E. N. Stone.

THE BULLETIN

OF THE

UNIVERSITY OF WASHINGTON

E. N. Stone.

JUNE, 1904

THE GRAHAM-HICKMAN CO., SEATTLE

CATALOGUE *for* 1903-1904 *and* ANNOUNCEMENTS *for* 1904-1905

OF THE

UNIVERSITY OF WASHINGTON

SEATTLE, WASHINGTON

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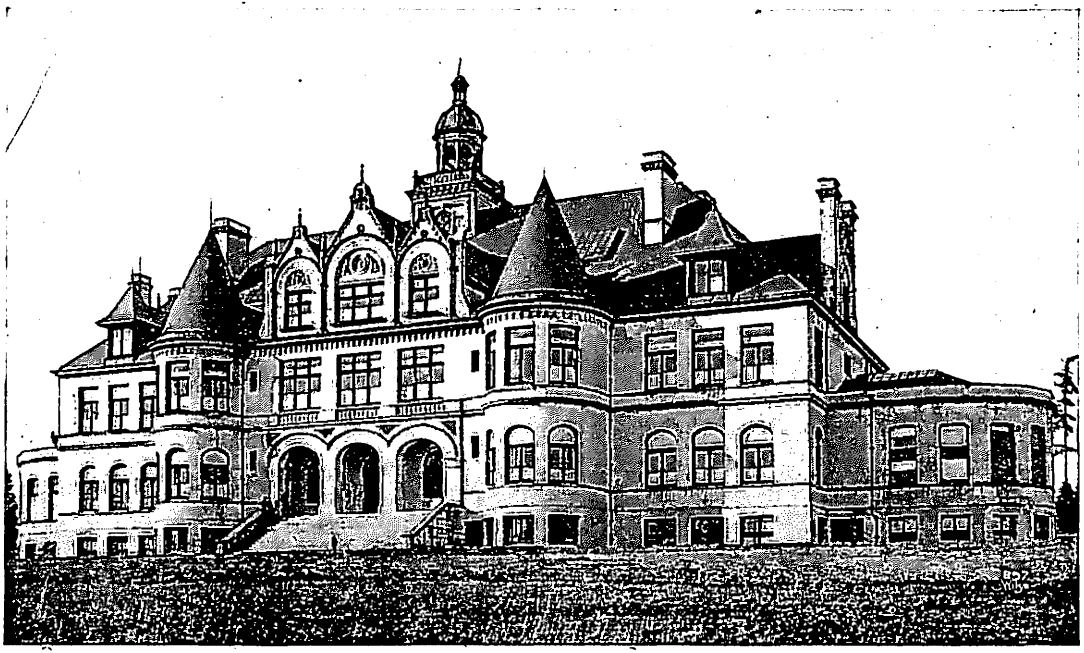

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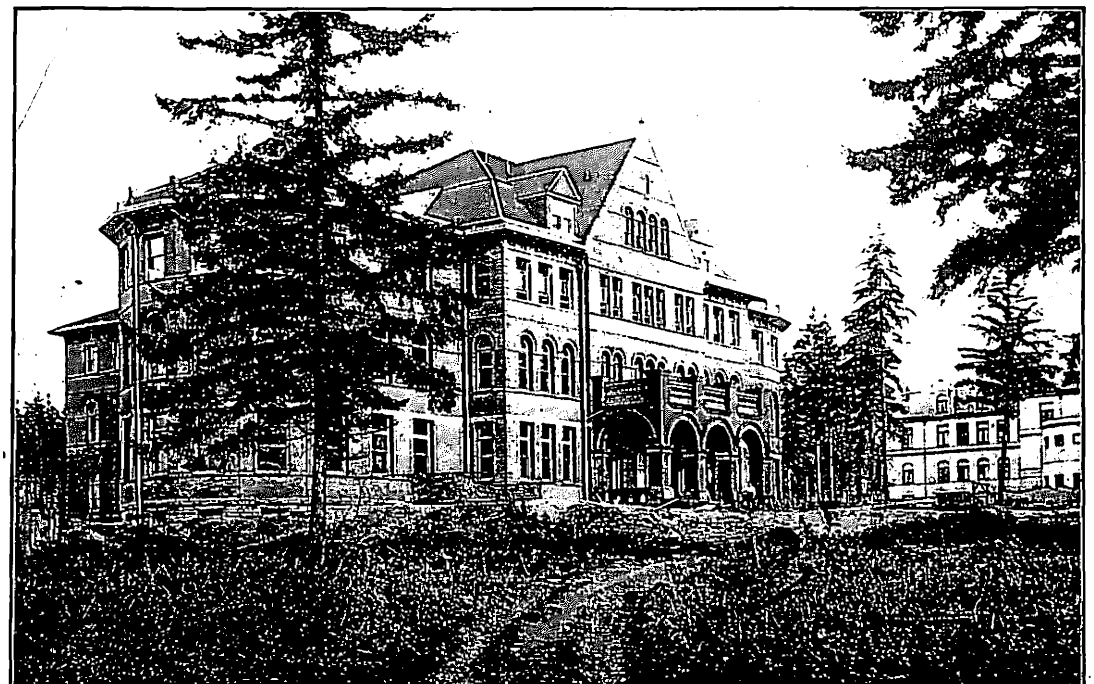
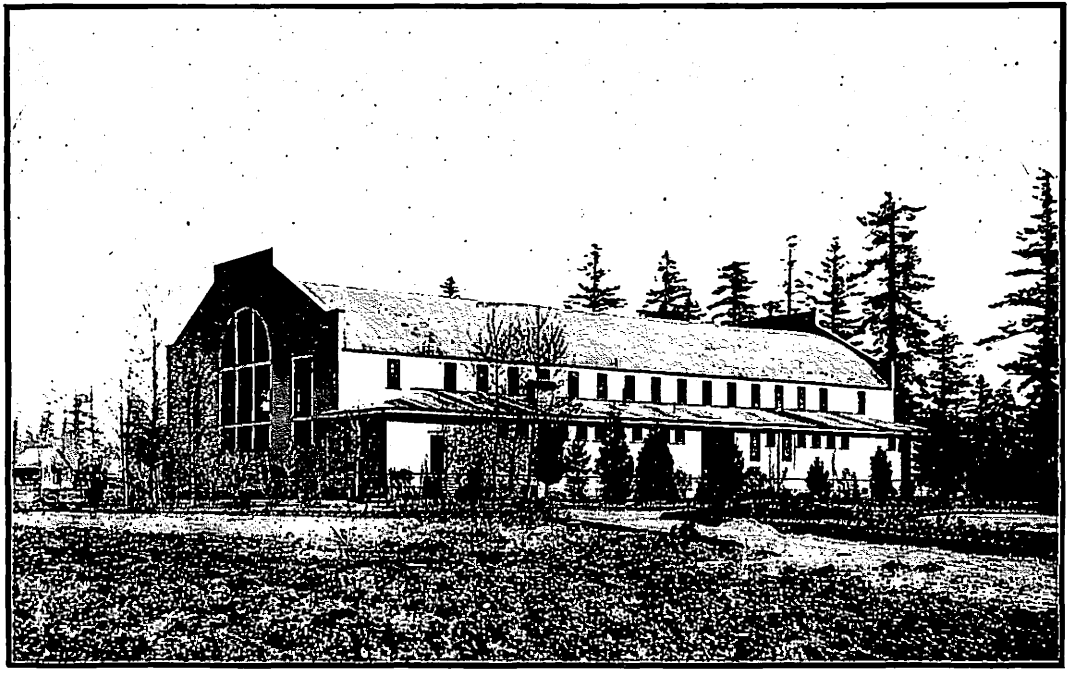


SCIENCE HALL.



GYMNASIUM.

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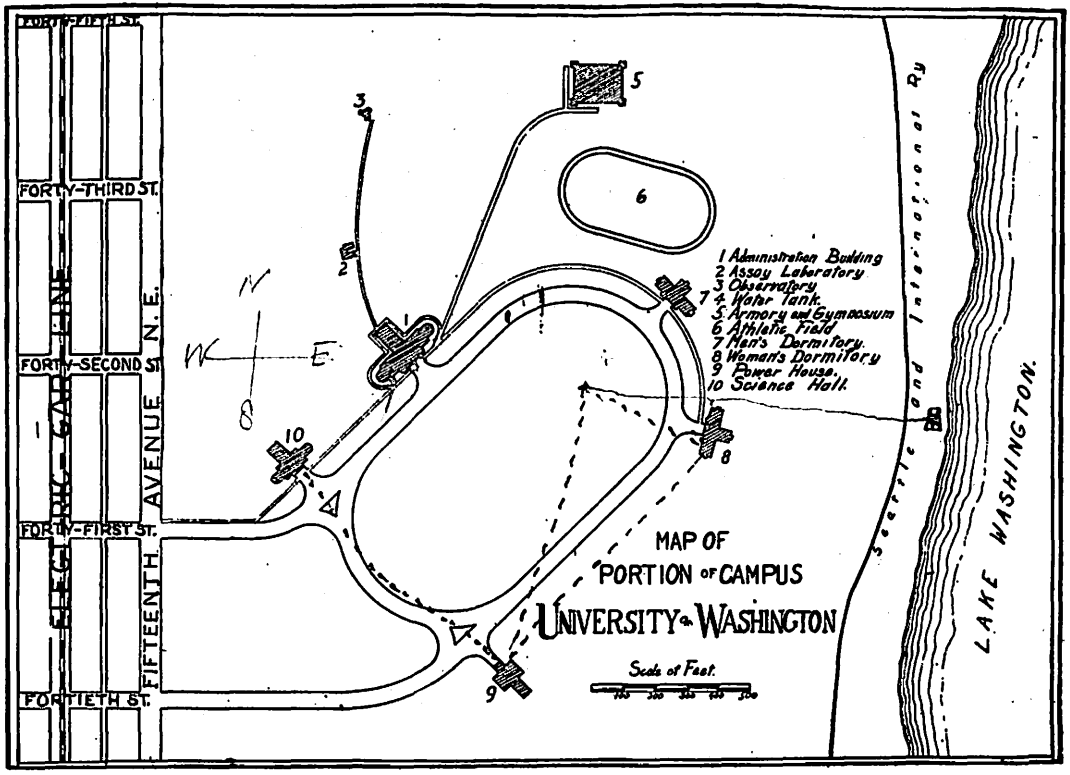
FORTY-FIFTH ST.
FORTY-THIRD ST.
FORTY-SECOND ST. N.E.
FORTY-FIRST ST.
FORTIETH ST.
FIFTEENTH AVENUE
ELECTRIC CAR LINE
Seattle and International Ry
LAKE WASHINGTON
1 Administration Building
2 Assay Laboratory
3 Observatory
4 Water Tank
5 Armory and Gymnasium
6 Athletic Field
7 Men's Dormitory
8 Women's Dormitory
9 Power House
10 Science Hall
MAP OF
PORTION OF CAMPUS
UNIVERSITY of WASHINGTON
Scale of Feet.
100 200 300 400 500

UNIVERSITY CALENDAR.

