses already offered are so framed that they supply to a considerable degree the necessary training. For this reason no additional classes or instructors will be necessary for two or three years. The training will include the following subjects, many of which are now given at the University: German, French, Spanish, history of commerce, finance, exchange, banking and general economics; theory and methods of transportation; climate, resources and general geography of foreign countries, laws of insurance; elementary engineering, in order to give an accurate general knowledge of the generation and transmission of power; materials of manufacturing; home and foreign methods of business and transportation; history of colonies and colonial administration; political science, with fundamentals of jurisprudence and common law, commercial geography, customs requirements, etc., etc.

*Students with excellent preparation and good health may take a greater number of hours, and thus increase the number of elective hours. (See rules governing extra hours.)

REQUIREMENTS FOR ENTRANCE

The requirements for entrance to the School of Commerce will be the same as those to any group of the College of Literature, Science, and the Arts, or of the College of Science and Engineering. Special students may take subjects in this school under the same restrictions as in other courses.

COURSE OF STUDY

The course of study will include four years of seventeen hours per week per year. By a suitable choice of electives, two lines of study may be had: Group 1, with special reference to history, political science, and economics, history of commerce and the problems that large commercial organizations give rise to; Group 2, with special reference to engineering or other topics that deal with the problems of transportation and the materials with which commerce deals in trade with different nations.

The number of credits required for graduation will be sixty-eight, in addition to the entrance credits required, distributed as follows:

1. Required subjects.
2. Elective subjects:
   (a) Group 1.
   (b) Group 2.

The classification of electives will be made at as early date as possible.

II.

THE COLLEGE OF SCIENCE AND ENGINEERING

A. THE SCHOOL OF APPLIED SCIENCE

Leading to the degree of Bachelor of Science.

1. General Elective Group, including psychology, astronomy, and electives in general science, (a) Chemistry, (b) Physics, (c) Geology and Mineralogy.

2. Four Year Course Preparatory to Medicine.

REQUIREMENTS FOR ADMISSION

The requirements for admission to these courses are the same as for admission to the Groups of the College of Literature, Science, and the Arts, with the exceptions noted below, and the general exception that German or French may be substituted for Latin.

COURSE OF STUDY

Group A, 1.

Freshman Year—	NO. OF HOURS
Latin or French or German (or Elective*)	5
Science	5
English	1
Algebra, Trigonometry and Analytical Geometry	5
	16
Sophomore Year—	
Latin or French or German (or Elective*)	4
English	4
Science	5
Differential and Integral Calculus	5
	18
Junior Year—	
French or German (or Elective*)	4
English	4
Elective	10
	18
Senior Year—	
Economics	3
Elective	14
	17

*Students entering with Latin, French or German will substitute elective work for the years already taken (see note under General Classical Group). Students taking Latin, French, or German as college subjects may take two years of each of any two, or four years of any one.

Group A, 2

Four Year Course Preparatory to Medicine and Dentistry.

This is a regular course leading to the degree of Bachelor of Science.

REQUIREMENTS FOR ADMISSION

The requirements for admission to this course are the same as those for admission to any of the Groups of the College of Literature, Science, and the Arts, including the equivalent of Zoology 1 and Botany 1.

	NO. OF HOURS
Freshman Year—	
English	1
Chemistry	5
Mathematics	5
Zoology 2	3
Botany 2 and 3	3
	17
Sophomore Year—	
English	5
French or German	5
Chemistry	5
Zoology 4 and 5	4
	19
Junior Year—	
French or German	4
Chemistry	5
Botany 4	2
Zoology 6	3
Economics	3
	17

Senior Year—	NO. OF HOURS
Zoology 8	4
Zoology 7	2
Physics	5
Botany 5	3
Thesis	2
	16

B. THE SCHOOL OF ENGINEERING.

1. Civil and Municipal Engineering.
2. Electrical Engineering.
3 Chemical Engineering.

ADMISSION

The requirements for admission to the School of Engineering are the same as the requirements for entrance to the courses of the College of Literature, Science, and the Arts, except that candidates for Engineering Courses must have had one year of Physics.

1. CIVIL AND MUNICIPAL ENGINEERING.†

Leading to the Degree of Bachelor of Science in Civil Engineering.

Freshman Year—	NO. OF HOURS
Algebra, Trigonometry and Analytical Geometry	5
English Composition and English Literature	4
General Chemistry	5
Mechanical Drawing	3
Shop Work	2
	19

†Municipal Engineering will not for the present be given as a separately organized course—the work is partially included in Civil Engineering.

Sophomore Year—	NO. OF HOURS
Differential and Integral Calculus	5
Advanced Physics	4
Graphic Statics	2
Descriptive Geometry	2½
Elementary Surveying	3
Shop Work	2
	18½

Junior Year—First Semester	
Differential Equations	5
Topographical Surveying	3
General Geology	3
Analytical Mechanics	3
Roads and Pavements	2
Railroad Engineering	4
	20

Junior Year—Second Semester.	
Strength of Materials	5
Elementary Geodesy	3
Analysis of Bridge Stresses	5
Analytical Mechanics	3
Railroad Engineering	4
	20

Senior Year—First Semester.	
Structural Details	2
Bridge Design	5
Economic Geology and Mineralogy	3
Masonry	3
Hydraulics	4
Economics	3
	20

Senior Year—Second Semester:	
Economics	3
Steam Engine and Boiler	3
Masonry	3
Elements of Sanitary Engineering	5
Irrigation Engineering	5
Thesis	1
	20

On completion of the four years' work, the student receives the degree of Bachelor of Science in Engineering.

POST-SENIOR YEAR

Leading to the degree of Civil Engineer.

The work of the Post-Senior Year leads to the professional degree of Civil Engineer. In this year the student is allowed considerable latitude in the selection of his main line of work; thus, he may take up the more advanced courses in Bridge Engineering and Design; Railroad Engineering, including city railways; Hydraulic and Sanitary Engineering, including Biology of water supplies and Chemical Analysis of Water. It will frequently be possible to take work along two or more of these lines. A description of the courses offered will be found under the appropriate heads. A minimum of 18 hours per week must be taken, and the candidate must present a satisfactory thesis involving either the results of original study and research, or complete designs and estimates of some important project.

2. ELECTRICAL ENGINEERING

Leading to the degree Bachelor of Science in Electrical Engineering.

Freshman Year—	NO. OF HOURS
Algebra, Trigonometry, and Analytics	5
Adv. Chemistry	5
Mechanical Drawing	3
Shop Practice	2
English	4
	19
Sophomore Year—	
Calculus, Differential and Integral	5
Adv. Physics	5
Descriptive Geometry	2
Graphic Statics	2
Elem. Surveying	3
Shop Practice	2
	19

Junior Year—	NO. OF HOURS
Direct Current Machinery	3
Steam Engines and Boilers	3
Diff. Equations (for 1st sem.)	5
Analytical Mechanics	3
Electrical Testing	2
Machine Design	2
Shop Practice (for 2nd sem.)	2
Steam Engineering, Laboratory (for 2nd sem.)	2
	17½

Senior Year—	
Thermodynamics	3
Alternating Current Machinery	4
Electricity and Magnetism	3
Hydraulics (for 1st sem.)	4
Economics	3
Dynamo Laboratory	2
Thesis (for 2nd sem.)	4
	19

POST-SENIOR YEAR

Leading to the Degree Electrical Engineer.

The work will be largely elective, subject to the control of the head of the department. It will consist of special advanced work to the amount of eighteen hours per week. A thesis will be required showing evidence of more than usual originality and power in this line of work.

MECHANICAL ENGINEERING

First three years same as Electrical Engineering.

Senior Year—	
Thermodynamics	3
Alternating Current Machinery	4
Materials and Engineering	3
Hydraulics (4 hours 1st sem.)	4
Mechanical Laboratory	2
Thesis (4 hours 2nd sem.)	4
Elective	3
	19

CHEMICAL ENGINEERING

Chemical engineering is one of the very youngest in the field of special engineering subjects, having been evolved in recent years in response to a constantly increasing demand for men who are not only sufficiently versed in chemical theory to understand the chemistry of technical processes, but who shall at the same time be possessed of such a knowledge of mechanical engineering that they will be enabled to construct whatever machinery or apparatus may be necessary for the most thorough practical application of chemical principles to the various industrial enterprises of the time.

It is to be seen from this characterization of his work that the function of the chemical engineer is a dual one; it has been, indeed, for the very purpose of uniting in a single individual the peculiar qualifications possessed by the laboratory man upon the one hand and the man of practical affairs upon the other,—a union that has been absolutely necessary for the proper co-ordination of laboratory and shop,—that the field of chemical engineering was created. That the creation has been a wise one is demonstrated every day in the constant improvements that are being made in chemico-technical processes,—improvements that are due almost wholly to the efforts of men who have exactly the equipment for work that has been outlined as necessary for the chemical engineer. The extent of the field is so wide, moreover, and the variety of special lines of work that it offers is so great that it should appeal most strongly to young men inclined toward a scientific-industrial career, and this should be especially true in the Pacific Northwest, where resources enormous in magnitude await development.

The entrance requirements here are practically the same as for the other engineering courses. Elementary physics is required, however,—not being optional with chemistry for entrance. The work of the Freshman year also corresponds closely to that of the same year of the other engineering courses. During the Sophomore and Junior years, however, especial attention is given to chemistry, though in addition to this the more important subjects in mechanical engineering are included. On account of the great diversity of directions in which it is possible to specialize, the work of the Senior year is entirely optional. The choice of subjects may include those giving special preparation for metallurgy in its several branches, the manufacturing processes depending upon the use of the electric current; the distillation industries; the production of acids, alkalis, fertilizers, cements, glass, ceramics, pigments, petroleum products, colors, explo-

sives, paper, sugar, starch, or in fact whatever other industry there may be having chemical principles for the basis of its operations.

REQUIREMENTS FOR ADMISSION

The requirements for entrance to the course in Chemical Engineering are the same as for entrance to the course in Mechanical Engineering.

COURSE OF STUDY

	NO. OF HOURS
Freshman Year—	
Algebra, Trigonometry and Analytical Geometry	5
Adv. English Composition and Literature	4
General Chemistry	5
Mechanical Drawing	3
Shop, Woodworking Machinery	2
	19
Sophomore Year—	
Calculus, Differential and Integral	5
Analytical Chemistry	5
Graphic Statics	2
Descriptive Geometry	1½
Surveying	3
Shop, Forge and Iron Working Machinery	2
	18½
Junior Year—	
Chemistry 3	5
Chemistry 4	3
Analytical Mechanics	3
General Geology	3
Direct Current Machinery	3
Resistance of Materials	2½
	19½
Senior Year—	
Thesis	

Electives to be settled with the approval of the head of the department of chemistry.

III.

THE SCHOOL OF MINES AND MINING

The School of Mines, which has been established some six years, has prospered to an extent that makes necessary an enlargement of its work and equipment. The importance to the state of mining and allied industries makes it of great moment that the best instruction possible be available in these branches within the state.

Arrangements will be made for observation and field work in the mining districts, and, for students who desire to do so, for work in the mines during the summer. The Blue River and Bohemia mining districts are close at hand, and the great mining districts of Eastern and Southern Oregon are easily accessible.

The main attention for the present will be given necessarily to gold and silver mining and metallurgy, although attention will also be given to the metallurgy of iron, steel, and copper. As the number of instructors in the University increases, options will be introduced so that students may specialize in a chosen department of mining.

The demands upon the mining and metallurgical engineer are varied, and it is the policy of the University to give the student the underlying principles of mathematics, physics, chemistry, mineralogy, geology, mining engineering and metallurgy, together with some practical knowlege of civil, electrical, and mechanical engineering. The courses will deal with the problems that actually arise in mining, in the treatment of ores, and in smelting.

ADMISSION

The requirements for admission to the School of Mines and Mining are the same as the requirements for entrance to the courses of the College of Literature, Science, and the Arts, except that candidates must have had one year of Physics, and may substitute either German or French for Latin. It will greatly lighten their University work if they can also offer Elementary Chemistry.

COURSE OF STUDY

Leading to the degree of Bachelor of Science in Mining Engineering.

Freshman Year—	NO. OF HOURS
Adv. Algebra, Trigonometry and Analytical Geometry	5
English Composition and Literature	4
Elementary Chemistry	5
Drawing	3
Shop Work	2
	19

Sophomore Year—	
Differential and Integral Calculus	5
Chemistry, second year	5
Elementary Surveying	3
Descriptive Geometry	1½
Graphic Statics	2
Mineralogy	3
	19½

Junior Year—	
Analytical Mechanics	3
Advanced Surveying	3
Petrology	3
General Geology	3
Assaying	3
Chemistry, (Adv. Inorganic)	3
	18

Senior Year—First Semester.	
Mining Engineering	2
Metallurgy (non-ferrous)	3
Geology (Field Work)	3
Hydraulics	4
Economics	3
Elective	1-4
	16-19

Senior Year—Second Semester.

Metallurgy (Laboratory)	3-5
Mining Engineering (Thesis)	3
Geology (Field Work)	3
Strength of Materials	3
Economics	3
Elective	1-4
	16-19

STATE HIGH SCHOOL COURSE

By vote of the Board of Regents of the University at the annual meeting held January 19, 1904, the two years of preparatory work heretofore offered by the University were ordered discontinued after the close of the session of 1903-4. Students entering the University beginning with the session of 1904-5, must come prepared to enter the Freshman class. A student may be conditioned in two subjects at entrance, to be made up either in the Eugene High School or under private tutor.

The entrance requirements to the University (see Entrance Requirements) are based on the State High School Course of study, which is given below for convenience of reference.

COURSE OF STUDY

First Year.

Higher English (with English Classics of this grade.)
Beginning Algebra (High School grade.)
Physical Geography (or Latin.)
History—Greek and Roman to 800 A. D. (Short study of Eastern nations should precede Greek History.)

Second Year (in two-years course.)

Higher English (to be coupled with English Classics of this grade.)
Algebra finished (½ year.)
Bookkeeping ½, or Higher Arithmetic ½, or Physiology ½.
Latin or Physical Geography, or Botany with laboratory work,
History, Mediaeval, with special reference to England,

Second Year (in a three-years course.)

Higher English (same as above).
Algebra finished ½, Geometry ½.
Latin or Physical Geography, or Botany with laboratory work.
History, (same as above).

Third Year.

Study of English and American Authors, with Composition work.
Geometry finished.

Select any two of the following:

Latin, first, second or third year, according to whether it has been taken before.

History, Modern, with special reference to England, if course is four years' course, and American History and Constitution if course is three years' course.

Physics, or Botany, or Geology ½, with Bookkeeping or Higher Arithmetic the other ½, or Elementary Political Economy ½ and Review ½.

Fourth Year.

Study of American and English Authors with Composition work.
History, American with Constitution.

Select any two of the following:

1. Latin or German.
2. Chemistry or Physics.
3. Geology ½ and Zoology ½, or Astronomy ½.
4. Elementary Political Economy ½, and Review ½.

Themes and orations last two years.

Music and drawing are additional to above.

THE SCHOOL OF MUSIC

FACULTY

The Faculty of each school or college consists of the President of the University and the resident professors, assistant professors, lecturers and instructors giving instruction.

HISTORY OF MUSIC

1. From the age of Primitive man to the time of Palestrina (1524 A. D.), tracing the evolution of music as an art in the various

countries. This is given in a course of lectures once a week, and is open to all University (college) students as an elective course for one credit, and also to all those studying in the musical department.

2. From the time of Palestrina to the present. Text-book: Ritter or Mathews, with lectures and extracts from the works of different composers. Elective course. Open to all those who have taken "Primitive Music." One credit. Not open till 1904-05.

THEORY AND HARMONY

FIRST YEAR

Ear Training—Notation—Tonality—Intervals—Time—Study—Metre—Rhythm—Chords—Original Melodies.

SECOND YEAR

Combination or Connection of Chords—Concords—Inversions—Discords—Dominant Sevenths—Harmonizing of Melodies and Basses, given and original.

THIRD YEAR

Secondary Sevenths, Ninths, Altered and Mixed Chorus—Modulation—Harmonizing of Melodies and Basses (continued)—Inharmonic Intervals—Organ Point—Suspension—Neighboring and Passing Notes—Figuration—Embellished Melody and Harmony.

FOURTH YEAR

Single Counterpoint—Five Species, in two, three and four parts. Double, triple and quadruple Counterpoint.

OTHER INFORMATION

There are three departments in the school of music, piano, voice and violin. These departments are in charge of competent and well known artists, and offer courses leading to a diploma or a degree, according to the amount of work done.

Rates of instruction average $4.00 per month for one 45 minute lesson per week. All fees are payable invariably in advance to the Dean.

MUSICAL SOCIETIES

The Eugene Oratorio Society, organized in 1896, has each winter studied one or more of the standard oratorios, including, "The Creation," "St. Paul," "The Messiah," "The Redemption," "Elijah," "Stabat Mater," and "Hymn of Praise."

COURSE OF INSTRUCTION IN ACADEMIC COLLEGES AND SCHOOLS

1903-1904

The following list shows the organization of the courses of instruction. Not all of the courses named can be given in 1903-1904. Many are to be given in alternate years. Departments will be developed and the number of courses increased as rapidly as the demand and the circumstances will permit.

ANTHROPOLOGY

(See Economics, Etc.)

BIOLOGY

Assistant Professor Sweetser.

Mr. Bovard.

(a) Introductory Courses as a foundation for study in Zoology and Botany; (1) for students preparing for the study of Applied Science; (2) for students seeking general culture; (3) for students preparing for the study of medicine.

(b) Intermediate Courses for students preparing for more extended study in Zoology, Medicine, Physiology, Embryology, Botany, Palaeontology, Geology.

(c) Advanced Courses for students in the Graduate School, and for those seeking specialized study and research as far as the resources of the department will permit.

Students proposing to study Pharmacy should elect Zoology 1, Botany 1, 2, 3, 6, 4, and are strongly urged to take most all of the work in the course Preparatory to Medicine and Dentistry.

EXPENSES

In accordance with the ruling of the Board of Regents, all students in laboratory courses are charged with a fee sufficient to cover all waste and breakage. This does not include cost of specimens for dissection or material for sectioning. The cost of these is only nominal.

The fees and deposits are as follows: Zoology, Courses 2, 3, $1.50; 1, 9, and 10, $1.00, 50 cents in each case returnable if there is no breakage. Courses 6, 7, and 8, $5.00; $2.00 in each case returnable if there is no breakage. Course 4, $5.00; $2.50 returnable if there is no breakage.

Botany Courses, 1, 2, 3, 7, $1.00, 50 cents in each case returnable if no breakage. Course 4, 5, $4.00; $2.00 returnable if no breakage.

ZOOLOGY

1. **Introductory Course.** Lecture and laboratory exercises. This course is required as introductory to 2. It is intended for beginners and those who wish to get a comprehensive view of the subject. May be taken in the same year with Botany 1. Four hours, Second Semester.

2. **Structural Zoology.** Study of types of invertebrate animals, from simple to more complex forms with reference to structure and relationship. Intended as an introduction to all the higher courses in this department, or to be regarded as a culture study, affording the student a general idea of different phenomena of animal life. Three hours. Lectures and laboratory work.

3. **Vertebrate Anatomy.** A continuation of Course 2. Dissection of Vertebrate Types, Study of Relationship, distribution, habits, etc. A culture course, but strongly recommended to students preparing for medical schools or for those intending to specialize in biology. Students must furnish their own material for dissection. Two hours.

4. **Mammalian Anatomy.** Human Osteology and Syndesmology. Dissection of a typical mammal. A thorough analysis of the human skeleton must be taken by those intending to anticipate the first year in medicine. Should be preceded by 1 and 2. Four hours.

6. **Normal Histology.** Lectures, recitations, laboratory work, the latter consisting of the study of the leading tissues of the human body, and preparation of tissues by the individual student, who learns methods of hardening, straining, imbedding, etc. Prescribed for those intending to enter the second year of the Medical School Course. Students furnish their own material for sectioning. Three hours.

7. **Vertebrate Embryology.** Study of embryonic development of chick and comparison with that of other vertebrates. Must be preceded by No. 6. Four hours, second semester.

8. **Advanced Physiology.** Prescribed for those intending to anticipate the first year of the Medical School. No student can elect this course who has not had work in chemistry and has not passed satisfactorily in mammalian anatomy and histology. Physiology must be preceded by or taken in conjunction with histology and organic chemistry. Two hours.

9. **Ornithology.** Study of the classification of birds. Training in identification, and study of local bird fauna. Incidentally, methods of collecting, preserving, labelling, etc. Four hours a week in first semester.

10. **Entomology.** Study of typical insects and groups of insects. Collecting and preserving. Four hours a week in second semester.

BOTANY

1. **Introductory Course.** Lectures and Laboratory exercises. This course is required as introduction to Course 2. It is intended for beginners and those who wish to get a comprehensive view of the subject. May be taken in the same year with Zoology 1. Four hours first semester.

2. **Cryptogamic Botany.** Morphology, physiology, classification and relationship. First semester, three hours.

3. **Phaenogamic Botany.** Morphology, physiology, and classification of phaenogams. Three hours, second semester.

4. **Medical Botany and Pharmacognosy.** The study of some typical medicinal plants, their structure, medical properties and common adulterants. Must be preceded by 2. Text-book; Sayre, "Organic Materia Medica and Pharmacognosy." Three hours during second semester.

5. **Bacteriology.** Laboratory technique and recitation, methods of staining, examining and cuiltvating. Advised for students intending to study medicine. Three hours.

6. **Economic Cryptogams.** Biological examination of water, bacteriology of milk foods, etc.

7. **Systematic Botany.** a. Structure, classification, and relationship of the cryptogams. Mycology and Algology. Hours to be arranged.

b. Structure, classification, and relationship of the higher cryptogams, mosses, and ferns. Also a similar study of phaenogams. Hours to be arranged.

8. **Plant Physiology.** This will include a more or less extended study of the function of vegetable life. Hours to be arranged.

9. **Current Literature.** A Journal Club open to the more advanced students in the department. Students present abstracts of articles in current biological literature and read standard works on biology. Once in two weeks at home of instructor. One hour.

EQUIPMENT

The Biological Department is thoroughly equipped for work. It has a large lecture room and operating room, combined, and a large well lighted laboratory. The equipment of the department includes among other things 21 compound and dissecting miscroscopes, with low and high power objectives, including one-twelfth homogeneous immersion lens, camera lucidus, embryograph; instruments for microscopic measurements; micratome, imbedding baths, incubators, digestion oven, Fick's spring monometer, Marey's tambours, kymograph, sphygmograph; induction coil and battery, time marker and clock, centrifuge with tubes, and haematokrit, etc.

It has also a series of skulls and skeletons, illustrating structure of different mammals; birds and reptiles; articulated and disarticulated human skeletons; many human skulls, disarticulated, sectional, and foetal.

The museum contains a fine 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. B. J. Bretherton, of Newport, Oregon, and presented to the University.

It is further supplied with an excellent series of invertebrate animals, models of types from France and Germany, and a fine series of botanical models of types of various groups of flowers, and of representatives of insectivorous plants. To this must be added casts of brains and head formations of various races, and a particularly fine series of wax models made from drawings by His in Ziegler'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., etc.

Mr. Thomas Howell has donated his large herbarium, containing many type species, to the University. This collection will be available for students in Systematic Botany.

The laboratory is supplied with a large aquarium for the preservation of specimens, and both laboratory and lecture room are lighted by electricity and furnished with gas from the plant of the University. Constant additions are being made to the apparatus and collections.