1904-1905.

FIRST SEMESTER.

Examinations for Admission	Monday, Tuesday, Sept. 19, 20.
Registration Days	Monday, Tuesday, Sept. 19, 20.
Recitations Begin	Wednesday, Sept. 21.
Thanksgiving Vacation	Nov. 23 evening to Nov. 28.
Holiday Vacation	Dec. 22 to Jan. 3.
Semester Examinations	Jan. 25, 26, 27.
First Semester Closes	Friday, Jan. 27.

SECOND SEMESTER.

Semester Begins	Monday, Jan. 30.
Spring Vacation	Friday, March 24 to April 3.
Semester Examinations	June 7, 8, 9.
Baccalaureate Sermon	Sunday, June 11.
Commencement	Wednesday, June 14.
Alumni Dinner	Wednesday, June 14.

THE BOARD OF REGENTS.

Hon. WILLIAM E. SCHRICKER, President...La Conner
Term Expires, 1908.

Hon. JAMES Z. MOORE.....Spokane
Term Expires, 1904.

Hon. RICHARD WINSOR.....Seattle
Term Expires, 1905.

Hon. JOHN H. POWELL.....Seattle
Term Expires, 1905.

Hon. GEORGE H. KING.....Seattle
Term Expires, 1908.

Hon. ALDEN J. BLETHEN.....Seattle
Term Expires, 1909.

Hon. FREDERICK A. HAZELTINE, A. M....South Bend
Term Expires, 1910.

WILLIAM MARKHAM, Secretary of the Board.

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Reports and Publications.

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F. A. HAZELTINE. ALDEN J. BLETHEN.

FACULTY OF THE UNIVERSITY OF WASHINGTON.

THOMAS FRANKLIN KANE, PH. D. (Johns Hopkins University), *President.*

A. B. De Pauw University, 1888; A. M., 1891; Ph. D., Johns Hopkins University, 1895. Tutor in Latin, De Pauw University, 1886-88; Professor of Latin, Lewis College, 1888-91; Scholar in Latin, Johns Hopkins University, 1893-94; Fellow in Latin, 1894-95; Professor of Latin, Olivet College, 1895-1900; Professor of Latin Language and Literature, University of Washington, 1900-2; Acting President, 1902-3; President, 1903—.

University Heights.

HENRY LANDES, A. M. (Harvard University), *Professor of Geology and Mineralogy.*

A. B., Indiana University, 1892; A. B., Harvard University, 1892; A. M., 1893. Assistant, U. S. Geological Survey, 1891 and 1893; Assistant to State Geologist, New Jersey, 1892-94; Principal of Rockland (Me.) High School, 1894-95; Professor of Geology and Mineralogy, University of Washington, 1895-; State Geologist, 1901-.

University Heights.

EDMOND STEPHEN MEANY, M. L. (University of Wisconsin), *Professor of History.*

B. S., University of Washington, 1885; M. S., 1899; M. L., University of Wisconsin, 1901. Member of Washington Legislature, 1891 and 1893; Assistant to Executive Commissioner for Washington, World's Columbian Exposition, 1890-94; Secretary of the Board of Regents, University of Washington, 1894-97; Registrar and Lecturer on Northwest History and Forestry, 1895-97; Professor of History, 1897-.

University Station.

Faculty and Other Officers.

J. Allen Smith, Ph. D. (University of Michigan), *Professor of Political and Social Science.*

A. B., University of Missouri, 1886; LL. B., 1887; Ph. D., University of Michigan, 1894. Attorney-at-law, Kansas City, 1887-92; Professor of Economics and Sociology, Marietta College, 1895-97; Professor of Political and Social Science, University of Washington, 1897-.

University Station.

*Arthur Ranum, A. B. (University of Minnesota), *Professor of Mathematics and Astronomy.*

A. B., University of Minnesota, 1892; Graduate Student and Fellow in Mathematics, Cornell University, 1893-96; Fellow in Mathematics, University of Chicago, 1896-97. Professor of Mathematics and Astronomy, University of Washington, 1897-.

University Heights.

Almon H. Fuller, M. C. E. (Cornell University), Dean of the College of Engineering and *Professor of Civil Engineering.*

C. E., Lafayette College, 1897; M. C. E., Cornell University, 1898; M. S., Lafayette College, 1900. Fellow in Civil Engineering, Cornell University, 1897-98; Professor of Civil Engineering, University of Washington, since 1898; absent on leave, with American Bridge Company, Philadelphia, 1900-1901; Dean of College of Engineering, 1899-.

University Station.

Arthur R. Priest, A. M. (De Pauw University), *Professor of Rhetoric and Oratory.*

A. B., De Pauw University, 1891; A. M., 1894. Principal of High School, Seale, Ala., 1891-92; Associate Principal and Professor of English, McFerrin College, 1892-93; Instructor in Rhetoric and Oratory, De Pauw University, 1893-96; Professor, 1896-98; Instructor in Oratory, University of Wisconsin, 1898-99; Professor of Rhetoric and Oratory, University of Washington, 1899-.

University Heights.

*Retires August 1, 1904.

JOHN T. CONDON, LL. M. (Northwestern University),
Dean of the School of Law.

Student, University of Washington, 1875-79; LL. B., University of Michigan, 1891; LL. M., Northwestern University, 1892. Assistant, in charge of Evidence, Northwestern University, 1891-92; Member of Seattle Bar since 1892; Professor of Law and Dean of School of Law, University of Washington, 1899-.

120 Thirteenth Ave., North.

HORACE G. BYERS, PH. D. (Johns Hopkins University),
Professor of Chemistry.

A. B. and B. S., Westminster College, 1895; A. M., 1898; Ph. D., Johns Hopkins University, 1899. Professor of Chemistry, Tarkio College, 1895-96; Instructor in Chemistry, Westminster College, 1896-97; Instructor in Chemistry, Maryland University, 1897-99; Professor of Chemistry, University of Washington, 1899-. University of Chicago (Summer Session), 1902, 1903, 1904.

4719 Fifteenth Avenue Northeast.

B. T. Roller

*CHARLES W. VANDER VEER, Director of Gymnasium,
Professor of Physical Culture and Hygiene.

Student, Union College, New York, 1873-76. Professor of Physical Culture, Union College, 1876-92; Professor of Physical Culture, Case School of Applied Science, 1893-94; Instructor in Physical Culture, Seattle Athletic Club, 1894-95; Professor of Physical Culture and Hygiene, University of Washington, 1895-.

1302 University Street.

CAROLINE H. OBER, *Professor of Spanish.*

Student, Wheaton Seminary, 1882-86; Massachusetts Normal School, Salem, 1888-89. Teacher, Public School, Palisade, Nevada, 1886-87; Instructor in Modern Languages, Bozeman Academy, Montana, 1887-88; Regent and Vice Directress, Government Normal Schools, Argentine Republic, 1889-93; Instructor in Spanish, San Diego High School, California, 1896-97; Professor of Romanic Languages, University of Washington, 1897-.

University Station.

*Retires August 1, 1904.

TREVOR C. D. KINCAID, A. M. (University of Washington), *Professor of Zoology.*

B. S., University of Washington, 1899; A. M., 1901. Instructor in Biology, University of Washington, 1895-99; Assistant, American Fur Seal Commission, 1897; Acting Professor of Entomology, Oregon Agricultural College, 1897-98; Entomologist, Harriman Alaska Expedition, 1899; Assistant Professor of Biology, University of Washington, 1899-1901; Professor of Zoology, 1901-.

University Station.

FREDERICK M. PADELFORD, PH. D. (Yale University), *Professor of English Literature.*

A. B., Colby College, 1896; A. M., 1899; Ph. D., Yale University, 1899. Scholar in English, Yale University, 1896-98; Fellow, 1898-99; Professor of English, University of Idaho, 1899-1901; Professor of English Language and Literature, University of Washington, 1901-.

University Heights.

ALBERT H. YODER, A. B. (Indiana University), *Professor of Pedagogy.*

Graduate, State Normal School, Madison, South Dakota, 1888; A. B., Indiana University, 1893; Scholar in Pedagogy, Clark University, 1893-94; Scholar in Psychology, University of Chicago, and Student in Pediatrics, Northwestern University Medical School, 1895-96. Superintendent of City Schools, Madison, South Dakota, 1888-91; Instructor in Pedagogy, Indiana University, 1892-93; Principal, San Francisco Normal School, 1894-95; President of Vincennes University, 1896-1900; Editor of Journal of Childhood and Adolescence, 1900-; Professor of Pedagogy, University of Washington, 1901-.

University Heights.

MILNOR ROBERTS, A. B. (Stanford University), Dean of the School of Mines and *Professor of Mining Engineering and Metallurgy.*

A. B., Stanford University, 1899. Instructor in Mineralogy, Stanford University, 1899-1900; Professor of Mining Engineering and Metallurgy, and Dean of the School of Mines, University of Washington, 1901-.

University Heights.

ARTHUR SEWALL HAGGETT, PH. D. (Johns Hopkins University), *Professor of Greek.*

A. B., Bowdoin College, 1893; A. M., 1894; Ph. D., Johns Hopkins University, 1897; Student, University of Berlin and American School at Athens, 1897-98. Scholar in Greek, Johns Hopkins University, 1895-96; Fellow in Greek, 1896-97; Instructor in Greek and Latin, Worcester Academy, 1898-1901; Assistant Professor of Greek and Latin, University of Washington, 1901-02; Professor of Greek Language and Literature, 1902-.

University Heights.

FREDERICK ARTHUR OSBORN, PH. B. (University of Michigan), *Professor of Physics and Director of the Physical and Electrical Laboratories.*

Ph. B., University of Michigan, 1896; Graduate Student, University of Michigan, 1900-1902. Assistant in Physics, Saginaw High School, 1890-91; Instructor in Physics, Ann Arbor High School, 1893-96; Professor of Physics, Olivet College, 1896-1902; Professor of Physics and Director of Physical and Electrical Laboratories, University of Washington, 1902-.

University Station.

JOHN P. HOYT, LL. B. (Ohio State and Union Law College), *Professor of Law.*

LL. B., Ohio State and Union Law College, 1867. Justice, Supreme Court of Washington, 1879-87 and 1889-95; Chief Justice, 1895-97. Professor of Law, University of Washington, 1902-.

1617 Fourth Avenue, West.

WILLIAM B. SAVERY, PH. D. (Harvard University), *Professor of Philosophy.*

A. B., Brown University, 1896; Assistant in Ethics, Harvard University, 1896-97; A. M., Harvard University, 1897; James Walker Fellow (traveling), Harvard University, 1897-98; Student in University of Berlin, 1897-98; Morgan Fellow, Harvard University, 1898-99; Ph. D., Harvard University, 1899; Assistant in History of Philosophy, Harvard University and Radcliffe College, 1899-1900; Professor of Psychology and Philosophy, Fairmount College, Kansas, 1900-1902; Professor of Philosophy, University of Washington, 1902-.

University Station.

Geo. F. Blair

DAVID THOMSON, A. B. (University of Toronto), *Professor of Latin.*

A. B., University of Toronto, 1892; Classical Master in the High School, Orillia, Ontario, 1893-99; Fellow in Latin, University of Chicago, 1899-1901; Assistant in Latin, University of Chicago, 1901-02; Professor of Latin, University of Washington, 1902-.

University Station.

JAMES EDWARD GOULD, PH. B. (University of Washington), *Assistant Professor of Mathematics.*

Ph. B., University of Washington, 1896. Student, Summer School, University of California, 1897; Student, Summer Quarter, University of Chicago, 1900, 1901 and 1902. Principal of High School, Port Townsend, 1897-99; Instructor in Physics and Chemistry, Seattle High School, 1899-1901; Assistant Professor of Mathematics, and Principal of the Preparatory School, University of Washington, 1901-3; Assistant Professor of Mathematics, 1903-.

2206 Second Avenue North.

THEODORE C. FRYE, PH. D. (University of Chicago), *Professor of Botany.*

B. S., University of Illinois, 1894; Principal of the High School, Montecello, Ill., 1894-96; Superintendent of City Schools, Batavia, Ill., 1897-1900; Graduate Student, University of Chicago, 1896-97, 1900-02; Fellow in Botany, 1901-02; Ph. D., 1902; Professor of Biology, Morningside College, Iowa, 1902-03; Professor of Botany, University of Washington, 1903-.

HERBERT D. CARRINGTON, PH. D. (University of Heidelberg), *Professor of German.*

Ph. B., Yale Scientific School, 1884; 1884-85, study in New Haven; 1885-89, private study and public school work; Assistant in German, Yale Scientific School, 1889-92; Student in Germany, 1892-97; Ph. D., University of Heidelberg, 1897; Instructor in German, Yale Scientific School, 1897-1900; Instructor in German, University of Michigan, 1900-03; Professor of German, University of Washington, 1903-.

GEORGE H. ALDEN, PH. D. (University of Wisconsin),
Assistant Professor of History.

A. B., Harvard University, 1893; Fellow in History (with Prof. Von Holst), University of Chicago, 1893-95; Graduate Student (with Prof. Turner), University of Wisconsin, 1895-96; Ph. D., 1896; Acting Assistant Professor of Mediaeval History, University of Illinois, 1896-97; Professor of History, Cornell College, Iowa, 1897-98; Professor of History, Carlton College, Minn., 1898-1903; Assistant Professor of History, University of Washington, 1903-.

THOMAS K. SIDEY, PH. D. (University of Chicago),
Assistant Professor of Latin and Greek.

A. B., Victoria University (now Toronto), 1891; Graduate Specialist in Classics and English, Ontario College of Pedagogy, 1891; Classical Master, Iroquois High School, 1892; Teacher of English and Classics, Ottawa Collegiate Institute, 1892-94; Classical Master, Whitby Collegiate Institute, 1894-1896; Graduate Student, University of Chicago, 1896; Fellow in Latin, 1897-99; Ph. D., 1900; Associate Professor of Latin, Cornell College, Iowa, 1899-02; Professor of Latin and German, Central Normal College, Danville, Indiana, 1902-03; Assistant Professor of Latin and Greek, University of Washington, 1903-.

JOHN C. THORPE, M. E. (University of Michigan),
Assistant Professor of Mechanical Engineering.

B. S., in Mechanical Engineering, University of Illinois, 1900; Instructor in Mechanical Engineering, University of Michigan, 1901-03; M. E., University of Michigan, 1903; Practical work, railroad mechanical engineering, 1899-1903; Assistant Professor of Mechanical Engineering, University of Washington, 1903-.

CHARLES H. GORDON, PH. D. (University of Chicago),
Acting Professor of Geology.

B. S., Albion College, 1888; Principal Keokuk Public Schools, 1888-90; Instructor in Natural History, Northwestern University, 1890-93; Graduate Student, University of Chicago, 1892-95; Fellow in Geology, 1893-95; Ph. D., 1895; Superintendent City Schools, Beloit, Wis., 1895-97; Special Student, University of Heidelberg, 1897-98; University of Chicago, 1898-99; Superintendent of City Schools, Lincoln, Neb., 1899-1903; Instructor in Geology, University of Nebraska, 1902-03; Acting Professor of Geology, University of Washington, 1903-1904.

RUDOLF ERNST HEINE, B. S. (University of Wisconsin), *Assistant Professor of Electrical Engineering.*

B. S., in Electrical Engineering, University of Wisconsin, 1898. Engineering Department, Milwaukee Electric Railway and Light Company, 1898-1900; Western Electric Company, Chicago, 1900-1901; Assistant Professor of Mechanical and Electrical Engineering, University of Washington, 1901-03; Assistant Professor of Electrical Engineering, 1903-.

University Station.

OTTILIE G. BOETZKES, A. M. (University of Washington), *Assistant Professor of Modern Languages.*

A. B., University of Washington, 1901; A. M., 1902; student in Paris, summer of 1903; Assistant in Modern Languages, University of Washington, 1900-01; Instructor, 1901-03; Assistant Professor, 1903-.

University Station.

*HENRY G. KNIGHT, A. B. (University of Washington), *Assistant Professor of Chemistry.*

A. B., University of Washington, 1902; Assistant in Chemistry, University of Chicago, 1902-03; Fellow-elect, 1903. Assistant in Chemistry, University of Washington, 1900-01; Instructor, 1901-02; Assistant Professor, 1903-.

University Station.

CHARLES W. JOHNSON, PH. D. (University of Michigan), Dean of the School of Pharmacy, *Professor of Pharmacy and Materia Medica.*

Ph. C., University of Michigan, 1896; B. S., University of Michigan, 1900; Ph. D., University of Michigan, 1903. Practical Pharmacist, Detroit, Michigan, 1896-98; Assistant Instructor in Chemistry, University of Michigan, 1898-1901; Instructor in Chemistry, University of Iowa, 1901-02; Assistant Professor of Chemistry, University of Washington, 1903-04; Professor of Pharmacy, University of Washington, 1904-.

University Station.

*Called to chair of Chemistry, University of Wyoming.

PIERRE JOSEPH FREIN, PH. D. (Johns Hopkins University), *Professor of French.*

A. B., Williams College, 1892; Ph. D., Johns Hopkins University, 1899. Instructor in Modern Languages, Holbrook Military School (New York), 1892-93; Instructor in French and Greek, Oahu College (Honolulu), 1893-95; Student in Europe and Johns Hopkins University, 1895-99; Fellow in Romanic Languages, Johns Hopkins University, 1898-99; Instructor (1899-1900) and Assistant Professor (1900-03) of Romanic Languages, Leland Stanford, Jr., University; Professor of French, University of Washington, 1903-.

University Station.

INSTRUCTORS AND ASSISTANTS.

HENRY C. DAVIS, A. B. (South Carolina College), *Instructor in Rhetoric and Oratory.*

1898, A. B., South Carolina College; 1898-1901, Public School work; 1901-03, Principal High School, Columbia City, South Carolina, and Instructor in Rhetoric.

ADELBERT BROWN, C. E. (Cornell University), *Instructor in Civil Engineering.*

1900, Graduate State Normal School, Brockport, New York; 1903, C. E., Cornell University; Summers of 1901-02-03, associated in engineering work with Le Grand Brown, M. Am. Soc. C. E., Rochester, New York.

WILLIAM B. HAMPSON, M. E. (University of Nebraska), *Director of Shop-work in Mechanical Engineering.*

JEAN WOLD, *Instructor in Physical Culture and Director of Gymnasium for Women.*

HENRY L. BRAKEL, A. B. (Olivet College), *Instructor in Physics.*

*W. LEE LEWIS, A. B. (Stanford University), *Instructor in Chemistry.*

PAUL HOPKINS, A. M. (University of Washington), *Instructor in Chemistry.*

ROBERT M. GARRETT, A. M. (University of Washington), *Assistant in English.*

CHARLES A. H. BLODGETT, A. B. (University of Washington), *Assistant in Spanish.*

DAVID H. WOLFLE, A. B. (University of Washington), *Assistant in Physics.*

†Hon. FRED RICE ROWELL, A. B., *Lecturer on Mining Law.*

*Retires August 1, 1904.
†Deceased.

UNDER-GRADUATE ASSISTANTS.

DONALD F. MCDONALD, *Assistant in Geology.*
NORMAN P. LAWSON, *Assistant in Political Science.*
CHAS. ALFRED NELSON, *Assistant in Zoology.*
~~MARY G. O'MEARA~~, *Assistant in Pedagogy.*
ANNA E. COREY, *Assistant in Botany.*
~~CLAUDE A. LINK~~, *Assistant in Chemistry.*
~~ROSCOE TEATS~~, *Assistant in Mining.*

OFFICERS.