In view of the limited resources in the way of assistance in this department, the instructor reserves the right to omit any elective courses which appear to conflict with more important work.

CHEMICAL ENGINEERING

(See Chemistry and Engineering.)

CHEMISTRY

Assistant Professor Stafford.

Mr. Benson.

Facilities for both instruction and research in the department of Chemistry are excellent. Nine rooms in McClure Hall are devoted to the uses of this department, and are equipped with appliances and apparatus which enable the work undertaken to be carried on with a most desirable degree of efficiency. The commodious lecture room is fitted out with a good assortment of up-to-date lecture material. Three large laboratories are available, each equipped with tables, lockers, gas, water, waste, hoods, hydrogen sulphide connections, water baths, drying ovens, electric terminals, balances, and other accessories. In point of completeness the equipment in this laboratory compares favorably with any other in the Northwest.

In shaping the subject matter of the courses outlined below, especial attention has been given to the matter of making the preparation for teaching and research, medicine, pharmacy, chemical manufacturing, mineralogy, metallurgy, and chemical engineering as complete and practical as possible. The arrangement is such that

progress in acquiring an equipment in chemistry for any of these lines of work shall be logical and continuous from the very first. At the same time the fact is not lost sight of that the study of Chemistry is most valuable as a purely educational factor, and no effort is spared in making the work given conform to the requirements of such. For training in habits of exactitude, for gaining a helpful insight into methods of scientific thought and procedure, and for practice in the interpretation of evidence, Chemistry holds a high place among the studies offered in college or university courses.

It is to be noted that under the special provision relating to Sophomore requirements for the year 1904-1905, students electing Chemistry as a major may continue their work in this department during the Sophomore year in place of an equivalent of required work. This makes it possible for students interested in Chemistry to pursue their work from the Freshman year without interruption.

For lack of space upon the department schedule, all of the courses described cannot be given in one year. By providing for a few of the advanced courses in alternate years, however, it has been found possible to give students doing two or more years advanced work the opportunity to enroll at some time during this period in any course that may be desired.

1. **General Chemistry.** This course or a satisfactory equivalent is prerequisite for any other work in this department. Its purpose is to give a general introduction to the science, emphasizing, incidentally, many practical applications of chemistry in the affairs of everyday life, manufactures, metallurgy, etc. Three lectures are given each week for the year in which the subject material of the courses is illustrated by elaborate lecture experiments, while numerous specimens, models, charts, lantern slides, etc., serve to give the subject a living interest by bringing the student as nearly as possible into contact with its practical aspects. Four hours of laboratory work per week for the year, with the ample facilities for laboratory work that this department now offers, affords abundant opportunity for first-hand contact with the experimental truths of chemistry and for training in laboratory methods. The general laboratory is a well lighted room containing one hundred individual lockers each supplied with gas, water, and a very complete outfit of chemicals and apparatus. The room is equipped with a bank of hoods from which the air is continuously exhausted by an electrically driven Sturtevant fan. In the hoods are to be found steam and water baths, gas, water, waste, hydrogen sulphide cocks, etc. while elsewhere about the room are electric terminals for power, Chapman aspirators, rapid

filtering apparatus, blast lamps, drying ovens, scales, and in general whatever other appliances may be necessary for the exemplification of laboratory practice of the highest order. Six balances for the use of students in this course are in a room immediately adjacent. Lectures on Monday, Tuesday, and Wednesday at 11; laboratory periods 1 to 3 Thursday and Friday. Five hours.

2. **Analytical Chemistry.** This course begins with a rapid survey of systematic qualitative analysis accompanied by a sufficient study of the theory of electrolytic dissociation and the law of mass action to enable the student to explain the various operations of analytical chemistry from a scientific standpoint. "Qualitative Analysis"—Bailey and Cady, Blakistons,—is used as an outline for this part of the work. Following immediately after is the quantitative determination of as many of the more common ions as the time available will permit,—Talbot's Quantitative Analysis being used as a guide. In this work the equipment corresponds closely with that described above for general chemistry, the main differences being in the character of the individual outfits. These are very complete and together with the general laboratory conveniences that are available, make the conditions for study and work as favorable as possible. One lecture and nine laboratory hours per week for the year. Lecture Thursday at 11; laboratory periods, 1 to 4 on Monday, Tuesday and Wednesday. Five hours.

3. **Organic Chemistry.** The work in this course is intended to serve as an introduction to the chemistry of the hydrocarbons and their derivatives. Its subject matter is a necessity to the advanced student of chemistry, and will be found to be a most valuable aid to students of medicine, pharmacy, biology, and kindred subjects. The laboratory facilities are no less complete than in the courses described above. Must be preceded by course 2. Three lectures and four hours of laboratory per week for the year, hours to be arranged upon enrollment. Text, "Organic Chemistry,"—Perkins and Kipping, Chambers, London. Five hours.

4. **Advanced Inorganic Chemistry.** A lecture course in general chemistry in which the purely descriptive features are subordinated to considerations of the law of mass action, the phase rule, the theory of electrolytic dissociation, Avogadro's hypothesis, and similar helpful conceptions, and their practical applications in the explanation of chemical phenomena. The work is based quite largely upon "The Principles of Inorganic Chemistry"—Ostwald, translation by Findlay, Macmillans, 1902,—which is used as a text. Must be preceded by

course 2. Prerequisite for all higher courses, but may be taken contemporaneously with any of them. Three lectures a week for the year, hours to be arranged. Three hours.

5. **Advanced Analytical Chemistry.** A year of laboratory work designed especially for students who desire to perfect themselves in general analytical methods, though the last months may include the application of these to special problems of industrial or organic analysis in cases where the proficiency of the students will seem to justify the departure. Must be preceded by courses 2 and 4. Texts and reference books to be provided by the student will be announced at the time of enrollment. Three to six hours.

6. **Mineralogy.** (See Mining.)

7. **Assaying.** (See Mining).

8. **Metallurgy.** (See Mining).

10. **Industrial Inorganic Chemistry.** Practice in the manufacture of inorganic chemicals on a large scale. Crude materials are supplied from which chemicals of the various grades of purity are made, the quality of each being established by careful analysis. An abundant supply of large acid-proof stoneware, iron and copper kettles, stoves, furnaces, filtering apparatus, stills, retorts, etc., is available for this work, as well as a centrifugal machine, power crushers and grinders, and a Wegelin-Hubner filtering press. Credits not to exceed eight will be given according to the amount of work accomplished. Prerequisite, courses 2, 4, and 5.

11. **Industrial Organic Chemistry.** A course similar in all respects to the above, except that organic compounds are prepared. Prerequisite, courses 2, 3, 4, and 5.

17. **Physical Chemistry.** Three lecture periods and four hours of laboratory work are devoted to this subject during the second semester. The course must be preceded by courses 2 and 4, by mathematics to and including calculus, and by two years of physics. Three hours.

19. **Advanced Organic Chemistry.** A topical review of organic chemistry, in which the principles of general chemistry worked out in course 4, are applied in detail. The laboratory work consists in the preparation of chemically pure compounds synthetically or from crude materials for the department museum. Either semester,—three lectures and fourteen hours of laboratory. Prerequisite, courses 2, 3, and 4. Five hours.

21. **Electro-Chemistry.** A course based upon the texts by Le-Blanc and Luepke, together with collateral reading. Should be preceded by course 4, mathematics to and including calculus, and by a course in electrical measurements. Four lectures per week either semester, upon arrangement. Two hours.

22. **Chemical Technology.** The study of industrial inorganic chemistry with special reference to the manufacture of acids, alkalis, soda, chlorine, ammonia, fertilizers, cements, glass, ceramics, pigments, etc. A lecture course designed to accompany course 10, though it may be taken separately. Three lectures per week, first semester. One and one-half hours.

23. **Chemical Technology.** A course similar to the above, in which the subject matter is concerned with the industries based upon the destructive distillation of coal, wood and bones, the manufacture of oils, resins, soap, starch, dextrin, glucose, sugar, fermentation products, explosives, tanning, bleaching, dyeing, etc. Should be taken in connection with course 11. Three lectures per week, second semester. One and one-half hours.

CONCERNING LABORATORY FEES AND THE PURCHASE OF LABORATORY MATERIAL

The efficiency of a laboratory course depends to a very great extent upon having at hand a sufficient supply of the proper materials for the work outlined by the instructor. These materials correspond in a way to the pencils, paper and text-books, etc., required in other courses to facilitate the work of instruction, and are just as properly as the latter to be furnished by the student and not by the University. The selection of materials is itself a task demanding considerable experience if the best are to be secured, and since, moreover, the remoteness of the University from adequate sources of such supplies makes their purchase in a small way a matter entirely out of the question, it becomes a necessity for the department to carry in addition to its own assortment of chemicals and apparatus for general and lecture purposes an amount sufficient for the use of its students in all of the courses offered.

In conducting this phase of departmental affairs, the aim is to make it a strictly business proposition, the carrying out of which demands a rigid adherence to the following details:

A deposit of ten dollars for each laboratory course in which enrollment is made must be placed with the University Steward to stand as a security for the *unreturnable* portions of the outfits supplied at the beginning of laboratory work, and as a fund from which may be deducted a proportionate share of the cost of material supplied to the course in a general way. This deposit, as a rule, does not nearly cover the entire cost of the outfits, and the transaction is made with the understanding that where the breakage and other losses are excessive the student is to make good whatever the amount may be over and above the deposit. The department reserves the right in all cases to withhold credit for work done until laboratory accounts are fully settled.

Purchases of additional material are to be made from time to time as may be necessary, the charges for which are punched from coupons issued in sums of one dollar by the University Steward. Such additional material need not necessarily be purchased from the store room, however, but from wherever it may be desired so long as it is available when needed, and is adapted in all respects to the course requirements both as to quality and quantity; but in order to avoid the accumulation of heterogeneous material in the store room, the department will not receive any article for credit at the end of a course that was not originally dispensed from the regular stock.

All returnable material, as well as unused portions of coupons, are redeemed at the close of the laboratory work in any course at their charged value, and cash balances are collected or returned as the case may be.

It is especially to be noted that the deposit of ten dollars is to be made preliminary to enrollment in laboratory courses. There should therefore be due provision upon the part of all students for the prompt payment of this amount in order that no hardships may be incurred by the delay that otherwise must follow.

ECONOMICS AND SOCIOLOGY

Professor Young

Mr. Whittlesey

The function of this department is to enlighten the student on the wider and higher responsibilities of citizenship, to furnish instruction

essential to usefulness in the public service, in journalism, law and the ministry. The system of grouping the courses given below is designed to advance the student naturally and yet make his work complete and serviceable wherever it may be necessary for him to stop.

Group I.—The General Introductory Course gives the student the point of view of modern thought in economic, political and social sciences, and outlines the general course of progress in each line of social advancement through the lower stages of civilization. Prerequisite, Freshman standing.

Group II.—Comprises the information courses of this department. These courses are especially designed to enrich and make clear the concepts used in all later thinking in the social sciences. Prerequisite, Freshman standing.

Any course of this group may be taken along with the introductory course. It may be taken after the course of Group II of the corresponding science has been taken, but more naturally precedes.

Group III.—Comprises the courses fundamental for all extended study in the respective sciences. If only one course in any science is taken, the course of this group should be chosen. Prerequisite, Sophomore standing.

Group IV.—The principles of the sciences as they are developed in Group II are in the courses of this group viewed in perspective, and the broader relations discerned through the study of the historical development of thought in each science. These courses follow those of Group II of the respective sciences.

Group V.—Enables the student to investigate systematically the phenomena of modern society, with the view of developing policies of improvement and reform.

Group VI.—Society is confronted with great problems that challenge a reconstruction of the social organization and a revision of the fundamental conclusions in all the social sciences. These problems are appropriately made the subject of university investigation.

Group VII.—For securing a refinement of methods of investigation and statement of relations in quantitative forms, the methods and principles in the theory of statistics are taught.

A. ECONOMICS

I.

1. **General Introductory Course.** The theory of evolution in its applications to society; the process in connection with the new elements in the human sphere; the genesis of social life, mind, and institutions constitutes the scope of this course. Lectures and readings. One hour, second semester.

II.

2. **The Economic History of England.** The evolution of the forms of industrial organization from the village community to modern capitalism is traced. The inter-relations of economic conditions and social life in general are emphasized.

Text books, lectures, and collateral reading.

This course should be taken by all Freshmen of whom history is required. Two hours, second semester.

III.

3. **Economics.** Lectures, readings, and reports.

Required of Sophomores in A. B. courses and of Seniors in Engineering courses, except Civil and Municipal. Three hours.

4. **Theories of Value and Distribution.**

Text book and collateral reading. Four hours.

IV.

5. **History of Economic Thought.** This course is taken up mainly with an analysis and criticism of economic classics. For graduates and undergraduates. Four hours, first semester.

6. **Philosophy and Economics.** The relations between philosophical and economic speculation, with their causal interaction, are traced. Bonar's Philosophy and Political Economy will be used as a guide. For graduates and advanced undergraduates. Four hours, second semester.

V.

7. **Finance.** Public expenditure, financial administration, taxation and public debts. Text book, Adam's Public Finance. Three hours.

8. **Money, Credit, and Banking.** Applications of the principles of economics to modern monetary systems with the view of developing policies of improvement. Two hours. This course alternates with Course No. 1.

9. **Railway Transportation.** A study of the historical, economic and legal phases of the railway as a factor in modern life. For graduates and advanced undergraduates. Four hours, first semester.

10. **Economic Geography.** A study of the character of commercial relations, localization of industries and effects of physical environment on economic life of the United States and other American nations, the chief European nations and such of the Eastern nations as are of especial interest to American commerce.

This course is especially for advanced undergraduates and graduates who wish to make a study of commerce. (See School of Commerce.)

VI.

11. **Seminar in Economic Problems.** Questions connected with recent developments in taxation, in trust and industrial and commercial combinations, and in national expansion. Current economic literature and reports of commissions will furnish main materials for this course. Also state problems connected with irrigation, forestry, transportation, and utilization of water power. Four hours.

VII.

12. **Statistics.** A course in the theory and methods of statistics, with practical work in investigation and tabulation. For graduates and advanced undergraduates. Two hours.

B. POLITICS

I.

General Introductory Course. See Economics.

II.

13. **Political Institutions of the United States.** These are studied with special reference to their practical working. A study of constitutional law. Bryce, American Commonwealth. Three hours, first semester.

14. **Political Institutions of Europe.** Comparative study of the governments of Europe, especially those of England, France, Germany, and Switzerland. A study in comparative constitutional law. Three hours. Second Semester.

15. (a) **Jurisprudence.** A general course in Elementary Jurisprudence. (b) A study of the historical development of the Common Law. Two hours, either semester. (a) and (b) alternate; the one will be given which is most in demand.

III.

16. **Political Science.** The Nation and the State; idea, origin, forms and ends of the state. Three hours. Text-book: Burgess' Political Science.

17. **International Law.** One hour.

IV.

18. **History of Political Ideas.** A critical study of the leading writers on politics. For graduates and advanced undergraduates. Three hours, second semester.

V.

19. **Municipal Government** in Europe and the United States with a view to the determination of normal relations to the State, and solution of problems of organization, administration, and of policies. Two hours.

C. SOCIOLOGY

I.

General Introductory Course. See Economics.

II.

20. **Elements of Society.** Society as an organization analyzed for a determination of its characteristics. Text-book and collateral reading. Two hours.

III.

21. **Principles of Sociology** and Theory of Social Forces. As conceived of by leading modern sociologists. Three hours, first semester. For graduates and advanced undergraduates.

22. **Democracy.** Its characteristics, tendencies, and problems. Three hours, second semester.

23. **The Commonwealth of Oregon.** The development of its political, economic, and social institutions, and the consideration of its problems of legislation.

24. **Theory and Practice of Debating** of economic, political and sociological questions. Two hours. Prerequisites, Freshman English and a Course in Economics and Politics.

EQUIPMENT

The equipment for the study of Economics and Sociology includes the standard authorities on these subjects, comprising some

500 volumes. In Economic and Industrial History the equipment in History is available, and the library of the Oregon Historical Society, of several hundred volumes, affords the best possible material for original work in Economics and Industrial History and Theory.

The department also has files of all the leading American journals of Economics and Sociology, and a practically complete file of Government publications.

CIVIL AND MUNICIPAL ENGINEERING

Professor McAlister
Mr. Adams
Mr. Frazer

Municipal (or Sanitary) Engineering will not be given as a separately organized course until later. For the present, the elements of Municipal Engineering will be included in the Course in Civil Engineering. As circumstances warrant, separate courses of Municipal Engineering will be given.

It is to be understood that with the present number of instructors, not all the courses offered can be given in any one year; but the courses actually called for by the progress of the students enrolled are given, and it is expected that as more courses are demanded simultaneously the number of instructors will be correspondingly increased.

For courses in English, Mathematics, Chemistry, Physics, Geology and Economics, see under these departments.

DRAWING AND DESCRIPTIVE GEOMETRY

1. **Mechanical Drawing.** Use and care of instruments; plain lettering; elementary projections of points, lines, surfaces, and solids; isometric, and oblique projections; simple working drawings; shading; section lining; blue prints. Six hours in drafting room, both semesters, Freshman year.

2. **Descriptive Geometry.** Orthographic projections of points, lines and solids; traces of lines, planes, and single-curved surfaces; cylinder, cone and double-curved surfaces of revolution; intersection of solids by planes and development of surfaces; intersection of solids by solids; applications. Five hours, both semesters, Sophomore year.

3. **Shadows, Tinting, and Perspective.** An elective course for any one who has had the two preceding. Four hours, both semesters.

SURVEYING AND GEODESY

1a. **Elementary Surveying.** Land and town surveying; computation of areas; leveling and minor triangulation. Recitations, one hour; Sophomore year, both semesters.

1b. **Field and Office Work.** To accompany course 1a. Use and adjustment of instruments; surveys of land with chain and compass or transit, differential and profile leveling; heights by barometer; office reductions; plotting; use of plainimeter and slide rule. Four hours in field or office, both semesters, Sophomore year.

2a. **Topographical Surveying.** Analysis of surface lines and slopes; horizontal and vertical location of points, theory of stadia measurements and reductions; contours; methods adapted to small areas, city topography; larger areas. One hour, first semester, Junior year.

2b. **Field and Office Work.** To accompany course 2a. Complete survey of small area, such as the University campus, a reservoir site, etc ; surveys and maps of extended areas. The work of making a complete topographical survey of all the region within a radius of several miles of the University has been begun, and a portion of this work will be assigned to each succeeding class, thus affording to each student a considerable experience in the kind of work which he will encounter in actual practice. Four hours, with course 2c, first semester, and first half of second semester, Junior year.

2c. **Topographical Drawing.** Topographic symbols; hill shading; drawing contour lines; colored topographic drawings; topographic maps. The amount of time given to this course will be taken from the preceding, at the discretion of the instructor.

3a. **Elementary Geodesy.** Introduced by a brief course in practical astronomy. Determination of latitude, time, longitude and azimuth. Triangulation; precise leveling; figure of the earth, with reduction formulas for surveys and map projections; adjustment of errors; details of field work. Three hours, second semester, Junior year.

3b. **Observatory, Field, and Office Work.** To accompany course 3a. Latitude, time, longitude and azimuth determined by use of the large transit instrument and sidereal clock; also with the sextant, altazimuth instrument and pocket chronometer. Mainly night work at favorable times during the latter half of the second semester. The

last two weeks of the semester will be given up exclusively to this work and to the main triangulation upon which course 2b depends. Twelve days, eight hours per day.

3c. **Map Drawing.** Projection of extended areas according to various methods in common use. Time for this course will be taken from the two preceding, at the discretion of the instructor.

4. **United States Land Surveying.** A detailed study of the theory and methods of surveying the government lands. Intended for those who wish to fit themselves for U. S. deputy surveyors. In alternate years.

MECHANICS

Professor McAlister
Mr. Adams

1. **Analytical Mechanics.** A course designed particularly for engineering students. See under the department of Mathematics. Three hours, both semesters, Junior year.

2. **Graphic Statics.** Graphic methods of solving problems in the equilibrium of rigid bodies; direct applications of the general principles are made of the determination of stresses in framed structures subject to fixed loads, or shear and bending moment in beams; and of the centroid and moment of inertia of plane areas. Four hours in drafting room, both semesters, Sophomore year.

3. **Strength of Materials.** Elements of the mathematical theory of elasticity, with applications to beame, columns, and struts, shafts, etc. The course for the present will also include a brief study of the results of experimental tests of the strength of the common materials of construction, with tables to be used in practical designing. Five hours, second semester, Junior year.

HIGHWAY AND RAILWAY ENGINEERING

Professor McAlister.

1. **Roads and Pavements.** Survey and location of roads; grades; drainage, foundations; road coverings; crushed rock and gravel. Stone, wood, asphalt, and brick pavements; laying out city streets; footwalks, curbs, gutters, maintenance, repair, cleaning, and watering. Two hours, first semester, Junior year.

2a. **Railroad Engineering.** Reconnoisance, preliminary survey, location survey; simple curves; compound curves; transition curves; vertical curves; earthwork; trestles; tunnels; culverts; ballast, ties rails and rail fastenings; switches and crossings. Two hours, both semesters, Junior year.

2b. **Field and Office Work.** To accompany course 2a. A preliminary line from two to three miles long is laid out, and a topographical survey is made of the adjacent ground. Each student is then required to determine what in his judgment, will be the best and cheapest line for final location, the maximum grade and minimum radius of curvature being specified. One of the lines so determined is selected and located on the ground, and cross-sectioned; calculations are made of the earthwork in cuts and embankments, and approximate estimates of the cost of the entire construction, including the necessary structures, such as trestles, culverts, etc. In short, the whole work is carried up to the point of actual commsncement of construction. Four hours, both semesters, Junior year.

3. **Economic Railway Location.** A study of the sources of income; operating expenses; distance, grades and curvature as affecting first cost; maintenanc and operation; relative power of locomotives; rolling stock; train resistance, etc. Assigned readings, reports, and recitations from Wellington's Economic Theory of Railway Location, equivalent to three hours for one semester in post-Senior year.

4. **Railroad Buildings.** A study of standard designs of all kinds of railroad buildings, from the simplest watchman's shanty up to the snowsheds, engine houses, water stations, freight houses, depot buildings, etc. etc. Berg's Buildings and Structures of American Railroads will be used in this course. Three hours, both semesters, post-Senior year.

5. **City Railways.** Location, grades, curves, construction, maintenance and operation of elevated, surface and underground city railways. Recitations, field work, and assigned readings. The subject of motive power and appliances is not considered in this course. Students who wish to pursue this side of the subject will have to take a number of courses in electrical and steam engineering. Three hours, one semester, post-Senior year.

HYDRAULIC AND MUNICIPAL ENGINEERING

Professor McAlister.
Professor Sweetser.

1. **Hydraulics.** Hydrostatic pressure in pipes, tanks, reservoirs, etc., fluid motion; dynamic pressure; theoretical and empirical formulas for flow of water through orifices, over weirs, through tubes in pipes, conduits, canals, and rivers; measurements of water power, with brief reference to common water wheels and turbines. Four hours, first semester, Senior year.

2. **Elements of Municipal Engineering.** A brief comprehensive course in water supply, sewerage, and drainage of towns and country districts. Five hours, second semester, Senior year.

3. **Chemical Analysis of Water.** Elective course in post-Senior year for those who wish to specialize in sanitary engineering.

4. **Biology of Water Supplies.** Elective course in post-Senior year for those who wish to specialize in sanitary engineering.