HARRY CANBY COFFMAN, A. B., *Librarian.*
HERBERT T. CONDON, *Registrar and Secretary of Faculty.*
WILLIAM MARKHAM, *Secretary to the Board of Regents.*
ANNIE HOWARD, *Dean of Women.*
ELIZABETH PEARL MCDONNELL, A. B., *Cataloguer in the Library.*
WILLIAM B. HAMPSON, M. E., *University Engineer.*
~~ALBERT A. GADE, *Musical Director.*~~

COMMITTEES OF THE FACULTY.

Accredited Schools—Professors Yoder, Gould and Kincaid.

Admission—Professors Osborn, Byers, Fuller, Haggett and Gould.

Advisers—College of Liberal Arts: Freshmen, Professor Priest; Sophomores, Professor Padelford; Unclassified, Professor Gould; Juniors, Seniors and Graduates, the respective Major Professors. College of Engineering: Civil Engineers, Professor Fuller; Mechanical Engineers, Professor Thorpe; Electrical, Professor Osborn. School of Mines, Professor Roberts. School of Pharmacy, Professor Johnson. School of Law, Professor Condon.

Alumni Appointments—Professors Yoder, Meany and Osborn.

Assembly and Public Exercises—Professors Priest, Meany and Byers.

Athletics—Professors Roberts, Haggett and Thorpe.

Catalogue—Professors Osborn, Haggett and Alden.

Discipline—Professors Landes, Thomson and Frein.

Dormitories—Professors Fuller and Boetzkes.

Holidays—Professors Roberts, Savery and Carrington.

Honors and Advanced Degrees—Professors Smith, Fuller, Padelford and Savery.

Library—Professors Padelford, Frye and Sidey.

Museum—Professors Landes, Meany and Kincaid.

Petitions—Professors Smith, Ober and Frein.

Program—Professors Byers, Osborn and Fuller.

Student Assistance—Professors Meany, Landes and Thorpe.

Student Organizations—Professors Savery, Roberts and Padelford.

GENERAL INFORMATION.

HISTORICAL SKETCH.

When the first legislature of Washington Territory assembled in 1854, Isaac Ingalls Stevens, the governor, spoke most forcibly in his message in favor of a public school system and closed his remarks on this point with the following words: "I will also recommend that Congress be memorialized to appropriate land for a university." The advice of the governor was heeded. Congress was promptly memorialized for the grant of two townships of land, the amount previously given to Oregon for the same purpose. Within the short space of four months Congress complied with this request.

The government census showed that there were in the new territory at this time 3,965 white persons. These people were scattered from the Columbia river to the British boundary, and from the Pacific ocean to the Rocky mountains. The pioneers were not daunted by the fewness of their numbers or the leagues of separation.

On January 29, 1855, just six months from the date of the University land grant, the legislature enacted that the Territorial University of Washington should comprise two equal institutions, one at Seattle and the other on Boisfort Plains in Lewis County. The granted lands were to be divided equally between the two institutions. The county commissioners who were directed to select the granted lands failed in their duty,

and in 1858 the legislature united the two universities. Cowlitz Farm Prairie, in Lewis County, was chosen as the new site, and another enactment was passed for the selection of all the granted lands.

This shifting and fruitless policy in locating the Territorial University led the pioneers of the Puget Sound region to secure an enactment incorporating another institution to be called the "Puget Sound University." The possibility of thus duplicating educational institutions resulted in bringing matters to a definite conclusion, and in January, 1861, the legislature relocated the Territorial University at Seattle. A Board of University Commissioners, consisting of Rev. Daniel Bagley, John Webster and Edmund Carr, all of Seattle, was immediately appointed to select the granted lands, to sell them for not less than $1.50 an acre, and to build the University within one year. This board met on Washington's birthday, 1861, and organized for work. The land was cleared, the corner-stone of the main building was laid on May 21, 1861, and the building completed within the specified year. In the autumn of 1862 the other buildings were constructed, and during the winter the University of Washington was opened.

The legislature had made one other condition in relocating the University in Seattle and that was that a suitable site of at least ten acres be donated by the people of Seattle. The site was selected and the major portion of it donated by Hon. Arthur A. Denny from his farm. The other portion of the site was given by Charles C. Terry and Edward Lander. A few

large maple trees were left on the grounds, but all the other trees were cleared off. The ground was plowed and harrowed, and the Rev. Daniel Bagley sowed the whole tract with grass seed he had brought from Oregon the year before.

The records of the early years of the University are very meagre, but it is certain that the institution had a severe struggle. A bare list of the men who filled the position of president shows that changes were numerous, since no one of the first six presidents held office for more than two years.

For several years the work of the University did not rank much above that of an academy. The first class to be graduated was during the second administration of Dr. George F. Whitworth in 1876. This class consisted of one young lady, Miss Clara McCarty, now Mrs. Wilt of Tacoma, who was graduated with the degree of bachelor of science. The honor of having first organized the University on real college lines belongs to the seventh president, Dr. A. J. Anderson. Under his administration a small class was graduated annually with all the essentials of a college training.

The total number of graduates up to June, 1904, was 531. Records of the students in the earlier years, were not preserved, but it is estimated that the number of those who have attended the University from its organization to the present time is over 5,000.

The building erected in 1861 was the finest educational structure at the time in the Pacific Northwest. It was the only building belonging to the institution except the president's cottage and two rather inferior

dormitories. All were frame buildings. The money for their construction was obtained from the sale of the University lands. The territorial government paid out no money for the University's maintenance until 1879. Then the amount given was very small and was to apply on tuition fees of "free" scholars to be appointed by the governor, judges and members of the legislature. This condition prevailed in all the appropriation bills for the University throughout the territorial period. During this time, from 1862 to 1889, the total sum appropriated by the territory for the University was only $34,350.

During the later years of the territorial period and the first years of statehood, the old quarters of the University became very crowded. In 1893 the state legislature provided a beautiful new site and sufficient money to build structures of a permanent character and adequate to the needs of a growing institution. On September 4, 1895, the institution moved into the new buildings and since then the progress of the University has kept pace with the rapid development of the commonwealth.

Since the growth of the territory for years was slow and at times scarcely perceptible, it is not strange that the institution did not always make uniform progress. At the present time, however, the University of Washington is growing rapidly and has taken its place as the continuation of the public school system, the capstone of the state's great educational edifice. As in the rest of the public school system, from the kindergarten and primary school upward, instruction in the Univer-

sity of Washington is free to all, except in the Department of Law, without regard to race, sex, creed, or social station.

SEAT OF THE UNIVERSITY.

Every one seeking information about the University will also desire to know something of the city in which it has its home.

The city of Seattle is the metropolis of the state of Washington, and has a population of over 140,000. It is located on Elliott Bay, an arm of Puget Sound, and extends eastward to Lake Washington, one of the largest bodies of fresh water in the state.

The Cascade mountain range to the east, the Olympic mountains to the west, majestic Mount Rainier to the south and Mount Baker to the north, with the lakes, rivers and wonderful forests, combine to furnish an environment of healthfulness and inspiration. This natural beauty is beyond all computation in worth when considered as the appropriate home of a great institution of learning.

It has been the custom to refer to the climate of Puget Sound as mild but wet. The highest temperature reached in 1903 was 96 degrees, and the lowest was 24 degrees. A sure indication of the healthfulness of the Puget Sound climate is a low death rate.

Numerous lines of railroad, steamships and sailing vessels furnish abundant facilities for transportation to and from the city, while within the city there are over 100 miles of electric and cable street car lines.

There are six public parks in the city and four private parks open to the public. The Magnolia Bluff Army Post, covering a tract of 650 acres of upland and 200 acres of tide land, also affords a beautiful public park.

Three branches of the superior court and the United States district and circuit courts in Seattle, and the state supreme court within easy reach at Olympia, offer valuable advantages for the School of Law. Three general and two special hospitals offer similar aids when it is thought advisable to establish the School of Medicine.

Students in the departments of geology, mineralogy, and mining engineering find special advantages in and about Seattle. There are numerous coal mines and stone quarries near the city, and gold and silver mines easy of access in the Cascade mountains. One smelter in Everett, and another in Tacoma, may be easily visited, and the United State government has established an assay office in Seattle, which in volume of business stands next to New York and Denver.

Practical electrical engineering is amply illustrated by the extensive power and light plants in the city, and at the University, and the great system now completed at Snoqualmie Falls. The large iron works, saw mills, clay works, and numerous other manufacturing enterprises furnish valuable object lessons to students of mechanical engineering. The United States government dry dock and navy yard at Port Orchard, and the military post at Magnolia Bluff are both useful from an educational point of view.

The city maintains a fine public library, the books of which are available for students of the University. The management of the public library seeks every means possible to supplement the library of the University. The city library is rapidly recovering from a destructive fire. Andrew Carnegie has given the city $200,000 for a new library building on condition that the library is generously maintained. In a short time Seattle will own one of the first libraries on the Pacific coast.

There are seventy churches in the city. All the leading denominations are represented by several congregations. Besides the associations at the University, there are flourishing organizations of the Y. M. C. A. and the Y. W. C. A. in Seattle.

During the year 1903, twenty-eight buildings were occupied by the public schools, three hundred and eighty-seven teachers were employed and 18,000 pupils enrolled. A magnificent high school building, costing over $200,000, was completed in the fall of 1902.

CENTER OF A PROHIBITION DISTRICT.

The state legislature in 1895 enacted a strict law prohibiting the sale of all intoxicating liquors within a radius of two miles of the new University grounds. This insures a college neighborhood entirely free from the evils of the saloon.

GOVERNMENT.

Under the constitution and the laws of the State of Washington, the government of the University is vested

in a Board of Regents, consisting of seven members appointed by the governor of the state by and with the advice and consent of the senate. Each regent is appointed for the term of six years. The code of public instruction also provides that the immediate government of the institution shall be in the hands of the Faculty, consisting of the president and professors, under such rules as the Board of Regents may provide.

ENDOWMENT AND SUPPORT.

The University derives its support entirely from the state. There is no income from tuition fees, as instruction in all departments of the University, except the School of Law, is free, and the lands granted the institution as an endowment yield no revenue as yet. The income from these lands will some day greatly help to support the University. The two townships of land granted by Congress in 1854 were nearly all selected and sold in 1860 and 1861 to build and establish the Territorial University. There remains of this old grant some 3,000 acres, part of which is not yet selected. Besides this land, the University owns 320 acres near the city of Tacoma, acquired by purchase about 1862, and the old site of nine acres in the central part of the city of Seattle. Both of these last named parcels of land are sure to become good revenue producing properties. The old site has been leased for a period of thirty years. In addition to the above mentioned property the University was further endowed by the state on March 14, 1893, by the segregation of cer-

tain granted lands. Section 9 of the law approved on that day provides—

"That 100,000 acres of the lands granted by section 17 of the enabling act, approved February 22, 1889, for state charitable, educational, penal, and reformatory institutions are hereby assigned for the support of the University of Washington."

BEQUESTS.

Prior to the session of the state legislature in 1897 it was practically impossible to expect any gratuities or bequests, as such gifts would immediately go into the treasury of the state, and become unavailable except upon appropriation by the legislature. But in the session of 1897 the code of public instruction was enacted, and section 186, chapter 1, title IV., of that code made the following provision for University bequests:

"The Board of Regents is authorized to receive such bequests or gratuities as may be granted to said University, and to invest or expend the same according to the terms of said bequests or gratuities. The said board shall adopt proper rules to govern and protect the receipt and expenditure of the proceeds of all fees, bequests, or gratuities, and shall make full report of the same in the customary biennial report to the Governor, or more frequently if required by law."

It is hoped that this provision will result before long in the erection of a number of memorial buildings and the establishment of memorial scholarships and professorships.

BUILDINGS.

Before the erection of any buildings on the new grounds the Board of Regents adopted a wise policy by deciding that each structure should be made of materials found in the state of Washington. In this way,

besides serving their various purposes, the buildings furnish magnificent exhibits of the wealth of Washington in first-class building material.

The Administration Building is constructed of a light colored sandstone from Pierce county, and cream colored pressed brick from Spokane county, with terra cotta trimmings from King county. The interior finish is of Puget Sound fir and larch. It is a commodious structure in the style of the French renaissance. The main portion of the building is 244 feet in length by 70 feet in width. It is three stories high, with a finished basement. In this main portion are the recitation rooms, lecture halls, administrative offices, vaults and society rooms. The basement is devoted to laboratories. These are all well lighted and equipped for work. Extending to the rear, and separated by light wells, is a wing 91 feet in length by 54 feet in width. In this wing is Denny Hall, the general assembly room, below which is the library. The building is heated and ventilated by the latest improved facilities, and is lighted by gas and electricity. The administration building occupies the most commanding situation on the grounds.

The Science Hall is located on the oval about 500 feet south of the administration building. It is constructed of red pressed brick with trimmings of sandstone. It is three stories in height, with seven large rooms on each floor, and some additional space in the basement and attic.

In form the building is T-shaped, the front having very large circular ends, giving ideal locations for lab-

oratories and lecture rooms. The first floor contains the lecture rooms and laboratories for the departments of geology and mining; the second floor, the laboratories for zoology, and the lecture room and drawing rooms for civil engineering; and the third floor, the lecture room for zoology and botany, the botanical laboratories and the lecture room and drawing rooms for mechanical engineering.

The wing in the rear is 50 by 60 feet in size, and is separated from the front by light wells. It contains the State Museum, and is arranged in a general way so that the geological collections occupy the first floor, the zoological collections the second floor, and the botanical collections the third floor.

The New Power House and Machine Shop is situated on the oval southeast of the science hall. The building is of brick, two stories in height, 50 by 80 feet is size, and a wing 50 by 60 feet for the boiler room.

The first floor of the building is divided into three rooms. The first of these contains all of the steam and electrical machinery for the lighting and power system of the University. This consists of one 100 horse power Ball engine, one 40 horse power Ball engine, one 75 K. W. 500 volt direct current generator, one 60 K. W. 1,100 volt alternating current generator, one 35 K. W. 1,100 volt alternating current generator. A counter shaft is used, allowing any machine or any combination of machines to be run at any time. A five-panel switchboard distributes current to all parts of the grounds and buildings for lighting and power purposes.

The second, the boiler room, contains the three boilers, one of them fitted with a Green automatic stoker, and the pumps for furnishing all the buildings with steam and water.

In the third room is placed the iron working machinery; tool lathe, engine lathe, upright drill, shaper, vises, forges, and all the necessary tools.

The large room on the second floor is fitted up as the wood working shop. It is equipped with twelve work benches with complete outfits of tools, eleven wood working lathes, a jig saw and other necessary machinery.

The Observatory, though small, is a beautiful building. It is constructed wholly of sandstone, and occupies the highest point of the grounds northwest from the administration building. The internal arrangement and equipment of the observatory are treated elsewhere.

The Assay Shop is situated to the north of the administration building, and between it and the observatory. It is a frame structure, and although it is not intended as a permanent building, it is well adapted to the present needs. It consists of a furnace room, two balance rooms, a supply room, and a laboratory for wet work.

The Gymnasia are under one roof, the young women occupying the room at the western end of the building, which measures 50x80 feet, with baths, dressing rooms, and a good equipment.

The young men occupy the eastern end of the building, with shower baths, dressing rooms, box handball courts and an equiqment second to none in the North-

west. The main hall measures 80x120 feet, is 24 feet high at the sides and 40 feet in the center, and has a fine floor of Washington fir which is free from bad points and possesses equal elasticity everywhere. A running track, about 14 laps to the mile, with concaved corners, is suspended from the roof trusses or supported by the walls. The entire building is heated by steam and lighted by electricity.

The Old Power House is a brick structure 42x80 feet on the shore of Lake Washington. At present it is used for a pumping station.

Two Dormitories, one for women and the other for men, were provided for at the legislative session of 1899. There is a dining room in the women's dormitory for the use of men and women, and a parlor and reception room in each dormitory. The women's dormitory will accommodate at least fifty students, and the men's sixty. Both buildings command a beautiful view of Lake Washington and the distant Cascade range of mountains.

GROUNDS.

The new grounds are ample enough to satisfy every need of the University. There are 355 acres, all within the city limits of Seattle. The site lies between Lakes Union and Washington. It has a shore line of over one mile on Lake Washington and about a quarter of a mile on Lake Union.

To the southern, or Lake Union side, the land slopes gently from the highest point in the northwestern cor-

ner, which is about 225 feet above tide level. Toward the eastern, or Lake Washington side, the land is level for more than half its width, when it breaks off in a series of benches, terraces and ravines, capable of the most beautiful landscape effects.

The Board of Regents has adopted a plan that will not only give the best arrangement for new buildings, but will largely determine all future improvement of the grounds. This plan is a modification of the usual college quadrangle. In this case it will be an ellipse, whose major axis is 1,200 feet, and whose minor axis is 650 feet long.

The administration building faces the center of the ellipse. All other buildings will be arranged around the elliptical avenue, and the interior of the ellipse will be beautiful and kept open as the campus proper. Into the elliptical avenue will converge all other avenues, a topographical survey of the grounds having shown that this is the most natural treatment possible for the site. Besides ample room for an excellent arrangement of all necessary buildings for the University, there is an abundance of room for all sorts of athletic grounds.

One of the main reasons urged for the dedication of this land to the University purposes was that in addition to all other needs of the institution there could be established here a scientific arboretum for the cultivation, care and study of all kinds of trees and plants that will live in this climate.

The management of the Seattle city parks, realizing

that a beautiful University campus means another fine park for the city, has done its full share towards beautifying the grounds. On Arbor Day, 1898, the Park Department presented the University with fifty assorted oaks and fifty honey locusts. During 1899 the Park Department presented to the University 2,200 fine trees, embracing about thirty species new to the grounds. These were all carefully planted in groves at suitable places on the grounds.

A superintendent of grounds was employed last year and a small appropriation set aside for improvement. In addition to work around the administration building and armory, a nursery is being established. A donation of 1,000 perennials by the Department of Parks and the collection of 500 more from other sources mark the beginning of this work. These represent 42 natural orders and 179 species. Contributions of seed from Blanche Trask, of California; the Department of Agriculture, Ottawa, Canada; W. A. Kellerman, Columbus, Ohio, and C. S. Mann, Mapleglen, Pennsylvania, have been received.

By exchanging native seed and plants with Eastern collectors, many rare and desirable plants are being secured.

LIBRARY.

The library of the University of Washington contains 18,258 bound volumes and about 10,000 pamphlets. Besides these there are now 420 bound volumes in the Frederic James Grant Memorial Library of American History and about 900 volumes in the

library of the School of Law. It has been the policy to add each year as far as possible the best books of general reference, as well as those of most value to each department. The library contains the leading papers and periodicals, foreign and American, and practically all of the newspapers published in the Pacific Northwest. It is also a depository for the publications of the United States government, of which it has nearly a complete set. An effort has been made to complete, as far as possible, the public documents of the State of Washington and to secure a great number of the documents of the other states and foreign countries. The library is being rapidly catalogued and is classified according to the Dewey decimal system. The main library occupies a room 91 feet long and 54 feet wide in the basement of the administration building.

Students of the University also have the privileges of the Seattle Public Library, which will soon have a new building, presented to the city by Mr. Carnegie, and of the library of the King County Bar Association.

UNIVERSITY HISTORY COLLECTION.

An effort is now being made to collect and preserve materials and documents that may in any way have a bearing on the history of the University and the development of education in the Northwest. This will include college publications, photographs, clippings, educational journals, university and public school programmes, announcements and, in fact, anything that may in time be of historical value. The co-operation

of students, alumni and teachers throughout the state is earnestly solicited.

Richard D. Baker Loan Collection.

Mr. Richard D. Baker, of Seattle, has loaned to the University several volumes relating to mineralogy, geology and chemistry. This set supplements his donations or loans to the geological department.

Washington State Federation of Women's Clubs' Historical Collection.

The University library is the depository for the history collection of the Federated Women's Clubs of the state. This collection includes material relating to the progress of the club movement and includes also a large number of manuscripts and other matter relating to the history of the Northwest. Constant additions are being made and the effort will be to supplement the work of the Washington University State Historical Society.

THE AUDITORIUM.

The assembly hall of the University embraces what would have been the first and second floors of the wing of the administration building. A large stage and a seating capacity of 736 make this hall serviceable, not only for the assembling of the University students, but also for the various entertainments that form one of the attractive features of University life. The Board of Regents has named this assembly room Denny Hall, in honor of Hon. Arthur A. Denny, who gave most of

the first campus to the University when it was located at Seattle in 1861.

MUSEUM.

The University museum is destined to become one of the most important adjuncts of the institution. The legislature in 1899 made it the state museum and provided that state, county and other officers, while in the discharge of their duties, should save all matters of a scientific or historical value and deposit them in this museum.