5. **Water Supply System.** Amount of water required; available sources of supply; storage reservoirs and dams; purification works; supply pipes and conduits; city mains and branches; pumping machinery; operation and maintenance. Three hours, both semesters, post-Senior year.

6. **Sewerage and Drainage System.** Detailed design of sewer systems; disposal works and drains; separate and combined systems; rain fall and run-off; estimating increase of population; sewerage per capita; ground water; grades and self-cleansing velocities; use of formulas and diagrams; outfalls; disposal works. Three hours, both semesters, post-Senior year.

7. **Irrigation Engineering.** Hydrography; rainfall and run-off; evaporation, absorption and seepage; duty of water; sub-surface water sources, artesian wells. Canals and canal works; surveys, alignment; slope and cross section of canals; headworks and diversion weirs; distributary canals or ditches. Storage reservoirs; location, capacity, and construction; earth, loose rock and masonry dams; waste ways and outlet sluices. Pumping water for irrigation. Five hours, second semester, Senior year.

8. **Heating and Ventilation.** General principles of heating and ventilating; amount of heat required; system of piping; radiators and heating surfaces; steam boilers and hot water heaters; theory and design of various systems in use. Two hours, one semester, post-Senior year.

9. **River Improvements.** A study of the survey of rivers; the design and construction of river improvement work; protection against floods. Assigned reading from the published reports of U. S. engineers. Two hours, one semester, post-Senior year.

10. **Hydraulic Motors.** Mathematical theory and practical rules for design of water wheels, turbines, hydraulic rams, etc. Recitations, assigned readings, designs and drawings. Two hours, one semester, post-Senior year.

STRUCTURAL ENGINEERING

Professor McAlister.

1. **Structural Details.** Design of joints and connections used in bridges and roofs of wood and iron and steel, riveting; bolts and pins; roof trusses. Two hours, first semester, Senior year.

2. **Bridge Stresses.** Determination of stresses in simple trusses, suspension, swing, cantilever, and arch bridges, under fixed and moving loads, both for railway and highway bridges. General methods are developed, so that the student may investigate the merits of any proposed form of truss, after which attention will be mainly directed to those forms which have been found most efficient and economical. Both graphical and analytical methods are employed. Five hours, second semester, Junior year, and first semester, Senior year, with Course 3.

3. **Bridge Design.** Complete designs, with detail drawings and estimates of the following: Wooden truss, wooden trestle plate girder, pin-connected truss for railway, same for highway. Five hours, second semester, Junior year, and first semester, Senior year, divided between Courses 2 and 3 at the discretion of the instructor.

4. **Advanced Bridge Design.** Study of the design of typical examples of swing, cantilever, suspension, and arch bridges. Four hours, one semester, post-Senior year.

5. **Bridge Engineering.** Selection of site; survey of site; design and location of abutments and piers; working drawings of substructure and superstructure; methods of erection. Post-Senior year. Number of hours will be determined largely by the student's needs and desires.

6. **Masonry.** Characteristics and requisites of good materials in stone, brick, lime, and cement, sand, gravel, broken stone; preparation of mortar, concrete, and artificial stone; masonry construc-

tion in stone and brick, ordinary and pile foundations; foundations under water; design and construction of masonry dams, retaining walls, bridges abutments and piers, culverts, masonry arches. Recitations, designs, drawings, and estimates. Three hours, both semesters, Senior year.

EQUIPMENT

THE DEPARTMENT OF CIVIL ENGINEERING is located in the Power House and has the various surveying instruments named below, and also a large draughting table used in the construction of large maps and drawings. The surveying department is provided with the following instruments: Surveyor's transit, Burt's solar compass, plane table with the best modern improvements and attachments, compass with graduated limb reading to minutes, vernier compass, engineer's y-level, sextant, polar plainmeter, mercurial barometer, aneroid barometer, eight-inch vernier protractor reading to minutes; leveling rods, ranging poles, engineer's and Gunter's chains, steel tape, etc. There is on the same floor a lecture and recitation room, which is provided with celestial, terrestial and slated globes.

On the first floor is a draughting room, which is fully equipped with tables, sets of first-class instruments, water-colors, colored inks, blue-print apparatus, a fine section-liner, and a few standard works on drawing.

MECHANICAL AND ELECTRICAL ENGINEERING

Assistant Professor Dearborn.

Mr. Converse.

1. **Machine Design.** This course includes the standard conventions used in mechanical draughting, tracing and blue-printing, machine constructions, strength of materials, working drawings and engine details. Courses open to students who have completed Course 1, Mechanical Drawing.

Two credits, four hours in draughting room, both semesters, Sophomore year.

Required of students in Mechanical and Electrical Engineering.

2. **Steam Engines and Boilers.** The theory, construction and operation of the best types of steam engines and boilers. A detailed study of valve gears, steam distribution and regulation of engines,

steam turbines. Fuel determinations. Discussion of condensers, mechanical stokers and chimneys. Care of boilers.

Courses open to students who have completed calculus.

Three credits, 3 hours, both semesters, Junior year.

Required in Mechanical and Electrical Engineering.

2a. **Mechanical Laboratory.** Experiments in Steam Engineering. Engine, and boiler and pump tests, indicator, dynamometers, fuel calorimetry, valve setting, flue gas analysis.

Course open to students who have completed course 2.

Two credits, 4 hours, both semesters, Senior year.

Required in Mechanical Engineering.

3. **Thermodynamics.** The mechanical theory of heat and its applications to the theory and construction of steam, gas and hot air engines, refrigerating machines, and air compressors.

Course open to students who have completed course 2.

Three credits, 3 hours, both semesters, Senior year.

Required in Mechanical and Electrical Engineering.

4. **Hydraulics.** Measurements of flow of water. Determinations of water powers with reference to water wheels and turbines.

Course open to students who have completed calculus.

Two credits, 4 hours, first semester, Senior year.

Required in Mechanical and Electrical Engineering.

5. **Shop Practice.**

5a. **Wood Working.** Use and care of tools, mitering, turning, and pattern making.

Two credits, 4 hours, both semesters, Senior year.

5b. **Forging.** Welding, tool-dressing, tempering and annealing. One credit, 4 hours, first semester, Sophomore year.

5c. **Machine Shop.** Bench work, chipping, and filing, lathe, drill press, shaper, and planer.

One credit, 4 hours, second semester, Sophomore year.

The above three courses (5a, 5b, 5c) required in all Engineering courses.

5d. **Machine Shop.** Specialized machine shop practice. Construction and erection of apparatus and machines.

One credit, 4 hours, first semester, Junior year.

Required in Mechanical and Electrical Engineering.

6. **Electrical Testing.** A laboratory course for the study of units of measurement. Theory and calibration of instruments, ammeters,

voltmeters, watt-meters, and recording watt-meters. Galvanometer determinations and photometry.

Course open to students who have completed advanced physics.

Two credits, 4 hours, both semesters, Junior year.

Required in Mechanical and Electrical Engineering.

7. **Direct Current Machinery.** Theory and design of series, shunt and compound direct current dynamos and motors. Discussion of construction and operation of direct current machinery and its application to electrical lighting and power distribution.

Course open to students who have completed advanced physics and calculus.

Three credits, 3 hours, both semesters, Junior year.

Required in Mechanical and Electrical Engineering.

7a. **Direct Current Laboratory.** A laboratory course for the experimental study of direct current dynamos and motors, their operation, characteristic curves and efficiencies.

Course open to students who have completed first semester of course 7.

One credit, 4 hours, second semester, Junior year.

Required in Mechanical and Electrical Engineering.

8. **Alternating Current Machinery.** The theory of generation o single phase and polyphase alternating currents. Graphic problems, measurement of power, theory of transformers, rotary converters, synchronous induction and other motors, and their effects and operations in transmission systems.

Course open to students who have completed course 7.

Four credits, 4 hours, both semesters, Senior year.

Required in Mechanical and Electrical Engineering.

8a. **Alternating Current Laboratory.** Laboratory tests of transformers, auto-converters, single snd polyphase alternators, induction motors, synchronous motors and frequency changers.

Course open to students who are taking course 8.

Two credits, 4 hours, both semesters, Senior year.

Required in Mechanical and Electrical Engineering.

9. **Electricity and Magnetism.** An advanced course taking up the mathematical theory of Electricity.

Course open to students who have completed differential equations.

Four credits, 4 hours, both semesters, Senior year.

Required in Electrical Engineering.

EQUIPMENT

The equipment of the departments of Mechanical and Electrical Engineering is located principally in the new engineering building and power house on the northeast corner of the campus. The building is of brick, two stories in height, eighty by forty feet, with a wing forty by forty, which contains the boilers and pump-pit The first floor is divided into a lecture room, draughting room, electrical engineering laboratory and engine room, both of the latter having cement floor. The machine and wood shops, one lecture room, store room and lavatories are on the second floor.

The POWER PLANT, which is at the disposal of the department for experimental purposes, contains two 80 H P horizontal fire tube boilers, which supply the buildings on the campus with steam heat, three Worthington duplex pumps, two engines,—one of 10 H P, used to drive the machine shop shafting, the other of 20 H P belted to two 9 K W compound G E generators, operating in parallel on 120 volts and a modern G E black slate switchboard.

SHOP PRACTICE. For the course in wood working there is a full equipment of hand and bench tools, four modern turning lathes, jig saw, circular saw for ripping and cross cutting, and a special high speed band saw, all driven from a 10 H P electric motor.

The blacksmith shop is equipped with four of the new down draft forges with electrically driven blower and exhauster. This system does away with all overhead construction and removes all smoke. Each forge has an anvil, fuel and water boxes, and the usual complement of small tools.

The machine shop has a floor space of 1,600 square feet, is well lighted, and equipped with two engine lathes, a screw cutting lathe, hand end power presses, sharper, planer, grinder and bench tools.

THE ELECTRICAL ENGINEERING LABORATORY, including additions that will be made during the coming year, consists of two direct current generators of 9 K W capacity, two direct current motors of 5 and 10 H P, and the necessary measuring instruments, resistances, scales, brakes, etc. For work in alternating currents, there are two alternators one of 7½ K W, 60 cycle, 220 volts, used as a general source of alternating current, and one special laboratory machine designed to give single phase, two phase, Y and delta three phase, and six phase voltages, a synchronous motor, three induction motors of different types, a frequency changer, transformers, auto-converters

and alternating current measuring instruments. This equipment places our alternating current apparatus among the best on the coast, illustrating the best modern practice.

ENGLISH

Professor Carson
Professor Glen
Professor Howe
Miss Roe
Miss Slater

Six objects are contemplated in the following courses:

1. An ability to appreciate, enjoy, and criticise justly the best in English Literature.

2. A scientific knowledge of the origin and development of English Literature in general, and of special periods in particular.

3. Proficiency in English composition, including skill in organization of material.

4. A scientific knowledge of the laws of written and spoken discourse.

5. An ability to apply the methods of philological science to the English language.

6. The ability to appear before an audience with composure and speak so as to be heard, to be understood, and to be believed.

All students, regular and special, who take up the work in these courses must present twenty hours of entrance English. The entrance English requirements will conform to the State High School Course. Under rhetoric, criticism and English composition, 1a or 1b is required of all Freshmen in all courses excepting such Freshmen as may desire to elect either 1c or 1d. Course 2 is required of all Sophomores in A. B. courses, and of Juniors in the four-year pre-medical course and the scientific course. Course 3 is required of all Sophomores in A. B., pre-medical, and scientific courses. Under English Literature and Early English Literature, number one (first and second semesters) is required of all Freshmen except in four-year pre-medical and the engineering courses. In the engineering courses the second semester only is required.

I. RHETORIC AND COMPOSITION

Professor Carson
Miss Roe
Miss Slater

1. **Rhetoric, Criticism, and English Composition.** The courses in English Composition comprise papers under description, narration, exposition, and criticism, followed by forensics, analysis of masterpieces of argumentative composition, short stories and orations. In the Junior and Senior courses in orations, lectures are given concerning the differences between spoken and written discourse, the characteristics of the oration, the nature and purposes of persuasion, the laws of good prose.

1a. **English Composition.** Elements and principles of effective composition in English prose. Three methods are used: (1) the analysis in class of choice bits of literature; (2) constant practice in exercises in class and outside under grammatical rules and requiremedts; (3) the preparation of six short themes. Text book: Hart's Essentials of Prose Composition. Ia, 1b or 1d prescrlbed for all Freshmen in all courses. Text book: Carson's English Composition. One hour. Miss Roe.

1b. **English Composition.** The course aims: (a) to secure knowledge of the fundamental principles of composition; (b) to secure skill in the construction of sentences and paragraphs and in outlining. These subjects are reached through text-books, lectures, analysis and construction work. Six themes are required. Text-book: Scott and Denney's Paragraph Writing. Open to Freshmen with special preparation. One hour. Miss Slater.

1c **English Composition.** A two-hour course open to all Freshmen who desire more than the prescribed English. The first half of the year is given to the study of exposition; the last half to argument. The work is carried on through text-book, lectures, exercises, essays, and analysis of selections from master-writers on science. Six themes are required. Text book: Newcomer's Elements of Rhetoric. Two hours. Miss Roe.

1d. **English Composition.** A four-hour course during the first semester, to be followed by a one hour course in the second semester, intended for Freshmen in engineering courses. The first half of the year is given to exposition and argument and will be conducted under study of text, construction and criticism. Text books: Newcomer's Elements of Rhetoric and Tyndall's Fragments of Science. Miss Roe.

2. **Rhetoric and Criticism.** A good deal of written work is done to develop accuracy, originality and creative power. The first half of the year is given to the study of style, and exercises are written giving special attention to diction, figures, and structure of sentences and paragraphs. The second half of the year is given to invention. Exercises are written illustrating the essentials of description, narration, exposition, and the different forms of argument. Text books: Genung's The Working Principles of Rhetoric and Genung's Rhetorical Analysis. Required of the Sophomores in A. B. courses and of Juniors in pre-medical and scientific courses. Four hours. Professor Carson.

3. **Criticism, Exposition, and Argument.** English Composition. Prescribed for all Sophomores in A. B. courses who have passed in Course 1a, 1b, or equivalents. This course is closely connected with Course 2. Constant practice in writing consists of: (1) exercises based on the text book, written in the class room and outside; and (2) the preparation of six themes accompanied by outlines. Text book: Genung's The Working Principles of Rhetoric. One hour. Professor Carson and Miss Slater.

3a. **English Composition.** A course intended for special students and students in pre-medical and engineering course who have passed in 1a, 1b, or 1c. This course will be adapted to the needs of class. One hour. Miss Slater.

4. **Argument and Persuasion.** Open to all of Junior rank who have passed Courses 2 and 3. This course includes: (1) A study of the principles of argumentation and persuasion, as set forth in the master arguments and orations; (2) the drawing of two briefs from mastepieces of argumentative composition and the analysis of two orations in class; (3) the construction of three arguments, one description or narration, and paper of oratorical nature, each preceded by a brief; (4) lectures and conferences. Text book: Baker's Specimens of Argumentation. One hour, two credits. Professor Carson.

4a. **Argumentative Composition.** This course consists of: (1) the drawing of two briefs from masterpieces of argumentative composition; (2) the study of principles and methods under inductive and deductive arguments; (3) the study of the nature and kinds of evidence; (4) the production of three forensics, each preceded by a brief. Text books: Baker's Principles of Argumentation; Baker's Specimens of Argumentation. A two-hour course, open in the first semester to all of Junior standing who have passed Courses 2 and 3. 4a to be fol-

lowed by a supplementary course. Three credits (for year.) Professor Carson.

4b. **Construction of the Oration.** This course includes: (1) a study of the principles of argumentation and persuasion, as set forth in master orations; (2) the analysis of two orations in class; (3) the construction of two orations or papers of oratorical nature, each preceded by a brief; (4) lectures and conferences. Text book: Same as in Course 4a. A two-hour course for the second semester. Open to all who have passed 4a. Three credits (for year.) Professor Carson.

4c. **Advanced Composition.** The Short Story. This course is intended for Juniors who do not desire to continue work in argumentation. It is open to Sophomores who show special aptitude in story writing. It includes: (1) a study of narration, description, also character, plot, and dialogue, as exhibited in the short story; (2) analysis of classic prose in three forms; (3) construction of three papers illustrating these forms. A two-hour course for second semester. Open to those who have passed 4a. Three credits (for year.) Professor Carson.

4c. **Advanced Composition. Exposition.** A study of the principles of exposition as found in Coleridge, Matthew Arnold, Darwin, Bagehot; construction of practical exercises and three essays. Two-hour course the second semester, intended to follow 4a. Prerequsite: at least Junior standing. Three credits (for year). Professor Carson.

5. **Forensics and Orations.** Open only to Seniors who have passed Course 4 or Course 4a, first semester, and 4b, second semester, with credit. Course 5 consists of: (1) the drawing of one brief from a masterpiece of argumentative composition; (2) the analysis of two master orations; (3) lectures, conferences, and criticisms of briefs, forensics and orations; (4) the writing of two forensics and two orations, each preceded by a brief. An elective course, one hour a week. Two credits. Professor Carson.

6. **Journalism.** Development and functions of the American newspaper. Study of the methods of Journalism as set forth in a few great papers of our day and country. Practice in various forms of newspaper writing. A two-hour course. Text book: Shuman's Practical Journalism. Prerequisite: at least Junior standing. Two credits. Professor Carson.

7. **English Literary Criticism.** Lectures on the principles of criticism; a survey of literary criticism in England since the sixteenth century; special attention given to the nineteenth century, including

Wordsworth, Coleridge, Hazlitt, Lamb, Arnold, Pater, Lowell. Assigned readings and reports. Two hours. Professor Carson.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

8. **Seminar** in the Critical Study and Construction of the **Short Story.** A two-hour session each week. The structure of the short story will be analyzed in comparison with that of the novel and drama. Themes, motives, art in development of character, plot and environment will be discussed. This course will require the construction of a certain number of short stories, with practice in working out details. Open to graduates, Seniors and special students in English who are properly fitted. Three credits. Professor Carson.

9. **Seminar in Rhetorical Methods.** Two-hour sessions each week. This course is intended for graduates who intend to teach English or for teachers of English. Prerequisites are Courses 1, 2 and 3, or equivalents. The aim of this course is two-fold: To discuss important questions in the theory of rhetoric; to outline modern methods of teaching rhetoric and English composition in schools and colleges. Primarily for graduates.

10. **Modern English Grammar.** A course for teachers of English. Open to students who have taken Courses 2 and 3. Two-hour sessions each week.

11. **Seminar in the Theory, History, and Practice of Criticism.** This course will consider the critical theories of Plato, Aristotle, Horace, Boileau, Lessing, and also English masterpieces of literary and applied criticism from Sidney to Arnold. Open to graduates. Two-hour sessions each week. Not given in 1904-1905.

12. **Outline History** of the beginning of English Prose. A brief consideration of Caxton, Malory, Tyndale, and history of the English versions of the Bible to 1611. One hour. Professor Carson.

13. **Daily Themes.** Open to a limited number who have passed Course 4 or equivalent with credit. One hour. Professor Carson.

14. **Verse Composition.** After a few introductory lectures on the principles of English versification, the student will begin fortnightly practice in composition, with regular appointments for consultation and criticism. The purpose of this course is partly to familiarize the student with the chief varieties of English verse and stanza (heroic verse, the sonnet, etc.), and partly to give him added command of language. Open to a limited number of students who have passed courses 2 and 3 with credit. One hour. Professor Carson.

EQUIPMENT

This department is very well equipped in English dictionaries and special works for reference in rhetoric, English composition and criticism. It has constant use for latest authorities in the general library.

II. ENGLISH LITERATURE

Professor Howe
Professor Carson

1. **Outlines of Modern English Literature.** From Edmund Spenser to the present. The aim will be to lead the student, as far as possible, to gain his knowledge of each epoch from first hand reading of selected portions of representative authors, supplemented by lectures and text-book study. Prescribed for all Freshmen except in premedical and scientific courses. In these two course prescribed for Sophomores. A prerequisite to all advanced courses in English Literature. Three hours. To be preceded by the similar course given by Professor Glen. PROFESSOR HOWE.

1a. **Supplementary Freshman Course.** For students in Course 1 who are able to devote more than the prescribed time to the subject. Representative work will be read and discussed in class. Permission to take this course must be had from both Professor Carson and Professor Howe. One hour. Will be given in first and repeated in second semester. PROFESSOR HOWE.

2a. **Wordsworth.** A study in chronological order of the more important poems, illustrating the development and scope of his genius. Two hours, first semester. PROFESSOR HOWE.

2b. **Shelley.** A study of the more important works, in their order as written, and elucidated by a study of his life; illustrating the growth of his powers and his significance in the literature. Two hours, first semester. PROFESSOR HOWE.

3a. **Browning.** Two or three of the large masterpieces of this poet will be studied, with a view to give the student facility in reading his poems understandingly, and an idea of his significance in the lecture. Two hours, second semester. PROFESSOR HOWE.

3b. **William Morris.** A current study of the life and writings (both from prose and verse) sufficient to give the student a fair com-

prehension of the meaning and importance of Morris. Two hours, second semester. PROFESSOR HOWE.

[Course 2a, 2b, 3a, and 3b, primarily for Sophomores and Juniors, have, besides their immediate object, that of early inducting the student to the proper method of undertaking the study of any author, and of making clear the danger of forming conceptions upon an acquaintance with one work only. They are introductory to Courses 4 and 5.]

4. **The Georgian Poets.** Wordsworth, Coleridge, Southey, Scott, Byron, Shelley, Keats, Hunt, Hood, Landor. Lectures, with collateral reading and reports by the class. Must be preceded by 2a or 2b. Principally for Juniors and Seniors. Three hours, first semester. PROFESSOR HOWE.

5. **The Victorian Poets.** Browning, Barrett-Browning, Tennyson, Rossetti, William Morris, Swinburne, Matthew Arnold, DeVere, Yeates, Watson, Phillips. Lectures, with collateral reading and reports by the class. Must be preceded by 3a or 3b. Primarily for Juniors and Seniors. Three hours, second semester. PROFESSOR HOWE.

[Students are advised to take 2a and 3a in Sophomore year, and 2b and 3b in Junior year, following with 4 and 5 in Senior year, these courses forming a distinct and related group of studies.]

6. **From Milton to the Publication of the Lyrical Ballads, 1625 to 1798.** Outlines, (a) of the literature of the Puritan period, with special attention to Milton: (b) of the literature of the Restoration, with special attention to Dryden; (c) of the literature of the first forty years of the eighteenth century, with special attention to Swift, Addison and Pope; (d) of the literature from 1740 to 1798, with special attention to the rise of romanticism. Three hours. Not given in 1902-1903. PROFESSOR HOWE.

7. **Edmund Spenser.** A study of the Shepherd's Calendar and Faerie Queene complete, with some of the minor poems. Two hours, first or second semester. PROFESSOR HOWE.

8. **Shakespeare.** An introductory study, in which about twenty plays, so selected from Dr. Furnisall's classification as to indicate the growth of Shakespeare's mind and development of his art, will be read rapidly to give a foundation for later detailed studies. Three hours throughout the year. PROFESSOR HOWE.

9. **The Contemporaries of Shakespeare.** Chiefly the Elizabethan dramatists, with some attention to contemporary pamphlet literature. Recommended to students in history, as especial attention will be paid to the life and manner of the epoch as here depicted. For Juniors and Seniors. Two hours throughout the year.

PROFESSOR HOWE.

[Students are recommended to group 7, 8 and 9 together, taking 7 first, and 8 and 9 at the same time or in successive years.]

10. **The English Novel.** From the Morte D'Arthur to the present, including a study (a) of the Elizabethan novelists, Greene, Nash, etc.; (b) of the Augustan novelists, Richardson, Fielding, etc.; (c) of the Georgian novelists, Scott, Miss Austen, etc.; and (d) of the Victorian novelists, especially Dickens, Thackeray, and George Eliot. Lectures, with collateral reading and reports by the class. For Seniors and graduates. Three hours throughout the year.

PROFESSOR HOWE.

11. **English Prose Writers** (not novelists) of the nineteenth century, DeQuincey, Macauley, Carlyle, Landor, Newman, Matthew Arnold, Ruskin. For Juniors and Seniors. Two hours throughout the year. PROFESSOR HOWE.

[Students are recommended to take Course 11 with Course 4 and 5, or, less desirably, with Course 10.]

11a. **English Prose Writers** (not novelists) of the eighteenth century: Chiefly Gibbon, Burke, Samuel Johnson, Boswell, Hume, and Goldsmith. Recommended as a Senior study to students who have taken Course 11 during the Junior year. Two hours throughout the year.

12. **Outlines of American Literature.** This course gives an outline of American literary history and the reading and discussion of important works in prose and verse. It is carried on through text book, Pancoast's American Literature. Authors read: Franklin, Cooper, Irving, Poe, Bryant, Longfellow, Emerson, Hawthorne, Webster, Holmes, Lowell, Whittier, Whitman, Lanier. First semester, to about 1850. Second semester, 1850 to present time. Two hours throughout the year. Not offered in 1904-1905.

PROFESSOR CARSON.

12a. **Advanced American Literature.** A course alternating with 12. The environment, works and influence of a few authors are studied through lectures, reports, and reading. Two hours.

PROFESSOR CARSON.

13. **Seminar.** English Blank Verse. Elizabethan, Miltonic, and recent. Two hour session each week. For graduates and advanced undergraduates. PROFESSOR HOWE.

14. **Seminar.** English Narrative Poetry from Marlow to Morris. Two hour session each week. For graduates and advanced undergraduates. PROFESSOR HOWE.

15. **Seminar in Versification.** Critical study of a few verse poems which are dominant in English poetry with practice in metrical composition. Two hour session each week. Open to Juniors, Seniors, and graduate students. PROFESSOR HOWE.

16. **Teachers' Training Course in English Literature.** Principles, aims, methods and means to be used in the conduct of literary study. Lectures. One hour, second semester. PROFESSOR HOWE.

EQUIPMENT

The English library contains the masterpieces of the most valuable authors in English and American literature and is especially well equipped in a few selected periods. Nearly five thousand volumes were added to the University library in 1901 by purchase, gift and exchange, and the equipment of the department of English is therefore greatly strengthened.

III. ENGLISH LANGUAGE AND EARLY ENGLISH LITERATURE

Professor Glen

Courses 2, 7a, and 7b are primarily designed for undergraduates seeking the A. B. degree, but these courses must be taken with other specific courses for any advanced degree. The remaining courses include purely graduate courses, and those to which properly fitted undergraduates may be admitted, as specified below.

1. **General History of English Literature.** History of Old and Middle English Literature. A course in the beginnings of Literature in English. Recitations, lectures, and reports. Prescribed in Freshman year for all candidates for A. B. degree, and a prerequisite for all other college courses in English Literature. To be followed by a similar course in second semester by Professor Howe. Each semester, three hours. PROFESSOR GLEN.

2. **Anglo-Saxon.** Anglo-Saxon grammar and translation of select passages of prose and poetry. The relation of Anglo-Saxon to the cognate continental languages will be carefully studied, and similarities traced. A knowledge of German will be found extremely helpful. The elementary knowledge of Anglo-Saxon will be valuable to students of English history and English constitutional law. Open to students who have requisite language preparation. Required for advanced degrees in English. Required for advanced degrees in German. Three hours.

3. **Anglo-Saxon.** Beowulf, a textual and critical study of the great epic. Speculations concerning composition and authorship, historical value and literary merit. Christian elements and mythical elements. Special emphasis will be laid upon the phases of Anglo-Saxon life and spirit that the poem may express. Required for advanced degrees in English. May be taken by undergraduates. Three hours.

4. **English Literature,** from Norman Conquest to Chaucer. Results of conquest. Religious poetry, English folk poetry. "Art, lyric and epic." Anglo-Norman poetry. Layamon, legend, tale and tract. Later religious poetry, Langland, Gower, and Wiclif. Open to graduate students and undergraduates who may have taken prerequisite courses. Required for advanced degrees in English. Two hours.

5. **Chaucer.** Biography. Textual and critical studies in the Canterbury Tales and in minor poems. The seminary method is used when conditions permit. Topics assigned for individual study and reports, including influences of French and Italian predecessors, sources of poems, group classifications, origins, contents and relations between different poems. Open to undergraduates who have completed Course 3. Required for advanced degrees in English. Three hours.

6. **English Literature from Chaucer to Spenser.** Occleve, Lydgate. Early religious drama, miracle, mystery, and morality plays. Humanistic influences. Scottish imitators of Chaucer. Wyatt, Surrey, Skelton. Undergraduates not admitted without prerequisite Courses 1, 3, 4, 7a, 7b. Required for advanced degree in English.

7a. **History of the English Language.** A general lecture course in the growth and development of the language, including discussions of different language families, characteristics, family and group or branch connection of English. Consonant shifts. Teutonic group

characteristics. Native and foreign linguistic elements. Formative period. Creative period. Two hours, first semester.

7b. **English Phonology.** Principles of phonetics. Development of English vowel and consonant sounds. Two hours, second semester.

Half courses 7a and 7b are companion courses for 2, and are prerequisite for courses 3, 4, 5, 6, 8, 9. Required for advanced degrees in English.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

8. **Anglo-Saxon.** Reading from Cynewulf, signed poems and those attributed to him. Alfred, Saxon Chronicles, Aelfric, alliterative and prose homilies and translations. Required of students taking major work for advanced degrees in this department. May be elected by any who have completed the preceding courses. Not open to undergraduates. Three hours.

9. **The Metrical Romances** of Early English Literature. Form and contents. Early materials. Early significance. Origins. Translations of French Romances. Two hours. Open to graduate students only. Required for advanced degrees in English.

10a. **History of English Epic and Lyric Poetry.** This course is introduced to serve as an introduction to the field of epic and lyric poetry. With Course 10b, it aims to cover the three great lines of development in English verse. A knowledge of Anglo-Saxon and Middle English is prerequisite for this course. Strictly graduate course. First semester, three hours.

10b. **History of English Drama.** This course will be introduced by a survey of the greater epochs of the drama in literary history, after which it will proceed to the study of the beginnings and subsequent development of the drama in English. Graduate course, second semester. Three hours.

PUBLIC SPEAKING

Professor Glen.

There are five occasions for the delivery of public debates and orations scheduled for each year. This includes the competition for the Failing and Beekman prizes. Students will not be allowed to enter Courses 3 and 4 unless they have done satisfactory work in Courses 1 and 2 in this University, or equivalent work elsewhere.

1. **Regular Freshman Course.** Fundamentals, articulation, emphasis, inflection, and elementary work in vocalization and gesture. One hour.

2. **Sophomore Orations.** Open to all who have taken 1. A more detailed study of interpretation and expression. Advanced work in vocalization and gesture. Public work. One hour.

3. **Formal Oral Debate.** First semester. A study of the forms of debate. Private and public debates. Continuation of study of expression. One hour.

Second semester. Introduction to the study of oratorical forms and delivery, characteristics of oratorical style. Divisions of oratorical style, methods of cultivation of best style. What to avoid in oratory. Continuation of work in vocalization. Public Junior orations. One hour.

4. **Famous Orations and Orators.** Private rehearsals. Class drill. Competition for Failing and Beekman prizes. First semester, American orators. Second semester, British orators. One hour.

5. **Interpretation of Drama.** The aims of this course are to give the student closer acquaintance with the physical and psychological elements of expression and to furnish a "laboratory" for the analysis of much of the best in literature. Both classic and modern drama will be studied, details of interpretation carefully worked out, and at least one play publicly presented. One hour.

This course is open to students registered in any course in elocution or oratory in this University, provided the work in that course shall have been of a satisfactory character.

EQUIPMENT

The library facilities for study of this department have been sufficient thus far for the general needs of the work. A select collection of complete editions by the best known and most scholarly editors of English literary productions is being secured. The library is quite full of material for the study of old lyrics, and a beginning has been made in collecting material for the study of courses, such as "Morte D'Arthur," "Orlando Furioso," "Amadis de Gaul." The literature of criticism and philology is represented by such names as Ten Brink, Brooke, Gosse, Earle, Sweet, Skeat, Whitney, Bright, Bosworth, Toller, Klunge, Cook, Emerson, and Mayhew. A nearly complete set of the publications of the Scottish Text Society and a complete set of Early English Text Society publications have been added recently.

GEOLOGY

Professor Condon
Assistant Professor Hyde

1. **General Geology.** A general course in physical, stratigraphical and historical geology, with laboratory work in rock collections with type fossils illustrating the geology of Oregon and the United States. This course is a foundation for all of the subsequent work of the department, and the work will differentiate from this course as a basis along the following lines: (Four hours.)

A

2. **Geological Examinations and Surveys.** A discussion of the methods of systematically recording and interpreting geological phenomena. This will be followed by study of the scope of geological surveys and history, and results of such surveys.

The main part of the course will be taken in connection with the courses in Surveying, in Civil Engineering, and will include the representation of the results of surveys in (1) surface maps; (2) contour maps; (3) relief maps in clay. Two hours.

B

3. **Mineralogy.** (See Mining.)

4. **Petrography.** (See Mining.)

5. **Petrology.** (See Mining.)

6. **Economic Geology.** A study of the formation and general features of ore deposits and a more detailed study of ore deposits of iron, copper, lead, zinc, silver, gold, and lesser metals, with special reference to North America and Oregon. Also a general study of the distribution and occurrence of coal, petroleum, natural gas, asphalt, marbles, and building stones, phosphates, water supply, clays, salines, etc. Oue and a half hours.

7. **Palaeontology.** The study of organically formed and fossiliferous rocks, typical fossils of all ages, with special attention to those occurring in Oregon. Lectures and laboratory work. Two hours.

8. **Blowpipe Analysis.** (See Mining.)

COURSES FOR GRADUATES AND ADVANCED UNDERGRADUATES

Graduate courses will be outlined in geology as called for, and the credits assigned. In addition, courses 2, 4, 5, 6, and 7 are open to graduate students.

EQUIPMENT

In the Department of Geology, the University of Oregon has a fine collection of illustrative material. This is contained in two cabinets. One of rocks and minerals, part of which was presented to the University by the United States Geological Survey; the other part being the rocks and minerals of Professor Condon's collection.

The other cabinet is especially rich in fossil remains and represents the fruits of over forty years of continued research in the mountains of Oregon for materials to illustrate their history. These are, therefore, strictly characteristic of Oregon's own geological record.

These materials more than fill twenty large glass cases, whose under spaces are crowded with over two hundred drawers also filled with illustrative geological materials, arranged to accomodate the daily classes of the geological course. This undisplayed material would fill thirty or forty more cases, and require a much larger museum.

The department has also a valuable archaeological collection, and will make a collection of buildings stone, fire clays, and salines in connection with the proposed University geological survey contemplated in the course of instruction in geology.

GREEK LANGUAGE AND LITERATURE

Professor Straub

1. **Elementary Greek.** Gleason and Atherton's First Greek Book. Fall semester, five times each week.

2. **Xenophon's Anabasis.** (Harper & Wallace) Book I; Goodwin's Greek Grammar. Spring semester. Five times each week.

(Courses 1 and 2 include a thorough drill in Greek declensions and conjugations.

3a. **Anabasis.** Books II, III, IV. Critical Study of the Preposition (Adams); Goodwin's Greek Grammar; Greek Prose Composition (Pearson). Fall semester. Four times each week.

3b. **Homer's Iliad.** Books I to IV, inclusive. Jebb's Homer, Mahaffy's Old Greek Life; Greek Prose Composition, (Pearson). Spring semester. Four times each week.

(Courses 3 and 4 include a thorough drill in Greek syntax, with daily translations of simple English sentences into Greek.)

4a. **New Testament Greek.** The four Gospels. Fall semester. Four times weekly.

4b. **New Testament Greek.** Acts to Revelations, inclusive. Spring Semester. Four times weekly.

(Courses 5 and 4 are intended for divinity students, and are elective to other Greek students. Prerequisite courses 1 to 4.)

5a. **Xenophon's Memorabilia.** Demonsthenes, Phillipics. Fall semester. Four times weekly.

5a. **Lysias' Orations.** (Morgan). Selections from Herodotus. Spring semester, four times each week.

6. **Medea of Euripides.** Aechylus' Prometheus; Study of the Attic Theater. Fall semester, three times each week.

6b. **Plato's Apology and Crito,** Sophocles' Antigone; Greek Literature (Morris). Spring semester, three times weekly.

7a. **Aristophanes' Clouds.** Sedgwick's Greek Prose Composition. Fall semester, three times each week.

7b. **Demosthenes' De Corona.** Bredif's Life of Demosthenes; Greek Prose Composition. Spring semester, three times each week.

8. **Greek Mythology.** Text books, reading and informal lectures. Once a week during the year. No Greek required for this course. Open to all students.

9. **English Greek Course.** Homeric Society. History of Greek Art, The Ancient City, Greek Life and Thought, the Attic Theater. No Greek required in this course. Open to all students. Three times a week during the year.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

10. **Modern Greek Grammar.** Fall semester, three times a week.

11. **Modern Greek Literature,** studied and compared with Classic Greek. Spring semester, three times a week.

12a. **Pindar's Odes and Fragments.** Thucydides, Books IV to VI. Fall semester, two times a week.

12b. **Selections From Aristotle.** Spring semester, two times a week.

13. **Homer's Iliad.** Books VI to XXIV, inclusive, read with a view to the study of civilization and customs of the Homeric Tribes. Once each week during the year.

14a. **Greek Epigraphy.** Text book: Sobert's. Fall semester, once each week.

14b. **Greek Inscriptions.** Text book: Hick's Manual of Greek Historical Inscriptions. Spring semester, once each week.

Courses 6b, 7a, and 8b may also be taken by graduate students with the consent of the instructor.

EQUIPMENT

The department of Greek has a number of Hiepert's large wall maps, i. e., Greece, Asia Minor, Persia, etc.

The Classical Library contains, among other books, all of Dr. Smith's dictionaries of Greek and Roman Antiquities, Biography, Mythology, Geography, etc.; also Mahaffy's complete works, and works covering Ancient Sculpture, Painting, History, Greek Culture, Social Life, Ancient Classical Literature, the Attic Theatre, Growth of the Greek Constitution, of the Drama, Development of Oratory, etc. Large additions to the above have been made during the past few years.

HISTORY

Assistant Professor Schafer
Professor Young

INTRODUCTORY COURSES

1. **History of England.** A general course covering all phases of English history. Lectures, reports, and assigned reading. Open to all Freshmen. Correlated with course 1, Economics. Three hours, both semesters.

2. **Greek and Roman History.** A general course calling for extended reading both in classical sources, and in the best secondary authorities. Not given in 1904-1905. Three hours, both semesters.

3. **Mediaeval History.** A study of the principal historical movements of Europe from the decline of the Roman Empire to the Renaissance. Open to students who have taken the equivalent of 1 or 2. Three hours, both semesters.

4. **Modern History.** The development of Europe from the Renaissance to the close of the nineteenth century. Open to students who have taken 3 or an equivalent. Not given in 1904-1905. Three hours, both semesters.

5. **Historiography.** A course intended to familiarize the student with the world's great writers of history, their works, and the methods they employed in producing them; also to impart, as concretely as possible, the leading principles of research and criticism. A brief thesis, prepared according to approved methods, is required as a condition of completing the course. Open to students who have had one University course. Two hours, both semesters.

6. **Early American History.** A general course covering the history of the colonies, the Revolutionary War, and the adoption of the Constitution. Open to students who have had Course 1 or an equivalent. Three hours, both semesters.

7. **Later American History.** A general course covering the history of the United States from 1789 to the close of the reconstruction period. The emphasis will be placed on political history. Open to students who have taken Course 6. Three hours, both semesters.

ADVANCED COURSES

8. **The Constitutional History of England.** A study of the more important phases of English constitutional development, with some attention to the working of the present constitution. Open to students who have had Course 1, and the equivalent of Courses 3 and 4. Three hours, both semesters.

9. **Nineteenth Century History.** A study of the most significant movements of world history from the close of the French Revolution to the end of the nineteenth century. Prerequisites, Courses 1, 3, and 4, or equivalents. Three hours, both semesters.

10. **The Westward Movement.** A study of American expansion, with especial reference to the new state system, and the building up of the states of the Old Northwest. The emphasis will be upon insti-

tutions, and the seminary method will be employed as far as practicable. Prerequisites, three courses including 1 and 6. Three hours, both semesters.

11. **The Commonwealth of Oregon.** The development of its political, economic, and social institutions, and the consideration of its problems of legislation. Two hours, both semesters.

12. **Pacific Slope History.** A study of the exploration and colonization of what is now the American portion of the Pacific Coast, together with the evolution of the Pacific states. Some attention will be given to American relations with other powers on the Pacific, both occidental and oriental, especially Japan and China. Open to all students of proper maturity and training. Three hours, both semesters.

EQUIPMENT

The equipment in history is already considerable, and is being added to as rapidly as means will permit. The library contains many of the standard general histories and histories of special periods. In the way of primary sources the University is especially favored in having at hand a considerable part of the documents and manuscripts of the Oregon Historical society, which form an exceedingly valuable body of materials for research work in history. This material is being used by our advanced students in the production of monographs on various subjects in Oregon history.

The library is also adding to its stock of historical sources, especially in the line of later English and American history. It now possesses the colonial records and archives of several of the original states, and a reasonably complete collection of materials on the Old Northwestern states. These include the historical society publications of Ohio, Indiana, Illinois, Michigan, and Wisconsin, and a large part of the state documents of the same states. Efforts are now being made to complete our files of the publications of the Pacific Coast states, of which a large part are already at hand.

LATIN LANGUAGE AND LITERATURE

Professor Dunn.
Mr. Densmore.

1. **Roman History.** (a) The Legendary Period; Livy, Books I and II; (b) the second Punic War; Livy, Books XXI and XXII.

2. **Roman Comedy.** (a) The Plays of Terence, Phormio, and Andria; (b) the Plays of Terence, Adelphoe, and Phormio. Four hours per week. Three hours.

Courses 1 and 2 are to be taken in succession, occupying respectively the first and second semesters of a college year, and are designed primarily for Freshmen or those who enter with credits covering four years of academic or high-school Latin. Both 1 and 2 provide in turn subdivisions (a) and (b), which are offered either in alternate years or at the discretion of the instructor, both divisions being identical in value and subject, differing only in choice of books in Livy and one play in Terence. The regular text preparation in Livy and Terence is supplemented by sight reading in both authors or in selections from Ennius, Horace, Catallus, Ovid, etc. One hour a week is given to Latin composition and the study of idioms of classic prose. Lectures to be given at stated intervals during the year are provided upon such cognate themes as "The Regal Period of Rome," "Rome and Carthage," "Livy," "Hannibal," "Terence," "The Roman Theater," "The Roman Historians," and "The Roman Lyric Poets."

Text books: Livy, Books I and II, Greenough (Ginn); Books I, XXI and XXII, Lord (Sanborn), Terence, Phormio, Elmer (Sanborn); Adelphoe, Cowle (Sanborn); Andria, West (American Book Co.); Selections from Latin Poets, with brief notes (Harvard Publishing Company;) Latin Composition for College Use, Miller (Sanborn).

3. **Tacitus.** (a) The Germania and Agricola; (b) selections from the Annals; (c) selections from the Histories.

4. **Horace.** (a) The Odes and Epodes; (b) the Satires and Epistles. Three hours.

Courses 3 and 4 combined form one year's work, designed to supplement Courses 1 and 2. The first semester is devoted to Tacitus, subdivisions offering a variety in the choice of works to be read. Course 3 (b) or (c) will introduce the student to interesting epochs in Roman history, whereas (a) provides the fascinating story of early Roman Britain and tribal Germany. Course 4 occupies the second semester, with Horace, (a) providing a study of lyric Latin in the Odes and Epodes, or (b) offering a similar opportunity in Roman satire and the Satires and Epistles. As in 1 and 2 the regular text work will be supplemented by drill in composition, one hour each week.

Text books: Tacitus, Annals, Books I-VI, Allen (Ginn); Histor-

ies, Books I and II, or III-V, Godley (Macmillan); Germania and Agricola, Hopkins (Sanborn). Horace, Odes and Epodes, Smith (Ginn); Satires and Epistles, Greenough (Ginn), Handbook of Latin Writing, Preble and Parker (Ginn).

5. **Selections from the Epigrams of Martial and Satires of Juvenal.**

6. **Selections from the Letters of Pliny and Lives of Seutonius.** Three hours per week.

Courses 5 and 6, designed to be taken in successive semesters, continue the series begun by the four courses preceding. They cover an interesting epoch in the literature of the empire, and are especially valuable for their reference to Roman society of the Decline. A rapid succession of four different authors, each a master in a distinct province of letters, provides a pleasing variety of topic and style.

Text books: Martial, Stephenson's Selections (Macmillan); Juvenal, Duff (Macmillan); Pliny, Westcott's (Allyn); Seutonius, Books I and II, Cick, (Holt).

7. **Selections from Lucretius.**

8. **The Plays of Plautus.** Three hours per week.

Courses 7 and 8 together correspond primarily to the Senior year. Lucretius occupies the first semester and opens an attractive field in philosophy in selections from his De Rerum Natura. Plautus follows in the second semester, supplementing the study of Terence in the Freshman year with that of the Captivi, Trinummus and Pseudolus, and an extended analysis of the Latin drama.

Text books: Lucretius, Books I, II, III, Lee (Macmillan); Plautus, Captivi and Trinummus, Morris (Ginn); Pseudolus, Morris (Allyn).

COURSES FOR GRADUATES AND ADVANCED UNDERGRADUATES

9. **Catullus and the Elegiac Poets.** Three hours per week through half year.

This course continues through the first semester only, one-half of the time given to the study of Catullus, the remainder to the elegies of Tibullus, Propertius and Ovid.

Text books: Catullus, Merrill (Ginn); Roemische Elegiker, Schulzer (Weidmann, Berlin).

10. **Cicero's Letters.** Three hours per week through half year.

11. **Private Life of the Romans.** Three hours per week.

Course 11 consists entirely of lectures, continuing through the entire year. The aim of the course is to bring to the aid of the numerous reading courses the knowledge gained by a survey of the private institutions, customs, etc., of the people themselves. Two theses will be required of each student upon some special topic assigned by the instructor. It will be found a very helpful course, indispensable to the finished Latin student.

12. **History of Roman Satire.** Three hours per week through half year.

13. **History of Latin Literature.** Prose. Three hours.

Course 13 gives in lectures a survey of Latin prose from the early times to its decline. Suitable selections are designed by the instructor to be read in private by the students. Course 13 is given in alternate years with 14.

MATHEMATICS

Assistant Professor De Cou
Mr. Frazer
Assistant Professor Boynton

The instruction in mathematics is designed to secure two objects: first, high mental discipline for the general student through the study of an exact science; second, a thorough understanding of those subjects which form the foundation of most of the natural and applied sciences, such as physics, astronomy and the engineering sciences. All students are required to complete the work through plane trigonometry; those in the General Scientific Group take also advanced algebra and analytical geometry; engineering students, in addition to the courses mentioned, take differential and integral calculus in the Sophomore year, and differential equations and analytical mechanics in the Junior year.