The museum is located in a specially designed wing of the recently constructed science hall, where it occupies three floors, each 50x60 feet. The lower floor is devoted to the collections illustrating geology, the second floor contains the zoological and ethnological collections, and the third floor the herbarium, botanical exhibits and miscellaneous material. The specimens are stored for the most part in upright and wall cases, of which 442 running feet have been provided. In addition to these, several large table cases serve to display the more important mineralogical collections. The specimens thus far accumulated represent a good beginning along the lines of geology, mineralogy, zoology, botany and ethnology, and are of great value in illustrating the work of the departments concerned.

During the last few years many important additions have been made to the museum. The John R. Baker collection of minerals, consisting of over a thousand specimens of rare and beautiful crystals and other representatives of the mineral kingdom, has been deposited

indefinitely and is exhibited in three large table cases in the geological section of the museum.

Among the more important biological contributions may be mentioned a collection of over a hundred mounted fishes presented by Mr. Edwin C. Starks. Through the efforts of the same gentleman a series of beautiful corals was secured from the Field Columbian Museum. Mr. P. B. Randolph has deposited in the museum his extensive collection of land, fresh-water and marine shells, comprising about ten thousand specimens from all parts of the world. This collection is especially rich in local forms, and includes a fairly complete series of the mollusca indigenous to the Puget Sound region.

The palæontological section received a marked addition in a series of palæozoic fossils presented by Dr. S. Winfield Hartt, of Port Angeles. The museum is also indebted to the same gentleman for an important collection of archæological specimens from the southwestern United States. From the Harriman Alaska Expedition the ethnological section obtained a totem pole derived from Southeastern Alaska.

It is the aim to make the museum especially rich in specimens illustrating the natural history of the state. A considerable series of birds and other vertebrates has already been secured, while each year the collection of invertebrates is enlarged by the addition of named series in these groups. It is hoped that in the near future the museum may possess carefully determined representatives of nearly all the groups of marine and terrestrial animals of the region.

LABORATORIES.

Well-appointed laboratories are as essential to the modern college and university as books and lectures. The University of Washington has the following laboratories fully equipped for work in the various departments:

Chemical.

The four laboratories devoted to chemistry alone are exceptionally well lighted by large outside windows admitting the direct sunlight, as well as by gas and electricity. By a system of circulating warm air, the rooms are largely free from fumes or disagreeable odors, and a uniform temperature maintained. Each laboratory is also supplied with a large "hood," which is lined with glazed tiling and supplied with gas, water and waste pipes. All the desks have heavy walnut tops, and each is supplied with drawers, shelves, gas, water, a stationary test tube rack, and a full set of reagents for qualitative analysis, as well as completely new and modern glassware and apparatus. A large stock room is well supplied with a complete assortment of glassware, apparatus and chemicals. This room is in charge of an assistant, and at certain hours during the day students may supply themselves with apparatus and chemicals as needed for individual work.

In the rear of the stock room is a private laboratory of sufficient size to accommodate two persons. This laboratory is assigned to a graduate student for research work.

Laboratory F accommodates twenty-eight students,

working at the same time, and is devoted to the students of pharmacy who are also taking courses in chemistry. Adjoining it is the private laboratory of the instructor in pharmacy, in which will be found a well-stocked prescription desk for the use of students in prescription work.

Laboratory D, directly across the hall, accommodates twenty-one students, and is devoted to qualitative analysis.

Laboratory E accommodates twenty-five students. It is in the form of an amphitheater and is exceptionally well lighted and is an ideal room for the organic work to which it is devoted. Opening from it is a room which is equipped with ten balances, suited to the needs of the advanced students in general chemistry and students in organic work.

Laboratory H is the private laboratory of the professor of chemistry.

Laboratory I accommodates about fifty students, working at one time. It is located a few yards from the administration building and near the assay shops. It is devoted chiefly to quantitative work, and opening from it through double doors is a balance room containing the analytical balances needed in the work. This laboratory is equipped with hoods, water baths, thermogenerators, gas, water, etc., and is well lighted, so that it is especially well fitted for the work to which it is devoted. In the same building there is also a small laboratory for the use of the teacher in charge of the quantitative work.

Physics and Electrical Engineering.

The laboratories set apart for the use of the department consist of: (1) a general laboratory, 30x70 feet; (2) an electrical testing room with four piers; (3) a photometry room; (4) a dynamo laboratory and a battery room; (5) a shop.

The laboratories are supplied with apparatus from the best American and European makers. Among the more important pieces of apparatus may be mentioned: (1) standard balances, cathetometer, a mercury air pump and a Geneva Society straight-line dividing engine with microscopes, so that it may be used as a comparator; (2) Helmholtz resonators and double siren, chronograph with fork; (3) Boy's radiomicrometer, Dulong and Petit's absolute expansion of liquids apparatus, Berthelot's heat of vaporization apparatus and a Waterman calorimeter; (4) a spectro-goniometer, two spectroscopes, polarimeter, a refractometer, a Fresnel's optical bench complete, a Rowland concave grating, a Zeiss spectrometer, and an Abbe-Pulfrich interferometer; (5) Kelvin composite balance, Kelvin electrostatic voltmeter, sixteen Weston voltmeters and ammeters, two Weston indicating wattmeters, five recording wattmeters, Reichstaldt resistances, Kohlraush bridge, Hartman & Bran's electrolytic resistance apparatus, standard condensers, Thompson galvanometers, etc.; (6) a storage battery of seventy cells, six transformers, two direct current 110-volt generators, a 5-k.w. rotary converter, Fort Wayne 3-phase alternator, an induction motor, a 6-h.p. motor and a 25-h.p. motor, a Lummer-Brodhem photometer, a Matthews integrating photometer, etc.

The general laboratory is supplied with a number of standard reference works, among which may be mentioned Wenkelmann's Handbuch, Viole's Course de Physique, Wullner's Experimental Physik, Grey's Absolute Measurements in Electricity and Magnetism. A number of the more prominent periodicals in physics are constantly on file, such as Philosophical Magazine, Physical Review, Astrophysical Journal, Wiedemann's Annalen and Beiblaetter, Journal de Physique, Nature, Science, London Electrician, and Electrical World and Engineer, American Journal of Science, Street Railway Review, etc.

Botanical.

The botanical laboratories are on the third floor of science hall. The general laboratory is a room 41 feet by 42 feet, with a semicircular end. It has eleven large windows and a skylight, thus providing excellent light for microscopic work for forty-four students at one time. It is equipped with desk tables and revolving chairs; with two lead-lined aquaria and water fixtures; with abundant cases for books and preserved material, and with microscope cases. There is also a case of drugs for pharmaceutical work.

The histological and physiological laboratory is 20x24 feet, with accommodations for twelve students at one time. Here is a large paraffin bath, tables for reagents, and cases for glassware and chemicals. A dark room 9x12 feet opens off of it. This is fitted with shelves for storing material and serves excellently as a storeroom for material preserved in formaldehyde. It is

fixed for photography and used also for experiments in physiology requiring a dark room.

A private laboratory for the professor in charge is supplied with tables and reagents, and permits undisturbed work.

On the fourth floor is fitted up a culture room 16x16 feet. It contains two lead-lined aquaria, tables, shelves, and a hot-air bath, together with the minor apparatus, making it an excellent place for growing and experimenting with plants.

Botany and zoology have a common lecture room on the second floor, with a seating capacity of nearly 100, and fitted with cases and tables. Here is also a stereopticon and screen fitted for electric light, for illustrating lectures with lantern slides.

The department is equipped with twenty-four compound microscopes, twelve dissecting microscopes, one of the best Minot microtomes, six camera lucidas, and the smaller fixtures necessary for first-class work in preparation and study of slides for the microscope.

Six journals come regularly to the department and the current text and reference books are on its shelves, an eighty-dollar edition of Engler and Prantl's "Die Naturliche Pflanzenfamilien" among the number. There are also appliances for photography and the making of lantern slides, as well as several hundred lantern slides on hand.

The herbarium consists of about 5,000 specimens, representing the bryophytes, pteridophytes and phanerogams. These include the Chicago World's Fair ex-

hibit of Washington, with others added from time to time by exchange and collection. Recently Mr. Burglehaus has presented a collection of 1,500 mounted plants from the Eastern states and Puerto Rico. The department will be glad to get other specimens from teachers and others.

Zoological.

The department of zoology occupies the northern half of the second floor in the science hall, and includes three laboratories.

The general zoological laboratory is semicircular in form and is specially designed to provide an abundance of light for microscopic work. Eleven tables are so arranged as to accommodate forty-four students at a sitting. The center of the room is occupied by a large lead-lined aquarium arranged to contain the living animals required for study. The laboratory is at present provided with ten dissecting microscopes and eighteen compound microscopes, each equipped with high-grade objectives of the necessary powers. For advanced work more powerful lenses are provided, together with additional eye-pieces, substages, condensers and cameras. For the study of histology and embryology the equipment includes an incubator, paraffine bath, a Minot microtome, and all necessary reagents, stains and apparatus. A convenient dark room is provided for microphotography and other lines of photographic work.

The zoological laboratory is richly supplied with material both for dissection and demonstration. A great variety of marine specimens has been procured through the collection and preservation of the animal life found

in Puget Sound and the waters of Alaska and other parts of the Pacific Coast. The extensive lakes adjoining the campus furnish an unlimited supply of fresh-water organisms.

The physiological laboratory adjoins the general zoological laboratory and will accommodate a considerable number of students, providing facilities for the experimental investigation of this phase of biology.

The entomological laboratory is a small room designed to contain the extensive collection of insects, which now comprises many thousands of specimens, derived mostly from the Pacific Coast. Special facilities are offered for the study of the classification and biology of the insect fauna of the state.

An important feature of the work in zoology has been the preparation of collections of typical specimens for the use of the high schools throughout the state. Assistance in the determination of specimens is also offered to teachers and others interested in the natural history of the region.

Geological.

The geological laboratories are three in number and occupy the rooms on the first floor of the science hall, at the right of the main hallway. The largest room, 38x45 feet in size, has been especially designed for mineralogy, but it is used as a laboratory for general geology as well. It is supplied with eight tables, made with tile tops and provided with gas fixtures, which accommodate sixty-four students at one time. For laboratory work in general geology there are working collections of min-

erals, rocks and fossils, and for the work in mineralogy there are several cabinets filled with collections of minerals for descriptive and determinative work, collections of natural crystals and wood models, blowpipe sets, etc.