A number of fundamental elective courses are offered to the advanced student; they are so arranged as to give breadth and symmetry to his knowledge of mathematics and prepare him, if he so desires, to pursue graduate study profitably.

Graduate courses will be arranged to suit the needs of those applying for them.

COURSES IN MATHEMATICS

1. **Solid Geometry.** Five times a week, second semester. Text-book: Wentworth.

2. **Plane Trigonometry.** An elementary course. Prerequisite, algebra through logarithms. Three times a week, first semester. Required of all Freshmen.

3. **Advanced Algebra, Trigonometry, and Analytical Geometry.** An introductory course. Five times a week for one year. Required of Freshmen in General Scientific Group, and in all regular courses in the college of Science and Engineering.

4. **Differential and Integral Calculus.** This course includes the development of the fundamental principles and formulas of differential and integral calculus; their applications to expansion of functions, indeterminate forms, the determination of the various properties of plane curves, maxima and minima, areas and length of curves, areas and volumes of surfaces, hyperbolic functions, etc.

Prerequisite Course 3. Five times a week for one year. Required of Sophomores, in Engineering courses. Elective for others.

5. **Differential Equations.** A practical course in the theory of ordinary and partial differential equations and their solutions. Prerequisites, Courses 3 and 4. Text-book: Murray's Differential Equtions. Five times a week, first semester. Required of Jnniors in engineering courses.

6. **Advanced Differential Equations.** A continuation of Course 5, based on the text of Murray, Johnson, and Forsyth. Three times a week, second semester.

7. **Determinants and Theory of Equations.** An elementary, but very important course, giving the essential principles required in various and advanced studies. Texts: Barton, Burnside and Panton. Three times a week, one semester.

8. **Solid Analytical Geometry.** An advanced course dealing with surfaces of the second degree and their properties, together with some discussion of surfaces in general. Text-book: C. Smith's Solid Geometry. Three times a week, one semester.

9. **Advanced Integral Calculus.** Including definite integrals, Fourier series, elements of elliptic integrals and functions. Prerequisite, Course 4. Three times a week for one year.

10. **Projective Geometry.** An introductory course based on Holgate's translation of Reye's Geometrie der Lage. Three times a week, one semester.

11. **Analytical Mechanics.** An elementary course dealing with the principles and applications of statics, kinematics and kinetics. Prerequisite, Course 4. Three times a week for one year. Required of Juniors in the Engineering courses.

12. **General Astronomy.** A course embracing a brief historical sketch of the science, the fundamental principles, with such problems as yield to elementary methods of treatment, and an exposition of the more important facts known in reference to the bodies of the solar system, the stars, star clusters and nebulæ, tides as cosmogonic agencies, and a comprehensive account of the Nebular Hypothesis. Observatory work will be carried on as the weather permits. Three hours.

13. **Spherical and Practical Astronomy.** Lectures, observatory work, and computations. The observatory is provided with a good transit instrument, a sideral clock, and a sextant with artificial horizon. The transit instrument is so arranged that it may also be used as a sight-seeing telescope. Three hours.

GRADUATE COURSES

On application courses will be provided for graduates and others of sufficient mathematical maturity and training in the following subjects: Modern analytical geometry, differential geometry, theory of functions of a complex variable, elliptic functions, substitution groups, and theory of numbers.

EQUIPMENT

The department is provided with a good working library of the best texts and receives regularly a number of the best mathematical journals.

A collection of the famous Brill models, made in Germany, is an important adjunct to the work in geometry. Included in this collection are plaster models of ellipsoids, hyperboloids of one and two sheets, elliptic and hyperbolic paraboloids; on which are shown the geodetic lines, lines of curvature, circular, and principal sections, etc.; also wire and thread models, illustrating ruled surfaces and generating lines of conicoids. A spherical black-board, three feet

in diameter, black-board apparatus for use in geometrical constructions, and numerous models and drawings constructed by the students add materially to the equipment.

MINERALOGY

(See Mining)

MINES AND MINING

Assistant Professor Hyde

1. **Mineralogy.** Study of the nature and classification of minerals, and the methods most commonly used for their determination, including blowpipe analysis, the study of the crystal forms, and examination of mineral sections with the aid of the petrographic microscope. Must be preceded by or taken with chemistry 2. Three hours throughout the year.

2. **Petrology.** An introduction to the nature and classification of rocks, with special reference to the methods by which they may be determined in the field or mine. Lectures, laboratory, and field work. Must be preceded by Course 1. Three hours, first semester.

3. **Economic Geology.** An introduction to the nature, occurrence and economic uses of minerals of commercial value. Lectures and assigned reading. Three hours, second semester. Must be preceded by Geology 1 and Economic Geology and Mining 1.

4. **Field Work.** Study of the areal and structural geology of a portion of the region adjacent to the University. The results of this study to be recorded on topographic maps and diagrammatic cross section. Must be preceded by Courses 1 and 2, and Geology.

5. **Assaying.** Principles of sampling, principles of fluxing, practice in the fire assay of the most important types of gold, silver, and lead ores, the assay of bullion and laboratory amalgamation and concentration tests. Further practice in assaying is given students in checking the results of their experiments in the metallurgical laboratory. Must be preceded by Course 1 and Chemistry 1 and 2. One lecture and six hours laboratory work for first semester.

6. **General Metallurgy.** An elementary course dealing with the nature of metals, alloys, ores, fluxes, fuels, furnaces, and smelting and

leaching operations. Must be preceded by Course 1 and Chemistry 1, 2, and 4. May be taken contemporaneously with second semester of Chemistry 4. Lectures and assigned readings. Two lectures per week, second semester.

7. **Metallurgy.** Study of modern metallurgical methods, especial attention being given to metallurgy of gold, silver, lead, and copper. Lectures and assigned reading. Must be preceded by Course 6. Three lectures per week for first semester.

8. **Metallurgical Laboratory.** Determination of method by which the values can most profitably be extracted from a given ore, investigation of special metallurgical problems, etc. Two to five hours either semester.

9. **Mining.** Lectures, assigned reading, and quizzes on mining operations, including prospecting, development, methods of working, timbering, shaft sinking, hoisting, drainage, and ventilation. Open only to engineering students with full Junior standing. Three hours, second semester.

10. **Ore Dressing.** A study of ore and mineral substances of commercial importance which are subjected to dressing and concentration; and of the methods best adapted to their most economical manipulation. Lectures, assigned reading, and laboratory work. Must be preceded by courses 5, 6, and 9. Two to five hours, first semester.

11. **Thesis.** Every Senior will be expected to present a thesis at the close of the Senior year. This should be in the form of a report upon some mine which he has examined, a report upon the method by which some ore can be most advantageously worked, with specifications and estimates for a plant for working it, or a report embodying the results of some special investigation in economic geology, metallurgy, or mining engineering. Three hours, second semester.

EQUIPMENT

(See Chemistry and Engineering)

MODERN LANGUAGES

Dr. Schmidt
Miss Thurston

The aim of the instruction in the Department is primarily to en-

able students to use modern German, French, Spanish, or Italian with facility in reading, writing, and, as far as practicable, in speaking, and to acquaint them with the masterpieces in the respective literatures.

Opportunity is also given for graduate courses in Germanic and Romanic languages. These are intended especially for students who desire to make the teaching of these languages their profession, or who expect to take an advanced degree in them. Careful attention is given to the linguistic as well as to the literary training of the student, aiming at a comprehensive insight into the historical growth of the Germanic languages and literatures.

GERMAN LANGUAGE AND LITERATURE

1. **Elementary German.** The elementary course comprises: Joynes-Meissner's German Grammar; German composition; translation of easy prose and poetry. Special attention is paid to systematic training in pronunciation. The reading of about 100 pages of graduated texts from a reader is required. Huss's German Reader is used. In addition to this one or two of the following selections will be read: Storm's Immensee; Heyse's L'Arrabbiatta; Volkman's Kleine Geschichten; Maerchen and Erzaehlungen; Seidel's Maerchen; Zschokke's Der Zerbrochene Krug. German conversation. Five hours a week throughout the year.

2. **Advanced German.** During the second year the work comprises advanced German Grammar and Composition, Syntax. German conversation, (based upon Vos's Material or some other method) throughout the year. Material to be read is selected from the following list: Das Maedchen von Treppi; Baumbach's Die Nonna; Wildenbruch's Das edle Blut; Hillern's Hoeher als die Kirche; Seidel's Leberecht Huehnchen; Hauff's Das Kalte Herz; Leander's Traeumereien; Freitag's Die Journalisten; Lessing's Minna von Barnhelm; Schiller's Wilhelm Tell; Goethe's Hermann und Dorothea. The class is expected to read two or three stories and two or three plays during the year. Four hours a week throughout the year.

3. **Classical Drama.** (a) Goethe's Egmont; Torquato Tasso; Iphigenie auf Tauris. (b) Schiller's Maria Stuart; Jungfrau von Orleans; Wallenstein; (c) Lessing's Minna von Barnhelm; Emilia Galotti; Nathan der Weise; (d) Grillparzer's Sappho, Kleist's; (e) Prinz Freidrich von Homburg. Writing of essays in German; German conversation. Practice in writing German is afforded by means of dictation or similar exercises. Three hours a week throughout the year.

4. **German Fiction.** During the year some of the following works will be read: Ebner-Eschenbach's Die Freiherren von Gemperlein; Keller's Dietegen; or Kleider Machen Leute; Riehl's Novellen, for example, Burg Neideck, Der Fluch der Schoenheit; Der stumme Ratsherr, Das Spielmannskind; Scheffel's Ekkehard; Wildenbruch's Der Letzte; Dahn's Sigwalt und Sigridh, Meyer's Gustav Adolph's Page; Sodermann's Der Katzensteg; and Auerbach's auf Wache, etc. Three hours a week throughout the year.

5. **Modern German Drama.** The following dramas will be read: Wildenbruch's Harold, Hauptmann's Die versunkene Glocke, Sudermann's Johannes, Fulda's Der Talisman. Three hours a week throughout the year. Will not be given 1904-05.

6. **German Poetry.** Goethe's poems; Schiller's ballads; Uhland's poems; White's Heine's poems; Klenze's Deutsche Gedichte; Hatfield's German Lyrics and Ballads, or Kluge's Auswahl deutscher Gedichte will be used as textbook. One hour a week throughout the year.

7. **Goethe's Faust.** Part I, with commentary. Two hours a week during one semester. One credit.

8. **Heine's Prose.** Die Harzreise; Die Romantische Schule and other selections will be read. Two hours a week during one semester. One credit.

9a. **Historical German.** This course consists of the rapid translation of modern historical and economic German. It is especially designed for those students who wish to acquire a sufficient knowledge of the language to enable them to read German books on history, philosophy, etc. The matter to be read is selected from such works as Riehl's Kulturgeschichtliche Novellen; von Sybel's Kleine historische Schriften; Freytag's Bilder aus der deutschen Vergangenheit; Seiler, Die Heimat der Indogermanen, Schiller's Geschichte des dreissigjaehrigen Krieges, etc. Two hours a week during one semester. One credit.

9b. **Scientific German.** This course is recommended to students who are taking or who plan to take special courses in Natural Science or in Medicine. Gore's or Dippold's German Science Reader is used as an introduction, and is followed by monographs on various subjects, in order to give the student as large a vocabulary as possible. Among the books to be read are: Lassar-Cohn's Die Chemie im taeglichen Leben; Brewer's Naturlehre; Muller's die electrischen Maschinen; Helmholt's Ueber Goethe's Naturwissenschaftliche Arbeiten. No student is advised to take this course who has not had at least

two years of thorough preparation in literary German. Two hours a week throughout the year. Alternates with 9a.

10. **Advanced German Composition.** C. A. Buchheim, Materials or German Prose Composition. Parts I and II. One hour a week throughout the year.

11. **Contemporary Literature,** in rapid readings. Works by Hauptmann, Suderman, Wildenbruch, Fulda, Ebner, Eschenbach, Dahn, etc., are read. This course is intended for students who have completed Courses 1, 2, and 3, and who wish to become acquainted with the works of the most modern authors. Two hours a week throughout the year.

12. **General History of German Literature.** Bernhardt's or Karsten's Deutsche Litteraturgeschichte is used as a text book. A limited number of lectures are given. One hour a week throughout the year.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

Is so far as the demand will justify the formation of classes, the department will offer the following courses.

13. **Middle High German.** Michels, Mittelhochdeutsche Grammatik, 1900; Henrici, Proben der Dichtungen des Mittelalters, Berlin, 1898; Selections from Nibelungenlied; Walther von der Vogelweide; Parzival. Lexer, Mittelhochdeutsches Taschen-Woerterbuch.

14. **Old High German.** Braune's Althochdeutsche Grammatik, and the same author's Althochdeutsches Lesebuch (4th Ed.); Muellenhoff and Scherer's Denkmaeler Deutscher Poesie und Prose (3d Edition); Behaghel's Historical Grammar of the German Language.

15. **Gothic and the Elements of Comparative German Grammar.** Braune, Gotische Grammatik, 4. Auflage, Hale, 1895; Heyne's Ulfilas, 9. Auflage, von F. Wrede, Paderborn, 1896; Streitberg's Urgermanische Grammatik. This course is required for advanced degrees in English Philology.

16a. **Norwegian or Swedish.** Grammar and Reading. Representative authors.

16b. **Danish.** Groth's Danish Grammar. Reading of representative authors. Course 16a and 16b alternate.

17. **History of German Literature to the Nineteenth Century.** With special study of the classic periods of the twelfth and eighteenth centuries. Sherer's Geschichte der deutschen Literatur; Franke's Social Forces in German Literature are used as text-books. Papers on assigned topics will be required.

ROMANCE LANGUAGES AND LITERATURES

FRENCH

1. **Elementary French.** Fraser and Squair's French Grammar, Part I, with written exercises and systematic training in French pronunciation. The reading of about 550 duodecimo pages of graduated texts is required. Super's French Reader or some similar text-book is used. In addition to this, in 1902-'03 the following were read: Halevy, L'Abbe Constantin; Merimee, Colomba; Labiche and Martin, Le Voyage de M. Perrichon. Writing from dictation. French conversation. Five hours a week throughout the year.

2. **Advanced French.** Composition and syntax on the basis of Fraser and Squair's French Grammar, Part II, and Francois' Advanced French Prose Composition. The reading of easy modern French in the form of stories, plays, or historical or biographical sketches: George Sand, La Mare au diable; Musset. Pierre et Camille; Augier and Sandeau, Le Gendre de M. Poirier; Labiche and Martin, La Poudre aux yeux; Balsac, Cinq scenes de la Comedie Humaine; About, Le Roi des montagnes. French conversation. Four hours a week throughout the year.

3. **History of French Literature in the Seventeenth Century.** The following texts will be read: Corneille, Le Cid, Cinna; Racine, Athalie, Esther, Andromaque, Phedre; Moliere, Le Misanthrope, Les Precieuses ridicules, Le Bourgeois gentilhomme; Boileau, L'Art poetique; selections from Descartes, Pascal, La Rochefoucauld, Madame de Sevigne, Bossuet, La Bruyere. Lectures. Practice in writing French. This course is open to students who have completed Course 2 or its equivalent. Three hours a week throughout the year.

4. **History of French Literature in the Eighteenth and Nineteenth Centuries.** The following texts will be read: Marivaux, Le Jeu de l'amour et du hasard; selections from the prose work of Rousseau and Voltaire; Beaumarchais., Le Barbier de Seville; Chateaubriand, Le dernier Abencerage; Beranger, Alfred de Musset, Alfred de Vigny, Lamartine, Gautier, Victor Hugo, Leconte de Lisle, Verlaine, Sully-Prudhomme, selected poems; Victor Hugo, Ruy Blas; Taine, the Introduction to the Historie de la litterature anglaise. Lectures. Practice in writing French. Three hours a week throughout the year. Course 4 alternates with Course 3.

5. **Scientific French.** The purpose of this course is to acquaint the student with technical terms, to familiarize him with scientific forms of expression and style, and to enable him to read with profit

the scientific and technological contributions to French magazines. Hurdler's or Davies' Scientific French Reader will be used, and a number of magazine articles will be assigned to each student for outside reading. Open to students who have had two years of French. One hour a week throughout the year.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

6. **Old French.** Lectures on old French Phonology and Morphology. Students should provide themselves in advance with Gaston Paris's Extraits de la Chanson de Roland, (Paris, 6th ed., 1899) and Schwan-Behrens' Grammaire de l'ancien francais, traduction de Bloc (Leipzig, 1900). Other books used are Koerting, Lateinisch-romanische Woerterbuch (Paderborn, 1901), Paris's edition of La Vie de St. Alexis (Paris, 1903), and Suchier's edition of Aucassin et Nicolete (Parderborn, 1899).

Open to students who have had at least two years of German, four years of French and four years of Latin. Three hours a week throughout the year.

7. **Physiological Phonetics.** The sounds of English, German, and French. Grandgent, German, and English sounds (Boston, Ginn and Co., 1892); Ripmann's adaptation of Vietor's Kleine Phonetik (London, J. M. Dent and Co., 1899); Sweet, A Primer of Phonetics (Oxford, Clarendon Press, 1890); lectures. Each student will make a special study of his English vowels. Two hours a week throughout the year.

SPANISH

1. **Elementary Spanish.** Ramsey, A Spanish Grammar; Matzke, First Spanish Readings; Alarcon, El Capitan Veneno, Padre Isla, Gil Blas de Santillana. The course is open to students who have had French and Latin. Three hours a week throughout the year.

2. **Advanced Spanish.** Moratin, El Si de las Ninas; Valdes, Jose; Galdos, Dona Perfecta, Marianela, Electra; Ford's Spanish Composition; Spanish conversation. Three hours a week throughout the year.

3. **Classical Spanish.** Cervantes, Don Quixote (selections); Calderon, Le Vida es Suena; selected plays of Lope de Vega. Fitzmaurice-Kelly's History of Spanish Literature will be used as a textbook. Three hours a week throughout the year.

ITALIAN

1. **Elementary Italian.** Grandgent, Italian Grammar; Bowen's First Italian Readings; Alfieri, Saul; Goldoni, Un Curioso Accidente. In 1904-'05 the course will be open, if a sufficient number apply, to students who have had two years of French or four years of Latin. Three hours a week throughout the year.

2. **Advanced Italian.** The classic period of Italian literature. Readings from Dante, Boccaccio and Petrarch. Garnet's History of Italian Literature will be used as a text-book. Three hours a week throughout the year.

PHILOSOPHY AND EDUCATION

Assistant Professor Sheldon

I. PHILOSOPHY

1. **Historical and Critical Introduction** to Philosophy. Lectures, papers, and private reading. Required of all students in the philosophical-educational group. Three hours. DR. SHELDON.

2. **Ethics.** History of Ethics, with outlines of speculative Ethics. Two hours. DR. SHELDON.

3. **Problems in Social Ethics.** One hour. PRES. CAMPBELL.

4. **English Philosophy,** with particular attention to the Synthetic philosophy of Herbert Spencer. Three hours. DR. SHELDON.

5. **Greek Philosophy.** History of Greek speculation with special attention to Plato aud Neo Platonism. Not offered during academic year 1904-1905. Two hours. DR. SHELDON.

4. **British Philosophy.** From Bacon to Herbert Spencer. A close study of Hobbes, Locke, Berkeley, Hume, Hamilton, Mill, Bain, Spencer, and evolutionary group of thinkers. This course will be given during the academic year 1904-1905. Two hours.

5. **Kant and His Successors.** An examination of the systems of Kant, Fichte, Hegel, Herbart, Schopenhauer, Lotze, and Wundt. Given in 1905-6. Two hours.

II. EDUCATION

Introductory

1. **Teacher's Course.** For students without teaching experience, who are looking forward to careers as high school teachers and principals. The following aspects of pedagogy will be dealt with:

(a) Pedagogical Psychology. Application of the fundamentals of modern psychology to processes of instruction.

(b) Educational thinkers of the nineteenth century. Pestalozzi, Froebel, Herbart, Herbert Spencer, and Thomas Arnold.

(c) History of method, with chief attention to secondary schools. The recent reports of committees of the National Educational Association dealing with the correlation of studies and methods of teaching in high schools will form the center of instruction. Students will visit high schools and when possible opportunities for practice teaching will be offered. Four hours a week throughout the year.

2. **Administrative Problems and Organization.** A series of lectures with inductive study of certain problems. Two hours.

3. **Education Club.** Meets weekly for review of current books and periodicals. Occasional addresses will be secured from outside educators. One hour a week.

4. **Foreign School Systems.** A study of the recent intellectual movements and educational institutions of Great Britian, Germany, and France. Three hours.

EQUIPMENT

The psychological laboratory is open to the use of the department of Philosophy and Education. The library is being rapidly strengthened by the addition of a large number of works bearing on this department. A large collection of text books on all subjects taught in primary and secondary schools is being formed for examination and study by teachers. A collection is also being made of old text books, showing the changes in method and material of instruction.

PHYSICAL EDUCATION

Mr. Burden.

Physical education is treated as an important part of college work. Two years in the gymnasium classes are required, for which

two credits are given. The University gymnasium is fitted with the most important gymnastic apparatus, such as chest weights, rowing machine, intercostal machine, traveling parallels, rope ladder, long horse, flying rings, Swedish stall-bar, ladder; wet spirometer, manometer, dynometer, for chest, back, and legs, and instruments for taking physical measurements.

The main hall is forty by eighty-five feet, with a twenty-five foot ceiling. On the same floor is the office of the director, and a room for anthropometry; there is also a gallery for spectators in the west end. The annex contains dressing rooms, lockers, sponge and shower baths and boiler room. Students can have the use of a private locker for a fee of one dollar per year. A deposit of fifty cents is required for the key.

The department is conducted upon strictly scientific principles. Dr. Seaver's chart system is used, showing the relation of the individual in size, strength, symmetry, and development to the normal man of the same age. Its aim is both hygienic and educative. It attempts to aid functions and develop form as well as to correct undeveloped or deformed parts, and supply recreation. It also aims especially to assist the student toward perfect nervous control, and by exercises of skill and precision to train nerve centers and muscles to act quickly and accurately in response to the will; and to produce mental and moral self-control. General athletics train men to meet the emergencies of life by giving them readiness of resource, quickness of thought and action, and courage and good temper under difficulties.

Reasonable effort is made to encourage outdoor sports, and the director devotes a considerable time when the season is suitable to directing outdoor exercises, such as rambling, tennis, and athletics of all kinds.

The students maintain an athletic club which encourages outdoor athletics, and are permitted by the Faculty to participate in intercollegiate sports. In addition to the regular class drills, a certain part of which consists of training in athletic sports, the University is represented by a football eleven, a baseball nine, a track athletic team, a tennis club, a golf club, a basket-ball team and an indoor baseball club. Other teams beside these are formed to give the University teams practice, and to give athletic practice to as many students as possible.

Women are admitted to separate classes in physical education under the same conditions as men.

Physical examinations are free of charge, and the director will be ready to examine students at any convenient time. Students may take the physical examinations and have their exercises prescribed, or may enter one of the regular classes.

PHYSICS

Professor Friedel

Assistant Professor Boynton

Mr. Shelley

Students offering Physics as a matriculation subject and wishing to pursue the subject in the University are ordinarily advised to take Course 1, so as to be thoroughly prepared for succeeding courses. In cases where the preparatory work has been exceptionally strong, the student may be excused from a part or the whole of Course 1, or even admitted directly to Courses 2 and 3.

Engineering students are urged to make their work in Physics as thorough and complete as possible. They should complete Course 1 by the end of the Freshman year, and take Courses 2 and 3 in the Sophomore year. It is very desirable that they should offer for matriculation the full equivalent of Course 1. Prospective teachers of science should include in their selection of studies at least Courses 1, 2, and 3. The department is unwilling to recommend any person as qualified to teach Physics in the High Schools who has less than that amount of preparation.

No credit is given for less than the full work of a course, except that when a student is excused from a part of Course 1 credit is given for the amount of work actually done in the University. Records given for the first half of a course continued through the year are understood to be provisional only, and conditioned upon the completion of the course.

Credits towards a degree are given only for work actually done at the University or at some other institution of like rank, or upon examination.

A laboratory fee of five dollars is charged for each course calling for two two-hour exercises per week through the year. For other courses the charge will be proportional to the time.

GENERAL COURSES

1. **Elementary Physics.** A general non-mathematical course. An

acquaintance with elementary algebra and plane geometry is a condition for entering the course. A knowledge of the notation of trigonometry will be found exceedingly helpful. Open to all qualified students. This course or its equivalent must be completed before undertaking any other course in the department. Four recitations and two laboratory periods, seven hours, five credits.

2. **General Physics.** Open to those who have completed elementary physics and trigonometry. This course and the following are required in the Sophomore year in the Engineering Courses, and are recommended to intending teachers of science. A lecture and recitation course. Four hours.

3. **Physical Measurements.** A general laboratory course designed to accompany Course 2, having the same prerequisites. Four hours, two credits.

ADVANCED COURSES

4. **Analytical Mechanics.** Also announced as Mathematics 13 and as Mechanics 1. Prerequisite, differential and integral calculus. Required of Juniors in the Engineering courses. Three hours.

5. **Mathematical Theory of Electricity and Magnetism.** Prerequisites, Physics 2, Mathematics 6, and Differential Equations. An introduction to the more mathematical methods of presentation, especially intended for students of Electrical Engineering, but adapted to the needs of those who wish to pursue the subject farther. Required of Seniors in the course in Electrical Engineering. Four hours.

6. **Electrical Measurements.** The calibration of standard types of measuring instruments, the preparation and testing of standards of resistance, E. M. F., inductance and capacity, and the use of the potentiometer and dynamometer. Open to students who have completed Courses 2 and 3. The calculus is helpful. The course is best taken after or in connection with Course 5. Required of Juniors in the course in Electrical Engineering. Four hours, two credits.

7. **Thermodynamics.** Also announced as the first half of Mechanical and Electrical Engineering 3 Prerequisites, Physics 2; Mathematics 6. A course on the theory of heat as applied to ideal gases, saturated vapors, and other simple types of substances, introductory to the study of the steam engine. Intended primarily for and required of all engineering students, but open to all qualified students. Especially recommended to students specializing in Physics or Physical Chemistry. Three hours first semester only, May be followed by

the course on Steam Engine, or by appropriate courses in Physics or Chemistry.

8. **Molecular Physics.** An optional continuation of Course 7, including the Kinetic Theory of gases and liquids; the deduction and further discussion of van der Waals' equation, and the theoretical aspects of the theory of Solutions. Three hours, second semester.

9. **Theory of Light.** Lectures with experimental illustration. Problems relating to the theory of optical instruments, treated by the methods of geometrical Optics and of the wave theory. Prerequisites, Physics 2, Mathematics 6. Three hours, first semester.

10. **Harmonic Motion.** The analytical treatment of wave motions with applications to sound, light, and electricity. Prerequisites, Physics 2, Mathematics 6, and at least one semester of Analytical Mechanics. Can be taken as an alternative continuation of the Analytical Mechanics. Three hours, second semester.

11. **Advanced Undergraduate Laboratory Work.** Open only to those who have completed at least the first half of Course 3. Work and credits to be arranged with the instructor.

PRIMARILY FOR GRADUATES

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

13. **Advanced Laboratory and Research.** Qualified students will have all the facilities of the laboratories placed at their disposal, and will receive the advice and assistance of the department. Hours to be arranged.

14. **Seminary.** Conferences at stated times on assigned topics and current periodical literature.

EQUIPMENT

The physical lecture room has a seating capacity of about sixty students. The lecture table is supplied with gas and water cocks, and electrodes connected at will with the University electric light plant or with the storage battery. An arc light stereopticon can be used for projection.

The general physical laboratory consists of three rooms on the same floor. These rooms are supplied with gas and water connections, and with electrodes capable of furnishing as high as seventy-

five ampeers. A basement room provided with substantial masonry piers is used for advanced work and for experiments requiring great stability.

A large part of the apparatus was secured from the best makers of Europe and America. Some finely finished and particularly serviceable instruments were made in the shop belonging to the University.

PSYCHOLOGY

Professor Hawthorne

1. **Elementary Psychology.** Open to all who are prepared to take the study.

Elementary Psychology includes a study of the phenomena of the intellect, sensibility, and will, with constant application to the processes of education, and the psychological origin of philosophical problems. Recitations, lectures, and topics. Text books: James's Psychology; Ladd's Primer of Psychology; Titchener's Outlines of Psychology; Titchener's Primer of Psychology. Five hours. Includes laboratory work, one hour a week.

2. **Experimental Psychology.** Advanced. Open to Juniors and Seniors.

It is the aim of the laboratory to furnish every possible facility for research work by competent students. Text books: Scripture's New Psychology; Sanford's Experimental Psychology; Titchener's Experimental Psychology. Three hours. Laboratory work included.

3. **General Psychology.** In this course, systematic instruction given in general psychology, including theories of mental processes. Text book: Ladd's Outline of Descriptive Psychology. Three hours.

4. **Physiological Psychology.** Open to all who are prepared to take the study. A study illustrated by charts, models, and histological preparations, of the human nervous mechanism, of the principal relations which exist between changes in this mechanism and the activities of the mind, and a discussion of the conclusions which may be drawn from these relations respecting the nature and laws of mind. Physiological Psychology includes an account of working hypotheses, methods, experimentations, and general results. The

method is, as far as possible, illustrative, with a large amount of required reading upon selected topics. Text books: Ladd's Outlines of Physiological Psychology; Wundt's Physiological Psychology. Three hours.

5. **Logic.** Deductive and Inductive. Elementary, advanced, and applied. Lectures, reading, and discussions. Text books: Jevons and Welton. Three hours.

FOR GRADUATES AND ADVANCED UNDERGRADUATES

The following courses are arranged for alternate years, to meet the requirements of those who have completed the course in colleges or universities, and who wish to pursue the subject still further.

6. **Abnormal and Pathological Psychology.** This course of lectures is designed to discuss especially the physiological and mental conditions of sleep, dreams, and hypnotic, somnambulistic, and other allied states. The theory of illusions and hallucinations will be treated with considerable detail. Three hours.

7. **Applied Psychology.** Three hours a week throughout the year. Application of modern psychological principles to educational subjects; outlines of the psychology of touch; its use in education, motor abilities; accuracy of movement; fundamental principles of writing and drawing; sight, color teaching; space, form teaching; drawing. Three hours.

8. **Research Work in Psychology.** The object of this course is such training in accurate introspection, observation, experimenting, and the art of research as is desirable for the general psychologist. Three hours.

9. **Diseases of the Mind and Nervous System.** This course will be illustrated by models of the brain and other parts of the nervous system; insanity and kindred subjects will be studied in connection with topical lessons. Three hours.

10. **Comparative Psychology.** This course will aim to trace the development of intelligence as running parallel to the development of the nervous system from the lowest forms upward. It will cover the ground of animal psychology, considering it with special reference to the problems of human psychology, so far as these can be stated in terms of the life of lower forms. It will include also a review of the comparative psychology of races as found in their languages and customs. On the mythological side, the logic of the theories of edu-

cation will be discussed and the relation of philosophy to the biological sciences determined. Lectures, recitations, discussions, reading. Wundt's Human and Animal Psychology, works of various authors, Romanes, C. Lloyd Morgan. Three hours.

11. **Aesthetics.** The object of this course is to review the history of thought on the subject of the beautiful, to give a philosophical account of the foundations upon which the arts rest; and to study scientific art theory in its relation to general philosophical systems. Bancroft's History of Aesthetics; Marshall's Pain, Pleasure and Aesthetics; and other works will be read in connection with the course. Three hours.

EQUIPMENT

The Psychological Laboratory occupies a large room in McClure Hall for lectures and class demonstrations, and for laboratory experiments, and original research work. There is also an additional small room for storing apparatus. The room is favorably located for experimental work—on the north side of the building, in the second story, having a steady light, and away from noise and interruption.

The laboratory, which is one of the few west of the Mississippi river, has a considerable store of the more simple apparatus, which is being added to by purchase and by manufacture in the shop of the University. Among the pieces of apparatus in use are the following: Revolving drum for testing reacting time, time of fatigue; electromagnetic fork and stand; time marker with Deprez signal for sine curves; spark coil; telegraph key; graphic recorder for nerve action; steadiness guage for determining steadiness of attention, and used in cross education; aesthesiometer for finding sensory circles in skin space; olfactometer; Galton whistle, for determining the highest audible pitch up to 90,000 vibrations per second; tone tester; audiometer; apparatus for color tests; apparatus in pseudoptics, etc.

SOCIOLOGY

(See Economics)

ZOOLOGY

(See Biology.)

UNIVERSITY SCHEDULE

REQUIRED WORK OF THE COLLEGES

	Monday	Tuesday	Wednesday	Thursday	Friday
8	Trigonometry Anal. Geometry Fresh. Hist. A. General Physics Economics A. El. Psychology B.	Trigonometry Anal. Geometry Fresh. Hist. A. General Physics Alter. Cur. Mach. El. Psychology B.	Trigonometry Anal. Geometry Fresh. Hist A. General Physics Economics A. Alter. Cur. Mach. El Psychology B.	Trigonometry Anal. Geometry Fresh Hist. A. Graphic Statics Alter. Cur. Mach. El. Psychology B.	Trigonometry Anal. Geometry Fresh. Hist. A. General Physics Economics A. Alter. Cur. Mach. El. Psychology B.
9	1st Yr. Language Rhetoric A. Calculus Bridge Design Elec. and Mag. Dir. Cur. Mach. El. Physics A.	1st Yr. Language Rhetoric Calculus Bridge Design Elec. and Mag. El. Physics A.	1st Yr. Language Rhetoric A. Calculus Bridge Design Elec. and Mag. Dir. Cur. Mach. El. Physics A.	1st Yr. Language Soph. Eng. A. Calculus Bridge Design Elec. and Mag. Mechanical Draw.	1st Yr. Language Rhetoric A. Calculus Bridge Design Dir. Cur. Mach. Mechanical Draw.
10	2nd Yr. Language Rhetoric B. Economics B. Anal. Mechan. Hydraulics Irrigation Engin.	2nd Yr. Language Rhetoric B. Economics B Anal. Mechan. Hydraulics Irrigation Engin. Trigonometry		2nd Yr. Language Rhetoric El Phys. Lab. Anal. Mechan. Hydraulics Irrigation Engin. Mechan. Draw. Trigonometry	2nd Yr. Lang. Rhetoric B. Economics B. El. Phys. Lab. Hydraulics Irrigation Engin. Mechan. Draw. Trigonometry
11	3rd Yr. Lang. Gen Chem. Lec. El. Physics B. Gen. Geology Sanitary Engin. Thermodynam. Ethics El. Psychology A.	3rd Yr Lang. Gen Chem. Lec. El. Physics B. Gen. Geology Sanitary Engin. Thermodynam. El. Psychology A.	Soph. Eng. B. Gen. Chem. Lec. El. Physics B. Surveying Lec. Sanitary Engin. Thermodonam. Ethics El. Psychology A.	3rd Year Lang. Adv. Chem. Lec. Gen. Geology Sanitary Engin. Thermodynam. Mechan. Draw. Ethics El. Phys. Lab. El. Psychology A.	3rd Yr. Lang. Adv. Chem. Lec. Gen. Geology Sanitary Engin. Thermodynam. Mechan. Draw. El. Phys. Lab. El. Psychology A.
1	Shop Work Masonry Diff. Equations Astronomy Chem. II Lab. Gymnasium	Shop Work Masonry Diff. Equations Astronomy Chem. II Lab. Gymnasium	Shop Work Masonry Diff. Equation Astronomy Chem. II Lab. Gymnasium	 Diff. Equations El. Phys. Lab. Gen. Chem. Lab. Gymnasium	R. R. Engin. Dynamo Lab. Diff. Equations Gen Chem. Lab. Gymnasium
2	4th Yr. Lang. Eng. Lit. A. Soph. History Education Shop Work Descript. Geom. R. R. Engineering Chem. II Lab. Gymnasium	 Soph. History Education Shop Work Descript. Geom. R. R. Engineering Chem. II Lab. Gymnasium	4th Yr. Lang. Eng. Lit. A. Soph. History. Education Shop Work Descript. Geom. R. R. Engineering Chem. II Lab. Gymnasium	4th Yr. Lang. Fresh. Eng. A. Soph. History Education Graph. Statics Roads and Pave. Gen. Chem. Lab. El. Phys. Lab Gymnasium	4th Yr. Lang. Eng. Lit. A. Soph. History Dynamo Lab. R. R. Engineering El. Phys. Lab. Gen. Chem. Lab. Gymnasium.
3	Eng. Lit. B. Shop Work Descript. Geom. Topo Surveying Philosophy Chem. II Lab. Gymnasium	 Shop Work Descript. Geom. Struct. Details Chem. II Lab. Gymnasium.	Eng. Lit B. Shop Work Topo. Surveying Chem. II Lab. Philosophy Gymnasium	Fresh. Eng. B. Graph. Statics Struct. Details Gymnasium	Eng. Lit. B. Dynamo Lab. R. R. Engineering Philosophy Gymnasium
4	Shop Work Topo. Surveying Gymnasium	Shop Work Struct. Details Gymnasium	Shop Work Topo. Surveying Gymnasium	 Struct. Details. Gymnasium	Dynamo Lab. R. R. Engineering Gymnasium

ELECTIVE WORK OF THE COLLEGES

	Monday	Tuesday	Wednesday	Thursday	Friday
8		Junior English	5th Latin	5th Latin	5th Latin
9	Amer. Expansion Finance Georgian Poets Bacteriology	Sociology Shelly Morris Histology	Amer. Expansion Jun. Oratory Finance Georgian Poets Physiology	Sociology Shelly Morris College Botany	Amer. Expansion Finance Georgian Poets
10	Educational Club Shakespeare Osteology	Educational Club Soph. Oratory Shakespeare Embryology		Educational Club Medical Botany	Educational Club Shakespeare Zoology
11	Prose Writers Logic Pacific Coast His.	Oregon History Beowulf Wordsworth Browning Debate	Beowulf Adv. Ger. Comp. Pacific Coast His.	Oregon History Beowulf Prose Writers	Wordsworth Browning Logic Scientific German Pacific Coast His.
1	Fresh Elocution Political Inst.	Anglo-Saxon English-Greek	Anglo Saxon Political Inst. English-Greek		Anglo-Laxon Political Inst. English-Greek College Botany
2	Spencer	Senior English	Ethnography Phys. Psychology Theory of Equa.	Spencer Contemporary Lit. Phys. Psychology Theory of Equa.	Ethnography Phys. Psychology
3	6th Latin Versification	6th Latin Senior Oratory Philosophy	6th Latin Adv. Amer. Lit.	6th Latin Philosophy	Versification
4	7th Latin Mythology Spanish Novel	7th Latin	7th Latin Adv. Amer. Lit. Spanish Novel	Debate	Spanish Novel

THE SCHOOL OF MEDICINE

FACULTY

The faculty of each school or college consists of the President of the University and the resident professors, assistant professors, lecturers, and instructors giving instruction.

ORGANIZATION

The School of Medicine of the University of Oregon, which was established in 1887, in 1895 became a graded school occupying the advanced rank of those requiring from their students as a condition of graduation, attendance upon four full courses of lectures in a regular medical college. The result of this advance, as shown in our work under the four course system, has proved eminently satisfactory.

The course in the School of Medicine leads to the degree of Doctor of Medicine. It covers a period of four years of collegiate study, each year representing six months in actual residence. The Faculty has now under consideration a seven months' session, which will probably be adopted with some changes in curriculum, particulars of which will appear in the separate announcement of the School of Medicine.

The studies are graded, so far as practicable, throughout the four years, and this grading is arranged with careful reference to the relation which the subjects naturally bear to each other.

The work of the first two years deals with the so-called scientific or laboratory branches, while that of the last two years includes the principles and practice of medicine and surgery, their associated specialties, and the application of scientific or laboratory methods to clinical experience.

REQUIREMENTS FOR ENTRANCE

This school is a member of the Association of American Medical

Colleges, and will conform to its requirements, as set forth in the following extract from the constitution of the Association:*

ARTICLE III

Section 1. Each college holding membership in this Association shall require of each student before admission to its course of study an examination, the minimum of which shall be as follows:

1. In English, a composition on some subject of general interest. This composition must be written by the student at the time of the examination, and should contain at least two hundred words. It should be criticised in relation to thought, construction, punctuation, spelling, and handwriting.

2. In Arithmetic, such questions as will show a thorough knowledge of common and decimal fractions, compound numbers, and ratio, and proportion.

3. In Algebra, such questions as will discover the student's knowledge of the fundamental operations, factoring and simple quadratic equations.

4. In Physics, such questions as will discover the student's understanding of the elements of mechanism, hydrostatics, hydraulics, optics and accoustics.

5. In Latin, an examination upon such elementary work as the student may offer, showing a familiarity usually attained by one year of study; for example, the reading of the first fifteen chapters of Cæsar's Commentaries, and the translation into Latin of easy English sentences involving the same vocabulary.

Sec. 2. In place of this examination, or any part of it, colleges, members of this Association, are at liberty to recognize the official certificates of reputable literary and scientific colleges, academies, high schools, and normal schools, and also the medical student's certificate issued by any state examining board covering the work of the the foregoing entrance examination.

Sec. 3. Colleges, members of this Association, may allow students who fail in one or more branches in this entrance examination the privilege of entering the first year course, but such students shall

*Changes in the standard of requirements of the Association were made at the meeting May 4, '03. Accordingly the faculty will issue new standard of requirements in separate announcements of Schools of Medicine to be issued about June or July, 1905. The new announcement may be had by applying to the Dean of the School of Medicine.

not be allowed to enter the second course until the entrance requirements are satisfied.

Sec. 4. Colleges, members of this Association, are free to honor official credentials issued by medical colleges of equal requirements, except in the branches of study embraced in the last year of their own curriculum.

Sec. 5. Candidates for the degree of Doctor of Medicine in the year 1889 and thereafter shall have attended at least four courses of medical instruction, each course of at least six months' duration, no two courses of which shall have been in the same calendar year.

Sec. 6. Colleges, members of this Association, are free to give to students who have met the entrance requirements of the Association, additional credit for time on the four year course, as follows: (a) To students having the A. B., B. S., or equivalent degrees from reputable literary colleges, one year of time; (b) to graduates and students of colleges of homeopathic or eclectic medicine, as many years as they attended those colleges, provided they have met the previous requirements of the Association and that they pass an examination in materia medica and therapeutics; (c) to graduates of reputable colleges of dentistry, pharmacy and veterinary medicine, one year of time.

Certificates of completion of prescribed courses in the University of Oregon in chemistry, physiology, osteology, and syndesmology are accepted as an equivalent for first year's work, except materia medica.

Examinations for matriculation may be arranged with the Dean at any time.

Special examinations in Latin and physics for conditioned matriculates will be held during the first week of the session; during the same period the fall examinations will be held for advancement to second, third or fourth year standing for those who failed to attain the requisite number of credits in the spring examinations. This privilege does not apply to students who may have failed in their finals for the degree. For such there is each year but one examination, which occurs in March.

It is earnestly recommended to the student intending to take the entrance examination, that a careful review be given the studies mentioned, in order that he may be spared the humiliation of rejection.

Before admission every student is required to obtain the Dean's receipt for the payment of the matriculation fee. It will therefore be

necessary for the applicant to present himself at the office of the Dean, register his name as a student in the Medical Department, and pay his fee. New students will be assigned seats in the order of date of matriculation.

*COURSE OF STUDY

FIRST YEAR

Anatomy, with dissections; General Chemistry; Materia Medica and Pharmacy; Physiology; Histology.

Examinations at the end of the year in Osteology and Syndesmology, Principles of Chemistry, Elementary Materia Medica, Physiology (Prox. Principles and the blood), Histology (final).

SECOND YEAR

Anatomy, with dissections, finished; Physiology, finished; Chemistry, with laboratory work, finished; Materia Medica and Therapeutics, finished; Microscopy; Hygiene; Obstetrics (Pelvic Anatomy, Embryology, and Normal Labor); Physical Diagnosis; Clinical Medicine.

Examinations at the end of the year: Anatomy (final); Physiology (final); Chemistry (final); Materia Medica and Therapeutics (final); Hygiene; Obstetrics; (Pelvic Anatomy, Embryology, and Normal Labor).

THIRD YEAR

Theory and Practice of Medicine, General Therapeutics, Principles and Practice of Surgery and Bandaging. Pathology, with laboratory work; Paediatrics; Dermatology; Gynaecology; Genito-Urinary diseases, Physical Diagnosis; Opthalmology and Otology; Obstetrics; Clinics; all.

Examinations in Principles of Medicine; Principles of Surgery; Pathology (final); Gynaecology; Physical Diagnosis; Obstetrics (final); Dermatology; Diseases of Genito-Urinary Organs; Opthalmology and Otology.

FOURTH YEAR

Medical Jurisprudence; Theory and Practice of Medicine; Principles and Practice of Surgery; Military and Operative Surgery; Clinics, all; Gynaecology; Genito-Urinary Diseases; Opthalmology and Oto-

*Subject to modification as per notice of probable lengthening of Session

logy; Rhinology and Laryngology; Bacteriology, with laboratory work; Paediatrics; Insanity and Diseases of the Nervous System.

Examinations. Final in above.

COURSES OF INSTRUCTION

SURGERY

Surgery in all its various branches will be taught during the third and fourth years, as per outline, by means of systematic lectures and operations in the presence of the class. In addition there will be demonstrations of all the details of bandaging, dressings, and the application of the various forms of apparatus used in the treatment of diseases, accidents and deformities, including fractures and dislocations. Members of the graduating class will have opportunities for practice in minor surgery, bandaging, etc., and subjects will be furnished for repeating all the usual surgical operations on the cadaver.

Professor Holt C. Wilson will deliver didactic lectures on Principles and Practice of Surgery, and clinics in Surgery will also be given by Professor W. H. Saylor, Professor Wm. Jones, and Dr. Andrew C. Smith. Professor George F. Wilson will deliver a practicial course upon operative and military surgery, and will give special attention to clinics on fractures and fracture apparatus.

CHEMISTRY AND TOXICOLOGY

During the first and second years Professor Binswanger will treat these subjects with special attention to the fundamental principles of chemistry, medical and physiologic chemistry, physics and poisons.

The lectures will be fully illustrated by experiments, and a well-equipped chemical laboratory will aid materially in the practical instruction of students in urinary analysis and other chemical examinations. A course of practical laboratory work by students is an essential of the requirements.