The petrographical laboratory, 20x22 feet in size, adjoins the one just described. For work in petrography there is provided a lathe fitted with a diamond saw and grinding plate, run by an electric motor, and a Bausch and Lomb petrographical microscope. The room is supplied with two tile-topped tables similar in pattern to those of the mineralogical laboratory. The working collections include a large variety of rock specimens, and a set of thin rock sections for use with the microscope. Leading from this laboratory is a large dark room, well arranged for photographic work.

The laboratory for physical geography, 22x23 feet in size, lies across the hall from the one last described. It is provided with models, maps, diagrams, charts, etc., for practical work in advanced physical geography or physiography. At the present time this room also contains the library and the collections of the State Geological Survey.

Engineering.

The equipment in instruments for surveying is complete for all plane and topographic work. It consists of one Heller & Brightly complete engineer's transit, with stadia; one Buff & Buff complete engineer's transit, with stadia; one Gurley light mountain transit, with solar attachment and Jones' patent latitude arc; two Keuffel & Esser engineer's transits; one Gurley railroad

compass; two 20-inch Gurley wye levels; one 18-inch Buff & Buff wye level; one Buff & Berger inverting dumpey level; one Gurley and one Keuffel & Esser plane table with alidades containing stadia wires; sextant, hand levels, chains, tapes, level and stadia rods, transit poles and other minor but necessary articles.

The campus, large and as yet practically undeveloped, offers unrivaled facilities for all kinds of field work. Much engineering work will be required on the grounds in the subsequent development. The greater part of this can be done by the students in their regular class work. Thus while rendering valuable services to the University, they will have an opportunity for grappling with practical problems seldom offered the undergraduate. The work of each succeeding class will, according to some definite plan, continue that already done, thus in time forming a complete system which will cover the entire grounds.

The drawing rooms are large and well lighted. They contain first-class drawing desks, lock drawers, stools, cabinet, models and a large collection of drawings and blue prints illustrating corrent engineering practice. Drawing boards are furnished to all students.

The hydraulic laboratory is equipped for making complete and thorough tests of small water motors, meters and nozzles.

The blue print room is commodious and well equipped.

The description of the electrical equipment will be

found under the head of *Physical and Electrical,* page 42.

The description of the mechanical equipment will be found under *The New Power House,* page 31.

The structural testing laboratory contains a Riehle 100,000-pound testing machine, with complete appurtenances for tensile, compressive and transverse tests of wood, iron, steel, stone and brick.

A Thatcher's calculating instrument is available for the use of advanced students.

The library contains complete files of the transactions of the American Society of Civil Engineers, and of the Engineering News, besides a fair collection of general engineering books.

Assay Laboratory.

The assay laboratory is located just north of the administration building. One room contains four stationary wind furnaces, 17 inches square; one large double muffle, heated by coal and coke; desks for sixteen students; four ore balances and tables for preparing charges, sampling ore, etc. An adjoining room contains a Hoskins gasoline pressure tank, three burners to heat muffles and fusion furnaces, a Brown cupel machine, two wind furnaces, a motor of 2-h.p. to run a gyratory muller and a jaw crusher, a sampling floor, bucking boards, mortars, pans, lockers, etc.

The balance room is supplied with a fine Keller button balance, sensitive to 1-200 m. g.; Oertling and Becker fine button balances, and two Becker analytical balances.

Wet assaying and general analysis is carried on in a room fitted with gas and water for twelve desks. Two thermo-batteries supply direct current for electrolytic work. Tanks for cyanide tests, a large hood, two pairs of cornet rolls and well supplied stock room complete the equipment.

OBSERVATORY.

The University observatory consists of a dome for the telescope of six-inch clear aperture, a library and computing room, a transit room, a cloak room, a closet for photography, etc.

The present equipment consists of an equatorial telescope of six-inch clear aperture, a Bond sidereal chronometer, and a sextant. The equatorial is furnished with a driving clock, a solar eye-piece, a filar position micrometer, and a set of positive and negative eye-pieces. The optical parts were made by Brashear, and the mountings by Warner & Swasey.

STUDENT ASSOCIATIONS.

The Associated Students of the University of Washington is an organization of the entire student body. The powers of government are vested by its constitution in an annually elected executive committee. This committee decides all questions relating to the student body as a whole, and controls all matters of general interest to the student community. The association also elects a general manager, who has the financial control of all branches of athletics, musical organizations

and of contests in debate and oratory. He has charge of all moneys received as association fees or admission to games and contests, and is the custodian of all property belonging to the association. He is required to give a bond for $4,000. Besides the general manager there is elected a separate manager for the college paper, and for a co-operative student book store. These managers are also bonded, and, like the general manager, are held responsible in all things to the executive committee.

The Student Book Store, located on the first floor of the administration building, is owned and operated by the Associated Students. It handles all the text-books, stationery and supplies, at a reduction from the usual prices.

The Stevens and Badger Debating Clubs are organizations among the young men for the improvement of their members in the art of debate. That frequent practice may be afforded, the membership in each of these clubs is confined to thirty students. The meetings are held once a week, and announcements of subjects for debate and of other matters of interest are made on the bulletin boards of the clubs. One or more inter-society debates are held each year, and from the contestants are largely chosen the University representatives for the intercollegiate debates.

The Athena Debating Club is a similar organization among the young women.

The Interstate Oratorical Association is represented by a branch association in the University.

The King County Bar Association in the spring of

1896 offered a cash prize of $100 to be competed for by students of the Universities of Washington, Oregon and Idaho. The work of maintaining this incentive to improvement in oratory has been done by a voluntary committee of the King County Bar Association, consisting of E. F. Blaine and W. S. Fulton.

Scholarship in Chemistry. A friend of the University has provided a scholarship of $200, to be given to the department of chemistry. The scholarship will be competed for during the year 1904-5 and enjoyed during the year 1905-6. Any student of the department is eligible to appointment. The person securing the scholarship will be selected by the instructors of the department on the basis of scholarship in the courses taken in the department, on scholarship in other departments, and of personality.

The Chemical Journal Club was organized by the instructors and students in the department of chemistry. The members read and discuss the English and German periodicals devoted to the development of chemistry.

The Society of Engineers is an association composed of the students in the college of engineering and the school of mines. Meetings are held once a month, at which original papers are presented by the members or lectures delivered by prominent engineers.

The German Club, organized in the winter of 1903-04, aims to supplement the work of the class-room by making its members better acquainted with the life of modern Germany and by giving them opportunity for German conversation. The work of the club has thus far been done in two sections, but these sections meet

occasionally for a social evening or to listen to an address in German.

The W. T. Harris Club, organized January 29, 1900, is composed to teachers and students in the department of pedagogy. Its purpose is to promote and direct investigation and discussion along such lines as may from time to time be selected or that public educational policy may suggest. The club meets each week.

The University Orchestra was organized in 1898 and has been doing excellent work. This organization is of great assistance, as it furnishes music for the usual programs during the University year. Other musical associations of the University include a women's glee club and a men's glee and mandolin club.

The Young Men's Christian Association and the Young Women's Christian Association have each a branch organization among the students of the University. They give a reception at the beginning of each term, and are active in making the new students feel at home and in assisting them in many ways. This they do, in part, by means of a bureau of information maintained by the two associations jointly. The Young Men's Christian Association now has a regular reading room and headquarters in the men's dormitory. Each association employs a paid secretary.

Four tennis clubs among the young men of the faculty and students control good cinder courts on the campus, where the ordinary playing is provided for and periodical tournaments are held. The young women also have had two cinder courts built for their match games.

Six of the national Greek letter fraternities have established chapters in the University. Of the six fraternities possessing charters, three live in their own houses; the other three live in rented houses. Students in the school of pharmacy have also established an independent fraternity.

Two of the national Greek letter sororities have likewise established chapters in the University.

THE ALUMNI ASSOCIATION.

OFFICERS FOR THE YEAR 1903-1904.

President.....RALPH DAY NICHOLS, PH. B., 1896
Vice President.....OTHILLA GERTRUDE CARROLL, LL. B., 1901
Secretary.....CHARLES A. RUDDY, A. B., 1901
Treasurer.....CAROLINE E. HORTON, A. B., A. M., 1899
Historian.....ADELLA M. PARKER, A. B., 1893

EXECUTIVE BOARD.

MARION EDWARDS, A. B., 1898, *Chairman.*
GEORGE A. COLEMAN, B. S., 1882.
RALPH DAY NICHOLS, PH. B., 1896.

COMMITTEE ON STUDENT AFFAIRS.

HARRY CANBY COFFMAN, A. B., 1899, *Chairman.*
HENRY LINDLEY REESE, A. B., 1899.
MARTIN HARRAIS, PH. B., 1897.

The list of Alumni will be published once in three years. The last list was published in the Catalogue of 1902-03.

WASHINGTON UNIVERSITY STATE HISTORICAL SOCIETY.

There has recently been organized a society with the above title, having officers and trustees as follows: Clarence B. Bagley, president; John P. Hoyt, vice

president; Roger S. Greene, treasurer; Edmond S. Meany, secretary; Cornelius H. Hanford, Thomas Burke, Samuel Hill.

The purposes of the organization are set forth in article III. of the articles of incorporation as follows:

To establish and maintain a society for the collection and preservation of historical facts and records; to gather and preserve memorials of the pioneers and early settlers of the Territory and State of Washington; to purchase, own, hold, enclose, maintain and mark the places of historical interest within this state by suitable and appropriate monuments, tablets and enclosures; to promote and engage in historical research relating to the Indians and Indian tribes; to engage in, carry on and promote historical, antiquarian, archæological, literary and scientific researches and to publish the results of the same; to collect, collate, bind and put in convenient form for use and preservation the papers, documents, materials and records collected by the society; to publish, provide for and superintend the publication and distribution of any papers, manuscripts, documents and records collected by the society; to establish and maintain a library; to encourage and promote the study of history and especially of the history of the Territory and State of Washington, at the University of Washington; to act as trustee and custodian of any historical, literary, scientific or other books, documents or property entrusted to its keeping; to purchase or construct a suitable building for safely housing and preserving the historical and other records belonging to the society or committed to its care and for its use and accommoda-

tion in all other respects; to receive, accept and fully acquire, by purchase, lease, gift or otherwise, lands, tenements and hereditaments, and all such personal property as it may deem desirable for its interests, including stocks in other corporations, promissory notes, bonds, mortgages, bills receivable and choses in action, and to sell and dispose of the same (except that the papers, books, documents, historical and other records belonging to the society shall never be sold, mortgaged or disposed of, but duplicates or superfluous copies thereof may be exchanged or otherwise disposed of); to borrow money and to make and deliver its promissory notes or other agreements to pay money, and to issue and sell its negotiable bonds and secure the same by making, executing and delivering mortgages and deeds of trust of its real property, or any thereof, for the payment or performance of all notes, bonds, contracts and other obligations which it may at any time make or incur; and to do each and every act and thing whatsoever which may at any time be or become necessary, convenient and advisable for it to do, in order to accomplish and carry out all or any of the objects or purposes or exercise any or all of the powers aforesaid, to the same extent that an individual or natural person might or could do in the premises; as well as each and every of the powers expressly or impliedly conferred in or by the laws of the State of Washington relating to the organization and management of such associations.