THEORY AND PRACTICE OF MEDICINE

During the third and fourth years, as per outline, Professor MacKenzie will bring into prominence, in this branch, the essentials of theoretical and practical medicine, dwelling more particularly upon those subjects which will be likely to prove of most substantial use to the young practitioner; while not neglecting theoretical essentials.

Teachings in this branch will be illustrated by clinics at the college and hospitals. Professor Wells will deliver lectures upon diseases of children; Professor Josephi upon diseases of the nervous system; Dr. Wheeler upon hygiene; and Dr. Geary upon physical diagnosis. Professors Bell and MacKenzie will hold medical clinics at St. Vincent's Hospital, and Professor H. C. Wilson at Good Samaritan Hospital.

ANATOMY

Professor Labbe will give instruction in General and Descriptive Anatomy. This subject will be considered during first and second years and finished at the end of the second year. These lectures will be illustrated by actual dissections, charts and drawings, and special attention will be given to the surgical relations of the subject. During the first year, a course on Osteology and Syndesmology will be completed.

Special arrangements have been made for storing dissection material, so that no shortage need be apprehended. A sufficient supply for the beginning of the course will be on hand and utilized as soon as desirable. The Demonstrator will be on duty daily (except Saturday) as per schedule of lectures, as special attention will be given to this branch during first and second years.

MATERIA MEDICA AND THERAPEUTICS

Professor Bell will direct attention during first and second years to remedial agents, and to the actions of medicines proper, with particular reference to their practical application. Specimens of the various medicines will be exhibited to the class, and attention given to electro-therapeutics.

BACTERIOLOGY

Dr. A. E. Mackay will deliver practical lectures on Bacteriology to fourth-year students.

The Bacteriological Laboratory is supplied with all the necessary apparatus, including incubators and sterilizers with thermostats and thermometers for a full course.

Each student receives instruction in bacteriological technique, including best methods of examining sputum, staining, etc., and a number of different bacteria will be cultivated and studied, such as typhoid, diphtheria, cholera, etc.

MICROSCOPY, HISTOLOGOY AND PATHOLOGY

Dr. Yenny will deliver a practical course on the use of the microscope, histology and pathology. This will include the study of microscopical examination of pus, blood, urine, etc.

To illustrate the lectures on Histology and Pathology, a course will be given on setting, cutting, staining, mounting, etc. Histology will be considered during the second year and Pathology by third-year students. This course will be thoroughly practical and will be taught almost exclusively by laboratory methods.

OBSTETRICS

This subject will be taught during second and third years as per outline. Professor Josephi will illustrate the lectures upon this branch by charts, diagrams, specimens, etc. All the principal obstetric operations will be demonstrated on the manikin in presence of the class, and members of the graduating classes will be required to perform certain operations and instrumental applications on the manikin before the class.

Opportunities for clinical work will be furnished to the graduating class, and labor cases will be entrusted to individual members under proper direction, thus insuring an eminently practical knowledge of this important branch. Professor Josephi will conduct the chemical work in midwifery at Good Samaritan Hospital.

GYNÆCOLOGY

This course will be taught didactically during third and fourth years by Professor Tucker. Professor A. J. Giesy will give clinics in gynæcology once each week at Good Samaritan Hospital. Practica instruction will be given in the use of the speculum and other instruments for the diagnosis and treatment of diseases peculiar to women, and every opportunity given for students to familiarize themselves with their use and application.

PHYSIOLOGY

Lectures upon this subject will be delivered during first and second years by Professor Geo. B. Story, and will be illustrated by demonstrations which will occupy a prominent place.

DISEASES OF THE NERVOUS SYSTEM

Lectures on nervous diseases, including insanity, will be delivered by Professor Josephi during fourth year. In this course special

nervous diseases not included in the lectures of others will be dwelt upon.

OPTHALMOLOGY, OTOLOGY, RHINOLOGY, AND LARYNGOLOGY

Professor Nunn will deliver lectures upon these subjects to third and fourth-year students and will give special attention to methods of diagnosis and treatment of the diseases of the parts involved. Practical clinical training in the use of the opthalmoscope, specula, laryngoscope, and instruments for local applications, will be given. Clinics in Good Samaritan Hospital.

GENITO-URINARY DISEASES

Professor Saylor will, in addition to clynics on surgery at the Good Samaritan Hospital, deliver didactic lectures on diseases of the genito-urinary organs during third and fourth years. Lectures will be illustrated by drawings, models, etc., and numerous cases at the bedsides in the hospital. Practical instruction in the use of instruments will be given.

PÆDIATRICS

Professor G. M. Wells will bring before the students during the third and fourth years a wide range of subjects in connection with this chair. From the first hour of life the infant requires a special study. Its diet and environments are of paramount importance in the first few years of life. Then the great questions of schooling and school hygiene are now coming to the front as never before. The alarming increase of myopia among the young appeals to this chair for prevention as no other. The relation of pædiatrics to the several branches of scientific medicine will be emphasized.

The surgery of infancy and childhood, manifestly so unique, will receive its share of attention.

DERMATOLOGY

Dr. J. C. Zan will deliver lectures on Dermatology during third year.

MEDICAL JURISPRUDENCE

Hon. W. D. Fenton will deliver lectures embracing the more essential points of this interesting branch of medicine during the fourth year.

PHYSICAL DIAGNOSIS

In addition to the general instruction on this important subject, Dr. Geary will hold clinics at the college for special work in this branch.

HYGIENE

Dr. Wheeler will deliver a course on Hygiene during the year. The subject will be treated from a practical standpoint.

LECTURES

All students are privileged to attend all didactic lectures but only such as are laid down in the schedule are compulsory.

HOSPITAL CLINICS

Instruction in medicine and surgery, to be efficient, must combine didactic and clinical teaching, and no opportunities for the last named class of studies are in any sense equal to those offered by the wards of a general hospital.

Our connections, through members of the faculty, with St. Vincent's and Good Samaritan Hospitals is such as to afford the most enlarged advantages of clinical instruction in the wards of those institutions, members of the medical staff of each being also members of the college faculty.

St. Vincent's new hospital is located only a few blocks from the college building on a tract of five acres. The portion now completed and occupied is 260 feet long, an average of 60 feet wide, and is six stories in height, including the basement. It contains 350 beds and is admirably fitted in other respects with the most modern furnishings and appliances.

Good Samaritan hospital is delightfully located near the foot of the western hills, contains 125 beds, and is rich in clinical material of all kinds. These two hospitals afford opportunities to the students of this college for clinical work and instruction unequaled anywhere in the Northwest.

Their close proximity to the college clusters the buildings for both didactic and clinical instruction, so that the necessity for the student to travel long distances in order to properly carry on his work is overcome, and thus much valuable time is saved to him.

Hospital clinics are held five days of each week during the session. Opportunities are given students to make diagnosis of disease and prescribe treatment therefor; and operations of endless variety are performed (in the presence of the class), according to the most advanced methods of modern surgery. An additional weekly medical clinic at the Good Samaritan Hospital has been arranged for the ensuing session.

Special attention will be given to instructing the student in methods of examination for purposes of diagnosis of both medical and surgical cases and the use of appropriate instruments used for that purpose. In addition to clinics formerly given, a "Clinic Conference" in both medicine and surgery has been established, which has proved very beneficial to the student.

Arrangements have been perfected for the obstetrical clinics. Each Senior student will be given an opportunity to attend and conduct, under proper supervision, cases of midwifery. This affords undergraduates a practical knowledge of midwifery, which must prove of great value in their future professional work.

These hospitals, already established and in successful operation for many years, present most excellent and unequalled facilities for the study of disease at the bedside, and this branch of instruction will receive the very careful attention of the staff of clinical lecturers connected with the college.

Portland's geographical position is such that its hospitals receive patients from the surrounding territory over a large area of country, and the types of both medical and surgical diseases met with are as various as those met with in larger cities.

The Faculty, while not disparaging the value of didactic lectures, makes the system of clinical instruction occupy a prominent place in the curriculum, and it will be the aim of its members to make the instruction in all departments as complete and efficient as possible.

In addition to didactic and clinical lectures, instruction will be given by practical work in the dissecting rooms and laboratories, and by repeated oral examinations.

The biological laboratory has been greatly enlarged and new instruments added.

HOSPITAL APPOINTMENTS

Arrangements have been perfected by which the college has in its gift two appointments each year of house surgeons to the Good Samaritan Hospital. Each appointment is for one year, during which time board and lodging will be furnished free at the hospital.

An excellent opportunity is thus afforded to the graduate to acquire in the wards of a well equipped hospital, without any expense, a practical knowledge by clinical experience and actual practice. The house surgeons of St. Vincent's Hospital are also supplied from the alumni of this college.

LIBRARY

A medical library, known as "The R. B. Wilson Library," has been established at the college building. The nucleus for this is a gift of the medical libraries of the late Dr. R. B. Wilson, and Dr. Rodney Glisan. This has been added to by gift from the Federal Government and will be further enlarged from time to time. Students will be allowed the use of books (not to be removed from the building) under such rules as the college may prescribe.

LOCATION AND EQUIPMENT

The new college building, located near Twenty-third and Lovejoy streets, opposite Good Samaritan Hospital, was completed and occupied during the session of 1892-03. It is a model of convenience, being furnnished with all the aids to medical education which modern advancement requires. Laboratories for chemical, histological, pathological, bacteriological, and other work are provided, and arrangements made for special attention to these important practical departments. The laboratory equipment has been doubled; extensive additions made to the apparatus in microscopy, and new instructors added to the Faculty for more extensive and specialized work in histology and pathology. The dissecting room is most conveniently arranged, is light and airy, and is furnished with artificial stone tables of special design, and electric fixtures for artificial illumination.

The building is heated by hot water, lighted by gas and electricity, and provision made for excellent ventilation. The Twenty-third street electric cars pass the location every few minutes. To reach the college by this line take the Washington street car, designated Twenty-third street. St. Vincent's new hospital is only a short distance from the college, and with Good Samaritan Hospital across the street, the arrangement of colleges and hospitals for clinical work is a most convenient one.

REQUIREMENTS FOR GRADUATION

The candidate for the degree of Doctor of Medicine must be of good moral character and twenty-one years of age. He must have studied medicine under a regular practitioner four years, including attendance upon lectures, and attended in a regular medical college authorized to confer the degree of M. D., four full courses of lectures, no two of which shall have been delivered within twelve months, (unless admitted to advanced standing as per constitution of the

Association of American Medical Colleges), the last of which must have been in this college; and must exhibit his tickets or other adequate evidence of attendance to the Dean of the Faculty. He must present to the Dean satisfactory evidence of having dissected the entire cadaver. He must have attended at least two courses of Dissections and Clinical Instruction. He must present to the Dean satisfactory evidence of time, study, laboratory work, and moral character. He must have passed successfully the examinations prescribed by the Faculty, and paid all fees due the College.

The degree will not be conferred upon any candidate who absents himself from the public commencement exercises without special permission of the Faculty.

The diploma given to graduates is that of the University of the State of Oregon, duly signed by the President and Secretary of the Board of Regents, as well as by the Medical Faculty.

Women will be admitted to matriculation, instruction and graduation on the same terms as men.

EXPENSES

All fees payable in advance.

All students who work in the chemical laboratory will be required to deposit $3.00 and those in the histological, pathological or bacteriological laboratory, $5.00 for breakage. These fees are returnable if no breakage is charged.

To those who enter at the beginning of the first year—

First year:	Matriculation	$ 5.00
	Fee for course	130.00
	One-quarter examination fee	7.50
Second year:	Fee for course	130.00
	One-quarter examination fee	7.50
Third year:	Fee for course	100.00
	One-quarter examination fee	7.50
Fourth year:	Fee for course	Free

To those entering beginning of second year (not having taken a course in this college)—

Second year:	Matriculation	$ 5.00
	Fee for course	130.00
	One-third examination	10.00
Third year:	Fee for course	130.00
	One-third examination fee	10.00

Fourth year: Fee for course	130.00
One-third examination fee	10.00

To those who enter beginning of third year (not having taken a course in this college)—

Third year: Matriculation	$ 5.00
Fee for course	130.00
One-half examination fee	15.00
Fourth year: Fee for course	$50.00
One-half examination fee	15.00

To those who enter beginning of the fourth year (not having taken a course in this college):—

Fourth year: Matriculation	$ 5.00
Fee for course	100.00
Examination	30.00

One full scholarship and two half scholarships are open to graduates of the University of Oregon with the degree A. B. or B. S., of not more than two years' standing. Particulars will be furnished upon application to either Registrar, University of Oregon, Eugene, or Professor Josephi, Portland.

BOARDING

Good board with rooms and all the usual accommodations can be obtained in the vicinity of the college at rates varying from $4.00 to $6.00 per week.

MISCELLANEOUS

Students are requested to be in attendance at the commencement of the session, so that they may not lose the benefit of knowledge to be derived from the opening lectures.

Students will matriculate at the office of the Dean, Professor S. E. Josephi, Dekum Building, Third and Washington streets, Portland, Or. For further particulars address

PROF. S. E. JOSEPHI, M. D.,
Room 610, Dekum Bldg., Third and Washington Sts., Portland, Or.

THE SCHOOL OF LAW

FACULTY

The Faculty of each school or college consists of the President of the University and the resident professors, assistant professors, lecturers and instructors giving instruction.

LOCATION

The School of Law is held in the City of Portland, which offers to the student of law many advantages not possessed by other cities. The District and Circuit Court of the United States hold regular sessions, the four departments of the Circuit Court of the State of Oregon for the Fourth Judicial District, the County Court of Multnomah County, and the Municipal and Justices' Courts are constantly in session, where questions touching every branch of the law are daily heard and determined.

The lectures are delivered at 7:15 p. m. in the Chamber of Commerce Building, in the center of the City of Portland. Each lecture with the accompanying recitation lasts about one hour. Lectures in the Junior year are on Tuesdays, Thursdays and Saturdays; in the senior year, on Mondays, Wednesdays, Fridays, and Saturdays. The seniors assemble at 8:30 p. m. on Saturdays. The twenty-first session opens Tuesday, September 20, 1904.

The holding of the lectures and other exercises in the evening enables bank and government clerks and other persons engaged during the day to avail themselves of the privileges of the school.

REQUIREMENTS FOR ADMISSION

All persons, irrespective of sex, are allowed to matriculate in the Law School. Applicants for admission to the first year class must be at least eighteen years of age, and to the second year class nineteen years of age.

Graduates of universities or colleges, and students who have completed an academical or high school course, are admitted to the Department without examination as to preliminary requirements, and may become candidates for the degree of Bachelor of Law. In order to be entitled to this privilege, however, the applicant should present to the Dean of the Department evidence that he comes within some one of the classes named, which should be in the form of a diploma or certificate, or a certified copy thereof.

All other applicants will be required to present satisfactory evidence that they are prepared to pursue the work with advantage to themselves and without disadvantage to the school.

At the close of each year students are examined on the subjects studied during the year, and before graduation they are required to pass satisfactory examinations on all subjects included in the course.

COURSE OF INSTRUCTION

The course of instruction extends through a period of two years, of nine months each, instead of eight months as heretofore. Twenty hours have thus been added to the course on Criminal Law, twenty on Torts, twenty on the Law of Real Property, and ten on Corporations. It is the intention to extend the course in the near future to three years.

The aim of this school is to give its students as thorough and practical an education in the principles of the law as the length of the course will permit, and to prepare them for practice in the courts of any state, but particularly in those of Oregon. Recognizing the advantages and disadvantages of the exclusive use of either the lecture or the course method, the faculty endeavors so to combine lectures with the use of text books, and especially with the careful study of illustrative cases, as most thoroughly to qualify the student for the active work of his profession.

The lectures are held in the evening, and, so far as practical, students who put themselves into timely communication with the Dean are connected with the best law offices of the city, where they have an opportunity of familiarizing themselves with the conduct of business and practical duties of the profession.

The thoroughness of the instruction imparted is sufficiently attested by the fact that of the two hundred and fifty-two graduates of the Department of Law none have thus far failed to pass the state bar examination. The more difficult test of actual practice has been met with almost equal success by the graduates, an unusual number of whom are admitted to be leaders at the junior bar and have held important official positions in various parts of Oregon.

The following is a statement of the subjects upon which instruction is given, with the time devoted to each subject:

JUNIOR YEAR

Elementary Law.—Blackstone's Commentaries, Books I, II, and III, and the General Laws of Oregon. Forty lectures on Tuesdays

and Saturdays, from September 20, 1904, to February 18, 1905, inclusive. Mr. Gantenbein.

Criminal Law.—Exposition and illustration. Clark's Criminal Law. Criminal Code of Oregon. Twenty hours. Thursdays, from September 20, 1904, to February 16, 1905, inclusive. Mr. Gantenbein.

Contracts.—Parsons on contracts. General Laws of Oregon. Forty lectures on Tuesdays, Thursdays, and Saturdays, from February 21 to May 23, 1905, inclusive. Mr. Gantenbein.

SENIOR YEAR

Torts.—Exposition and illustration. Bigelow on Torts. Twenty hours on Wednesdays and Saturdays, from September 21 to November 26, 1904, inclusive. Mr. Gantenbein.

Pleading and Practice.—Gould on Pleading. Bellinger and Cotton's Codes and Statutes of Oregon, Titles I-V, inclusive, and Titles VII and VIII. Twenty lectures on Mondays and Fridays, from September 23, 1904, to November 28, 1904, inclusive. Judge Northup.

Real Property.—Exposition and illustration. Tiedeman on Real Property. General Laws of Oregon. Twenty lectures on Wednesdays and Saturdays, from November 30, 1904, to February 18, 1905, inclusive. Mr. Gantenbein.

Equity Jurisprudence.—Fetter on Equity. Bellinger and Cotton's Codes and Statutes of Oregon, Title VI. Twenty lectures on Mondays and Fridays, from December 2, 1904, to February 20, 1905. Judge Sears.

Constitutional Law.—Black's Constitutional Law. Twelve lectures on Mondays and Fridays, from February 24 to April 7, 1905, inclusive. Judge Gilbert.

Evidence.—Jones on the Law of Evidence. Bellinger and Cotton's Codes and Statutes of Oregon, Titles IX-XI, inclusive. Twenty-one lectures, Wednesdays and Saturdays, from February 25 to May 6, 1905, inclusive. Mr. Gantenbein.

Corporation.—Bellinger and Cotton's Codes of Oregon, Title XLI. Ten lectures on Mondays and Fridays, from April 10 to May 12, 1905, inclusive. Mr. Chamberlain.

Negotiable Instruments.—Selover's Negotiable Instruments Law. Bellinger and Cotton's Code and Statutes of Oregon, Sections 4403-4594, inclusive. Ten hours, May 10 to May 26, 1905, inclusive. Mr. Gantenbein.

LIBRARY

The only books with which students are required to provide themselves are those used for purposes of text-book instruction. Parsons on contracts is used as a text-book for the reason that, in addition to the general law of contracts, it contains the principles of law governing the various topics, such as agency, partnership sales, guaranty and surety, bailments, innkeepers, carriers, patents, copyrights, trademarks, shipping, insurance, domestic relations, etc., thus obviating the necessity of purchasing text-books on each of these subjects of the law contracts.

Students in the Law School are allowed to use the Multnomah Law Library in the County Court House, free of charge. This library contains the reports of every state in the Union, the reports of the federal courts, and numerous English reports, together with an extensive collection of treatises and text books, both English and American, aud copies of the statutes of the several states and of the United States. New reports, as they are issued, are added, as are new text-books and treatises of merit.

TEXT-BOOKS

The necessary books required by each student will cost for new copies of the latest editions, as follows:

JUNIOR YEAR

Blackstone's Commentaries (2 vols.)	$ 10.00
Clark's Criminal Law	3.75
Parsons on Contracts (3vols.)	18.00
	$ 31.75

SENIOR YEAR

Bigelow on Torts	$ 3.00
Gould on Pleading	4.00
Tiedeman on Real Property	6.00
Fetter on Equity	3.75
Black's Constitutional Law	3.75
Jones on the Law of Evidence (3 vols)	6.00
Selover's The Negotiable Instruments Law	3.00
	$ 29.50

These books will be found very useful in professional practice and can frequently be borrowed or purchased second hand at a material reduction.

DEGREE

The Degree of Bachelor of Laws will be conferred upon such students as pursue the full course of two years and pass the required written examination. Students who have attended another approved law school for a period equal to one year of the course of this School of Law, have taken the senior year's course in this school, and pass a like examination, will also receive the degree of Bachelor of Laws.

The diploma given to graduates is that of the University of Oregon, duly signed by the President of the Board of Regents, the President of the University, and the Dean of the Law Department.

FEES

The tuition fee is sixty dollars for the Junior year and seventy-five dollars for the Senior year, except to seniors graduating in 1905, to whom the charge will remain the same as heretofore, viz: sixty dollars per annum. The tuition is payable at the office of the Dean in equal installments on September 20 and on the first day of December and March. Admission to membership in the classes is not permitted until the fees are paid. Regular attendance is required, and no deduction will be made on account of absence, or for failure to begin at the opening of the year. The final examination fee is ten dollars.

For students taking special courses the fee will be at the rate of one dollar per lecture, payable in advance. Special students may, on application to the Dean, receive an official certificate of attendance, showing the subject or subjects pursued, and the degree of attainment.

The right to change any or all announcements in this catalogue except, as to fees, is hereby reserved.

Applications for admission and requests for further information will be addressed to

C. U. GANTENBEIN, LL. B.,
Dean of Law School,
Portland, Oregon.

STUDENTS

THE GRADUATE SCHOOL

Boke, Henry J.....Napa, Cal.
Booth, J. C.....Lebanon
Converse, C. W.....Eugene
Densmore, Harvey B.....Eugene
Despret, Jules.....Portland
Glass, Roy.....Parkplace
Gilbert, James H.....Eugene
Hemenway, A. F.....Eugene
Holt, W. W. P.....Tacoma Wash.
McCornack, Mrs. H. F.....Eugene
Slater, Bertha E.....La Grande
Smith, Alice M.....Monmouth
Thayer, Fred G.....Toledo
Whittlesey, W. L.....Portland
Wigmore, Ernest C.....Eugene

THE ACADEMIC COLLEGES AND SCHOOLS

Abbett, Earl Richard.....Ashland
Adams, Alice Cecile.....Eugene
Anderson, Andrew Alfred.....Astoria
Anderson, George Nelson.....Eugene
Arnspiger, Olen.....Pendleton
Bacon, Ralph.....Gold Hill
Bamberger, Carlton Lewis.....Baker City
Bannard, Margaret Watson.....Grants Pass
Barber, Wm. Homan.....Eugene
Barnes, Frances L.....Eugene
Bean, Ernest G.....Eugene
Beck, Oscar Peter.....The Dalles
Benson, Alice Loretta.....Portland
Benson, Caroline.....Portland
Billings, George Homer.....Ashland
Bittner, Orman Newton.....Portland
Bond, Paul G.....Sodaville
Bretherton, Alice Gertrude.....Portland

Brown, Clifford W.....Salem
Burch, S. Aurelia.....Rickerall
Burdick, L. Antoinette.....Cottage Grove
Bursell, Arvid.....Central Point
Cain, John Rice.....Urbana, Ohio
Cameron, Cora Columbia.....White Salmon, Wash.
Cameron, Ethel Edna.....White Salmon, Wash
Cameron, Corinne M.....Jacksonville
Campbell, Chas. L.....Spokane Wash.
Carroll, Camille.....Eugene
Chandler, William Garnet.....Marshfield
Cleaver, Lulu Virginia.....Portland
Cleveland, Charles E.....Astoria
Coffey, Vanda R.....Eugene
Cole, Homer John.....Eugene
Conger, Bennie.....Eugene
Cox, Iva Agnes.....Eugene
Cooper, Charles Franklin.....Albany
Cooper, Mabel.....Independence
Crawford, Daisy Katherine.....Portland
Cronin, Albert Arthur.....Pendleton
Cundiff, Margaret A.....Eugene
Currin, Lula W.....Cottage Grove
Dale, Harry L.....Portland
Dale, Mary.....Portland
Davis, Carl H.....Eugene
De Bar, Florence.....Eugene
Dill, William A.....Portland
Dillard, Frank Carleton.....Eugene
Dobie, Ella Mead.....Portland
Dodge, Rosa.....Ashland
Donnelly, James F.....Baker City
Dunbar, Luta Ennona.....Eugene
Earl, Virgil D.....Dayton Or.
Eastland, Herbert C.....Eugene
Eaton, Mabel Elizabeth.....Union
Elton, Albert Jackson.....The Dalles
Failing, Ernestine.....Portland
Fenton, Horrace Burnett.....Portland
Ferris, Flora Pearl.....Wilton, New Hamp.
Flinn, Edith Ruth.....Albany
Fountain, Edwin Ray.....Klamath Falls
Foshay, Nellie Jane.....Albany

Frizzell, Porter T.....Mitchell
Frost, Jno. F.....Bellevue
Galey, Clarence L.....Ashland
Gallogly, Lorena Maude.....Eugene
Galloway, Francis Vernon.....Oregon City
Geddes, Daisy Agnes.....Eugene
Germond, Milton Bernel.....Millwood
Gibson, Foster Collins.....Portland
Gittins, Margaret A.....Eugene
Glafke, William Harley.....Portland
Goddard, Mary Lela.....Portland
Goodrich, Ray.....North Yamhill
Graham, David.....Portland
Gray, Jeanie.....Portland
Gray, Mary Augusta.....Portland
Gunnell, David Garfield.....Grants Pass
Hadley, Winnifred.....Eugene
Hair, Zena Mozelle.....Grants Pass
Hammack, Roy W.....Moscow, Wash.
Hampton, Harry Arthur.....Portland
Hannville, Merrill F.....Dayton, Or.
Hawthorne, Thos.....Eugene
Hendricks, Norma Leila.....Eugene
Hobbs, Harry H.....Eugene
Hockenberry, M. B.....La Grande
Holmes, Carl J.....Astoria
Holmes, George.....Astoria
Holmes, Gussie U.....Astoria
Holmes, Lula Maude.....Portland
Holt, Theodore Pickel.....Eugene
Horn, Marion Franklin.....Eugene
Howe, Fay D.....Eugene
Howe, Lola.....Eugene
Hudson, W. W.....Myrtle Creek
Hug, Geo. W.....Summerville
Huntington, Benj. Franklin.....Yoncolla
Jackson, Andrew Warren.....Bandon
Jackson, Oney Gustav.....Astoria
Jasper, Edward Doak;.....La Grande
Johnson, Gertrude Marion.....Drain
Johnson, Loris M.....Eugene
Johnson, Wistar Wayman.....Eugene
Jones, Louise.....Dayton, Or.

Jones, Robert L.....La Grande
Karr, Edith C.....Milwaukee
Kays, Leone B.....Eugene
Kerns, Le Roy.....Eugene
Kent, Mary Emma.....Eugene
Kerron, Set Metcalf.....Portland
King, Maude G.....Eugene
Kinsey, Mac De Camp.....Eugene
Koerner, Martha.....Oregon City
Kuykendall, John Eberle.....Eugene
Latourette, J. R.....Oregon City
Lauridsen, Laurids.....Astoria
Leach, Arthur D.....Portland
Lewis, Fred V.....Prineville
Lister, Edward S.....Eugene
Lister, Mildred S.....Eugene
Lobdell, George Lincoln.....Eugene
Long, Walter D.....McMinnville
Lucky, Edna Pearl.....Portland
Macrum, Garfield Howard.....Portland
Matlock, William T.....Eugene
McArthur, J. W.....Amboy, Wash.
McClain, Carl Arthur.....Eugene
McClain, Lula May.....Emerson, Iowa
McClain, Marion F.....Emerson, Iowa
McCornack, Elwin.....Eugene
McKinney, Bertha Louise.....Baker City
McKinney, Helen Jeannette.....Baker City
McKinney, Henry Miller.....Baker City
McMurren, Adelle Adaire.....Baker City
McQueen, Stuart Aken.....Eugene
Meldrum, Don Edwin.....Oregon City
Melrath, Emma Estella.....Portland
Merchant, Thomas P.....Carlton, Or.
Merritt, George Hiller.....Central Point
Merryman, Alice.....Hillsboro
Mitchell, Francis Blaine.....Baker City
Mitchell, Victoria.....Merlin
Moon, Rupert A.....Eugene
Moore, Felix Enoch.....Astoria
Morgan, Delbert Loyd.....Santa Cruz, Cal.
Mott, Jame Wheaton.....Salem
Mott, Lloyd Howe.....Salem

Moulton, H. G.....Baker City
Mount, Guy.....Silverton
Neil, Iter.....Pendleton
Newell, Ethel Gladys.....Eugene
Newell, Paulus Edwin.....Eugene
Oakes, Ivan.....The Dalles
Ordahl, George.....Corvallis Mont.
Overturf, Harley James.....Elk Creek, Neb.
Ozasa, Sab Ro.....Japan
Paddock, Harry O.....Clackamas
Palmer, Ernest Orson.....Eugene
Parker, Grace L.....Junction City
Penland, John R.....Whittier, Cal.
Perkins, Cloan N.....North Yamhill
Perkins, Neva.....Cottage Grove
Platts, John B.....Eugene
Platts, William Jesse.....Eugene
Poill, Mable Elizabeth.....Eugene
Poley, Clarence Leighton.....Ashland
Poppleton, Ralph R.....Portland
Prescott, Edna A.....Baker City
Raffety, Harry L.....Portland
Ramp, Floyd Cleveland.....Salem
Reese, Sophie.....Eugene
Reid, Chas. Roy.....Portland
Rhodes Clayborne F.....Thurston
Robinson, Claudius Carroll.....Wilderville
Robinson, Kirkman, Kenson.....Wilderville
Roome, Samuel Howard.....Portland
Ross, Custer Enoch.....Silverton
Ross, Clarence W.....Lebanon
Rothrock, Mary.....Pendleton
Russell, James Oscar.....Goldendale, Wash.
Sanderson, Frona.....Bloomfield, Iowa
Scott, Mary Ellen.....Independence
Shaver, Cora M.....Portland
Shelly, R. S.....Hood River
Sherk, Dafoe H.....Huntington
Smith, Elmer Elwood.....Eugene
Smith, Mabel Copley.....Grants Pass
Smith Perch Arnold.....Portland
Sparks, Vernon V.....Baker City
Starr, Chester H.....Salem

Staver, J. Frederick.....Portland
Steiwer, Frederick.....Jefferson
Stevenson, Donald.....Eugene
Stockwell, Eugene L.....Cottage Grove
Straight, Harry B.....Eugene
Stuart, Margaret A.....Mohawk
Stump, Fred N.....Sriver
Swift, Lon L.....Baker City
Taylor, Douglas W.....Portland
Templeton, Josegh H.....Halsey
Thomson, Cora Marguerite.....Clakamas
Thomas, St. Clair.....Portland
Tiffany, Albert R.....Eugene
Tiffany, Maggie T.....Eugene
Tomlinson, Vernon W.....Woodburn
Veatch, John Currin.....Cottage Grove
Wagner, Ben. F.....Ashland
Waller, Amos Orville.....Lucky Boy
Walton, Pauline.....Eugene
Ware, Joel Benjamin.....Eugene
Warfield, Mary Elizabeth.....Eugene
Warner, Chas. T.....Oregon City
Warner, Fred. A.....Oregon City
Washburne, Chester W.....Eugene
West, Rose Ora.....Clatsop
Wheeler, Harvey A.....Eugene
Williams, Thos. L.....Eugene
Williams, Edward L.....Eugene
Williams, Nellie F.....Eugene
Wold, Clara Petra.....Eugene
Wold, Cora Isabella Riggs.....Eugene
Woodley, John P.....Eugene
Woods, Bessie Jose.....Eugene
Wright, Claude C.....Union

ACADEMY

Ayres, Jesse.....Waterloo
Burt, Arthur.....Yoncalla
Chamberlen, Eva.....Cottage Grove
Conner, Floyd M.....Ballston
Ghormley, J. C.....Portland

Hardin, C. Elmer.....Prineville
Huffer, Olive E.....Jacksonville
Kershaw, H. M.....Grande Ronde
Matz, Lydia.....Eugene
McCallum, Ruth.....Eugene
McCown, Irene.....Portland
Moores, Gordon C.....Oregon City
Newell, Dudley R.....Eugene
Stockton, Roy V.....Ballston
Weinhart, Eva.....Blue Springs, Neb.
Williams, Angeline.....Oregon City
Young, Homer.....Eugene

THE SCHOOL OF MUSIC

PIANO STUDENTS

Allen, Ada.....Eugene
Allen, Eva.....Eugene
Ankeny, Dollie.....Eugene
Adkins, Clyve.....Eugene
Blume, Henrietta.....Eugene
Booth, Floyd.....Eugene
Bean, Robert.....Eugene
Barber, Mrs. W. H.....Sherwood
Booth, Barbara.....Eugene
Bellman, Lena.....Eugene
Berger, Mrs.....Eugene
Calkins, Jessie.....Eugene
Cockerline, Winifred.....Eugene
Coffey, Vanda.....Eugene
Cundiff, Margaret.....Eugene
Chenowth, Vera.....Eugene
Cooley, Fay.....Eugene
Christner, Pearl.....Eugene
Criteser, Mary.....Eugene
Criteser, Edith.....Eugene
Condon, Jeanette.....Eugene
Dale, Harry.....Porland
Day, Lena.....Springfield
DeBar, Florence.....Eugene
Dorris, Benetta.....Eugene

Dunbar, Luta.....Eugene
Douglas, May.....Eugene
Dunn, Lucille.....Eugene
Edmunson, Grace.....Eugene
Esson, Vesta.....Eugene
Evans, Mrs.....Eugene
Evans, Miss.....Eugene
Flegal, Kate.....Eugene
Flinn, Ruth.....Eugene
Ford, Carrie M.....Eugene
Ford, Sadie E.....Eugene
Garrett, Francis.....Eugene
Garrett, Lyda.....Eugene
Ghormley, Lloyd.....Portland
Green, Ruth.....Eugene
Gregory, Dorris.....Springfield
Gregory, Nellie.....Springfield
Graham, Ethel.....Eugene
Hadley, Winifred.....Eugene
Hales, Beatrice.....Eugene
Harding, Clara.....Eugene
Hammett, Grace.....Eugene
Hawthorne, Pearl.....Eugene
Hendricks, Norma.....Eugene
Houck, Frances.....Eugene
Humphrey, Hazel.....Eugene
Hoflein, Edna.....Eugene
Harris, Agnes.....Eugene
Hagar, Clara.....Creswell
Ivy, Gussie.....Eugene
Jensen, Josephine.....Eugene
Kays, Leone.....Eugene
Kays, Myrtle.....Eugene
Kelly, France.....Eugene
Knoop, Betty.....Eugene
Kuykendall, Mabel.....Eugene
King, Maud.....Eugene
Matthews, Agnes.....Eugene
Matz, Lydia.....Eugene
McKinney, Helen.....Baker City
McAlister, Ella.....Eugene
McCallum, Fannie.....Eugene
Marshall, Dena.....Eugene

Merritt, Geo.....Jacksonville
Moore, Cleo.....Eugene
Moore, Mary.....Eugene
Pendergast, Delta.....Coburg
Palmer, Ethel.....Grants Pass
Partlow, Alice.....Eugene
Philippi, Lizzie.....Eugene
Potter, Pauline.....Eugene
Potts, Helen.....Eugene
Potts, Irene.....Eugene
Quackenbush, Veda.....Eugene
Robinson, Helene.....Eugene
Ream, Lena.....Eugene
Rowland, Mae.....Eugene
Smith, Orilla.....Eugene
Smith, West.....Eugene
Shumate, Kathleen.....Eugene
Sparks, Mrs. Vernon.....Baker City
Stauffer, Paul.....Eugene
Stewart, Margaret.....Eugene
Striker, Florence.....Eugene
Starr, Eda.....Eugene
Thurston, Nita.....Eugene
Tozier, Frances.....Eugene
Thompson, Flo.....Eugene
Williams, Nellie.....Eugene
Wilson, Lloyd.....Eugene
Welch, Lindley.....Eugene
Wold, Clara.....Eugene
Woodcock, Mrs. Fay.....Eugene
Young, Francis.....Eugene
Yoran, Lucile.....Eugene
Zeigler, Wilma.....Eugene

VOCAL STUDENTS

Allen, Miss M.....Eugene
Angell, Mrs. Adah.....Eugene
Abbett, Earl R.....Ashland
Condon, Jeanette.....Eugene
Cooley, Fay.....Brownsville
Edmundson, Grace.....Eugene
Frost, John.....Bellevue
Gilbert, Daisy.....Eugene

Hannville, M. F. ..... Eugene
Hendricks, Ruby ..... Eugene
Jensen, Josephine ..... Eugene
McAlister, Ellai ..... Eugene
Merritt, Geo ..... Jacksonville
Mount, Grace ..... Eugene
Niemyer, Eva ..... Eugene
Smith, Mae Huff ..... Eugene
Steiwer, Fred ..... Eugene
Thurston, Mrs. Samuel ..... Eugene
Warfield, Mary ..... Eugene
West, Sadie ..... Eugene
Zumwalt, Miss L ..... Eugene

VIOLIN STUDENTS

Bretherton, Alice ..... Portland
Davidson, Frank ..... Eugene
DeBar, Mary ..... Eugene
Dobie, Ella ..... Portland
Green, Kent ..... Eugene
Green, Claire ..... Eugene
Gregory, Dorris ..... Springfield
Goldsmith, Meta ..... Eugene
Harding, Merle ..... Eugene
Hobbs, Grace ..... Eugene
Nicklin, Nina ..... Junction City
Roach, Buford ..... Eugene
Russell, J. O. ..... Goldendale, Wash.
Svarverud, A. ..... Eugene
Schwarzschild ..... Eugene
Umphlette, Ada ..... Grants Pass

THE SCHOOL OF MEDICINE

Abele, John G. ..... Portland
Adix, H. V. ..... Portland
Appleton, T. J., Jr. ..... Port Angeles, Wash.
Applewhite, J. A., A. B. ..... Koscowsko, Miss.
Babbitt, O. ..... Rochester, N. Y.
Bettman, Adelbert ..... Portland
Bilderback, Joseph, Ph. G ..... Portland
Bittner, S. P. ..... Portland

Blair, J. Bennett ..... Camas, Wash.
Boals, Robt. T..... Mayger
Buckell, A. E. T..... N. W. Territory
Chaney, Fred R..... Portland
Dalton, E. C..... St. Helens
Day, Henry B..... Dayton, Wash.
Desmond, E..... Spokane, Wash.
DeVaul, Oscar..... Pilot Rock
Duell, A. G..... Houghton, Wash.
Endicott, S. C..... Myrtle Point
Estey, H. E..... Portland
Ettelson, Jesse..... Sprague, Wash
Fessler, Theo., Ph. G..... Seattle, Wash
Fields, R..... Sheridan
Fisch, F. P..... Portland
Fisher, Ralph S..... The Dalles
Gellert, Sam'l..... Portland
Golden, Robert E., B M. E..... Marshfield
Greene, Herbert..... Hay, Wash.
Grieve, Robert..... Buffalo, N. Dak.
Griffith, Carl C..... Macleay
Hall, Chester G..... Sherwood
Hansen, Agnes..... Reedville
Hanson, Albert C..... Portland
Harris, Fred W..... Forest Grove
Hayes, James C..... Baker City
Hester, Thos. W., B. S..... Illinois
Hickman, Harvey O..... Oregon City
Hill, Geo. W..... Portland
Hoffman, C. J..... Portland
Hosch, Jacob F..... Scio
Houston, Harry L..... Baker City
Hugh, Louie..... China
Inman, W. J..... Ranier, Wash.
Irvine, E. Lloyd..... Portland
Kane, J. Edward..... Pennsylvania
Kavanaugh, H. J., A. B..... Gervais
Killingsworth, Wm., Jr..... Portland
Lemon, Cora B..... Grants Pass
Lieuallen, Fred..... Adams
Maki, Emma R..... Wisconsin
MacMillan, Lachlan..... Victoria, B. C.
McLachlan, Mary..... Portland

Mikkelson, A. C.....Astoria
Moad, C. L.....Wenatchie, Wash.
Monroe, Wm. A.....Tacoma, Wash.
Morrow, E. V.....Portland
Neubauer, Richard.....Portland
Newsome, Gail S.....Prineville
Nordon, Ben L.....Portland
Opie, F. G.....Tacoma, Wash.
Ostrander, Guy, H., B. S.....Union
Patton, Bertha T.....Portland
Peacock, Frederick.....Brandon, Man.
Quinn, L. C.....Phoenix, B. C.
Reames, Clara W.....Astoria
Reynolds, Anna G.....Portland
Richard, Cecil.....Almira, Wash.
Rinkenberger. F. W.....Tacoma, Wash.
Ross, John C.....Cathlamet, Wash.
Ross, Thos, W.....Astoria
Sargeant, Albert.....Chehalis
Scott, Wm. R.....Athena
Seki, H.....Japan
Slate, Olive.....Dalles
Smith, J. Newton.....Portland
Smith, Wm E.....Albany
Snively, J. Howard.....Prosser, Wash.
Spencer, Walter V., A. B.....Thatcher, Wash.
Starbuck, A. B.....Portland
Start, H. A., A. B.....Portland
Stevenson, Lillian G.....Tacoma, Wash.
Strauhal, Berry D.....Portland
Strickland, E. M.....Portland
Thomas, John S.....Seattle Wash
Thompson, F. F. T.....Portland
Thornton, O. A., B. S.....Astoria
Torgler, George A.....Portland
Townley, T.....Portland
Ullman, F. G.,Ph. G.....Baker City
Walch, F. G.....Portland
Walker, Ralph C.....Portland
Wheeler, Glenn.....Portland
Wiley, Percy J.....Tillamook
Willoughby, A. D.....Kalama, Wash.
Willoughby, R. R.....Eugene

Wiltsie, R. W.....Seattle, Wash.
Wooden, J. L.....Ashland
Yamada, K., M. D.....Japan
Zeiber, Thos. E.....Independence
Ziegler, Fred J., B. S.....Portland

THE SCHOOL OF LAW

Abbey, Adolph.....Portland
Back, Seid, Jr.....Portland
Beckwith, James A.....Portland
Bennett, Walter.....Portland
Brand, Ernest.....San Francisco, Cal.
Cahalin, James F.....Portland
Crouch, Leslie E.....Portland
Denniston, Gilbert W.....Portland
Derby, Andrew J.....Portland
Ellis, Joseph T.....Portland
Fouts, Seneca F.....The Dalles
Graham, John W.....Graeme
Hagedorn, Egmont.....Portland
Hartley, L. L.....Portland
Hatton, George C.....Portland
Hayakawa, Mangior.....Tokio, Japan
Irwin, Benjamin.....Milwaukie
Joehnk, Edward H.....Portland
Johnson, Albert E.....Portland
Kerr, Charles R.....Portland
Latourette, Howard F.....Oregon City
Latourette, Mortimer D.....Oregon City
Manier, William W.....Ranier, Wash.
Matsui, Yori S.....Kobe, Japan
Meindle, Frederick J.....Oregon City
Mosessohn, Moses.....Portland
Parker, Lonna J.....Portland
Parshley, Albert W.....Portland
Perkins, George J.....Portland
Rae, Alexander C.....Portland
Rutherford, Frank B.....McMinnville
Scoblic, Francis M.....St. Paul, Minn.
Scott, Charles M.....Portland
Sharkey, John P.....Portland

Stewart, Frank.....Portland
Stivers, Walter H.....Portland
Stringer, Arthur R.....Portland
Wade, Austin M.....Montesano, Wash.
Walton, James Jr.,.....Portland
Windsor, Henry N.....Evansville, Ill.
Youmans, Bert E.....Portland

SUMMARY OF OFFICERS AND INSTRUCTORS

Administration—		
Regents		11
Other Administrative Officers		13
		24
Instruction—		
Academic Colleges and Schools	24	
Assistant Instructors	9	
School of Music	4	
School of Medicine	23	
School of Law	6	66
		90
Deduct for names appearing more than once		10
Total Officers and Instructors		80

SUMMARY OF STUDENTS

Graduate School		15
Academic Colleges and Schools		224
Academy		17
School of Music		138
School of Medicine		99
School of Law		41
		534
Deduct for names appearing more than once		26
Total students in all departments		508
Total officers, instructors, and students		588

INDEX

Affiliation, University..... 27
Alumni Association..... 26
Anthropology 70
Appointment of teachers..... 27
Astronomy..... 116
Biology..... 70
Buildings and Grounds..... 20
Calendar..... 5
Chemistry..... 74
Civil and Municipal Engineering..... 84
College of Literature, Science and the Arts..... 49
College of Science and Engineering..... 56
Commerce, School of..... 55
Committees of the Faculty..... 16
Degrees..... 18-19
Bachelor of Arts..... 18
Bachelor of Science..... 18
Doctor of Philosophy..... 32
Engineering Degrees..... 33
Master's Degree..... 33
Drawing and Descriptive Geometry..... 84
Economics..... 81
Economics and Sociology..... 79
Education..... 125
Electrical Engineering..... 90
Employment..... 22
Engineering, School of..... 59
English..... 94
English Literature..... 99
English Language and Early English Literature..... 102
Expenses..... 22
Extension, University..... 27
Faculty, the General..... 10
Fees..... 22
French..... 122
General Information..... 21
General Regulations..... 45
Geology..... 106
Germanic Languages and Literatures..... 119
Government..... 23
Graduate School..... 31
Graduation Requirements..... 47
Greek Language and Literature..... 107
Gymnasium, required; Credits for..... 46
Highway and Railway Engineering..... 86
History..... 109
Hours (or credits)..... 47
Hydraulic and Municipal Engineering..... 88
Italian..... 124
Latin Language and Literature..... 111
Law or Journalism, Collegiate Course Preparatory to..... 54
Law, School of..... 146
Library and Reading Room..... 29
Mathematics..... 114
Major Subject..... 48
Mechanical Engineering..... 90
Mechanics..... 86
Medicine, School of..... 133
Medicine and Dentistry Four Year Course Preparatory to... 58
Mineralogy..... 117
Mines and Mining, School of... 65
Music, School of..... 68
Officers, Administrative..... 9
Philosophy and Education..... 124
Physical Education..... 125
Physics..... 127
Politics..... 82
Prizes and Honors..... 28
Probationary Status of Students..... 44
Psychology..... 130
Publications..... 29
Public Speaking..... 104
Regents..... 8
Registration..... 21
Requirements for Entrance.....35-46
Rhetoric and Composition..... 95

Romance Languages and Literatures 122
Societies 23
Athletic 25
Literary 23
Miscellaneous 26
Musical 25
Religious 24
Sociology 83
Spanish 123
Special Students 45
Structural Engineering 89
Students, List of 151
Summary 165
Surveying and Geodesy 85
University, The 18
University, History and Organization 19
Zoology 71