EXPENSE OF STUDENTS.

Tuition is free to all students of the State of Washington in all colleges of the University, except in Medicine and Law. For non-residents of Washington the tuition is $10 a semester. In the School of Law the tuition is $20 a semester, for all students.

The fees charged to graduates are $5 for each one receiving a baccalaureate or higher degree, or a diploma in pharmacy, and $3 for each one receiving a normal diploma.

The fees charged in the laboratories simply cover the cost of materials used by the students. The charges are specified under the general subject of Laboratory Fees.

All laboratory and locker fees, room-rent, and tuition fees in the School of Law must be paid in advance to the registrar of the University.

In the two dormitories, one for men and one for women, board and rooms are furnished at cost. For the past year the price of board has been $13.50 per month. Rooms, with light and heat, furnished, excepting bedding, cost $12 a semester. A deposit of $15, which is returned at the end of the year, must be made with the registrar in advance by all students desiring to board at the dormitory. The charge to each student is large enough to maintain the dormitories in a manner that will ensure comfortable rooms, wholeosme food and generally healthful surroundings. The University does not desire to make any profit from these dormitories.

There is always a large number of students who prefer to obtain homes with private families. There are many opportunites for this, and the registrar is always ready to give information and assistance to students seeking such places. In the past the expense of board and lodging with private families has ranged from $15 to $25 a month.

Many students who have found it necessary to support themselves while at the University have been enabled to do so by securing occupation of various sorts in the city. There is a limited amount which the Board of Regents is disposed to give students. This includes assistance in the library, the laboratories, the engine rooms, and janitor work. Students needing work to help pay their way through the University are given every possible aid by the Faculty Committee on Student Assistance. There is no reason why any ambitious and capable young man or woman desiring an education, should not obtain it at the University of Washington.

LABORATORY FEES.

The University does not desire to make any profit from the fees paid by the students for work in the laboratories. In many cases no fees are charged, except for injury to apparatus, when payment for the cost of the injury is required. The other fees charged are based upon the average cost of material used in the laboratories. Laboratory fees are payable to the registrar in advance. These fees in the several laboratories are as follows:

Chemistry.—At the beginning of each semester all

students in chemistry will be required to make a deposit of ten dollars ($10) with the registrar before being assigned to their desks except in chemistry 0, where the deposit will be five dollars ($5). Of these deposits one-half will be deducted to pay cost of chemicals, gas, water, etc., and the remainder, less breakage, will be returned.

Pharmacy.—All students in Pharmacy will be required to make a deposit of ten dollars ($10) each semester during their Junior year and fifteen ($15) during their Senior year. Of this amount one-half will be deducted to cover cost of drugs, and the remainder, less breakage, will be returned. These deposits are in addition to those required in other departments.

Physical and Electrical.—Students are required to make a deposit of five dollars ($5) with the registrar. From this deposit one dollar ($1) for each hour of credit is deducted to pay for material and repair of apparatus, and the remainder, less breakage, is returned.

Botanical.—Material for dissection, stains, alcohol, and other reagents, and typewritten laboratory outlines are furnished each student, for which a fee is collected as follows: One dollar for each hour's credit carried through the year, except research work, where the fees are determined by the nature of the work done.

Each student is furnished with a key to a drawer in his laboratory table, for which a deposit of twenty-five cents must be made. This is refunded upon return of the key.

Zoological.—For the courses in Zoology, involving

laboratory work, a fee is required to cover the estimated cost of the laboratory outlines, material and reagents used by the student. For the regular courses, the amount is one dollar for each hour's credit carried through the year. In research work the amount of the fee is subject to special arrangement, according to the nature of the investigation.

Mineralogical.—In mineralogy a fee of one dollar a term is charged, besides which a deposit of five dollars is required as surety for the return of the blowpipe outfits which are loaned to students.

Assaying.—In assaying there is a laboratory fee of five dollars for each course. A deposit of ten dollars is also required to cover cost of material furnished to students. If, at the end of the term, the student has not drawn out material to the amount of ten dollars, the balance is refunded. If, however, he has exceeded that amount, he is expected to pay the difference.

Structural materials.—A deposit of three dollars will be required for the course Structural Materials 10. This is to cover the cost of materials used. The unexpended balance will be returned.

Shop Work.—A deposit of three dollars is required of all students in wood work. A deposit of two dollars is required of all students in iron work.

DISCIPLINE.

Students are expected to conduct themselves as good citizens, and to perform their work in the University conscientiously. Contravention of these principles will

lead to admonition, to suspension, and when students are incorrigible, to expulsion.

ADDRESSES AT ASSEMBLY.

Addresses by members of the faculty and by distinguished scholars and men of affairs are given every Monday before the student body in Denny Hall. By this means the work of the class-room is supplemented, and the students obtain a broader outlook upon life through the light of practical experience. The following addresses were given during 1903-4:

Sept. 23—Annual opening address—"Patriotism"—Gen. Hazard Stevens of Massachusetts.

Sept. 28—Dramatic Recital—Mr. Wadsworth Harris of the Ward-James Company.

Oct. 5—"The Study of the Bible"—Mr. James Lynch.

Oct. 12—"The Student and the Library"—Mr. Charles W. Smith.

Oct. 19—"How Man is Educated"—Dr. Richard C. Boone, City Superintendent of Schools, Cincinnati, Ohio.

Oct. 26—"Nootka"—Prof. Edmond S. Meany.

Nov. 2—"College Spirit"—Mr. Charles M. Best.

Nov. 9—"Russia in the East"—Prof. Geo. H. Alden.

Nov. 16—"Caring for the Wounded in the Civil War"—Hon. Joseph Shippen.

Nov. 23—"The Student Volunteer Movement"—Mr. Nathan Wilbur Helm of Princeton. An address by Chief Joseph of the Nez Perces.

Nov. 30—"The Panama Incident and International Law"—Dean John T. Condon.

Dec. 7—"The Eastern Problem"—Mr. Yoshitaro Nakamura.

Dec. 14—Concert by the Orchestra, the Band and the Choral Union.

Jan. 4—"Transmission of the Ancient Literatures"—Prof. Thomas K. Sidey.

Jan. 11—"Morality Among the Indians"—Ex-Congressman William F. Prosser.

Jan. 18—"A Few Citizens Needed"—Dr. M. A. Mathews.

Jan. 25—"Radium"—Prof. F. A. Osborn.

Feb. 1—"The Hague Tribunal"—Mr. Walter S. Penfield.

Feb. 15—"The Rescue of Miss Ellen Stone"—Dr. Jas. H. House of Salonika, Turkey.

Feb. 22—Celebration of the Natal Day of the University—Addresses by representative Alumni.

Feb. 29—"Mercy Work"—Miss Emma Page.

March 7—"The Worth of an Ideal"—Hon. Oliver W. Stewart of Illinois, Chairman of the National Prohibition Committee.

March 14—"William Ewart Gladstone"—Dr. J. P. D. Llwyd.

March 21—"The Origin of American Institutions"—Dr. I. D. Driver of Eugene, Oregon.

April 4—"The Living Latin of Today"—Prof. Pierre J. Frein.

April 11—"The Boer War"—Captain W. S. O'Donnell and General G. D. Joubert.

April 18—"The Ideals of Life"—President W. T. Hogue of Greenville College, Illinois.

April 25—Annual Nomination of Student Officers.

May 2—"Plans for Campus Day"—Prof. E. S. Meany.

May 9.—"The Seattle Park System"—Mr. Chas. E. Fowler.

May 16—"The Greatest of the Venitians"—Rev. Edward Lincoln Smith.

May 23—"The Annual Address"—President Kane.

May 30—"Heroism"—Rev. Frederick C. Lee.

June 6—Annual Class Promotion.

INSTITUTES AND LECTURES.

The various members of the University faculty hold themselves ready to respond to calls for lectures before institutes, University extension centers, clubs, and assemblies, whenever such service does not interfere with the regular work in the institution. Several of the instructors who have had experience in the lecture field and in institute work are ready to give regular instruction in the institutes of the state and in educational organizations. Calls for work should be addressed to the individual professors, or to the secretary of the faculty.

ORGANIZATION OF THE UNIVERSITY.

The UNIVERSITY OF WASHINGTON embraces:—

The College of Liberal Arts.
The College of Engineering.
The School of Mines.
The School of Pharmacy.
The School of Law.

The courses leading to baccalaureate degrees in the College of Liberal Arts, the College of Engineering, and the School of Mines, are arranged to cover a period of four years. The course in the School of Pharmacy covers two years, and an advanced course takes two years longer. The courses leading to masters' degrees are not less than one year.

In the College of Liberal Arts are given the degrees of Bachelor of Arts (A. B.) and Master of Arts (A. M.); in the College of Engineering, Bachelor of Science (B. S.), Civil Engineer (C. E.), Mechanical Engineer (M. E.), and Electrical Engineer (E. E.); in the School of Mines, Bachelor of Science (B. S.), and Engineer of Mines (E. M.); in the School of Pharmacy, Graduate in Pharmacy (Ph. G.), Pharmaceutical Chemist (Ph. C.), and Bachelor of Science (B. S.); and in the School of Law, Bachelor of Laws (LL. B.).

The School of Medicine is not yet organized.

DIVISION OF THE YEAR.

The year is divided into two semesters. Admission will be granted at the beginning of either semester to students properly prepared, but freshmen should always enter, if possible, at the beginning of the first semester.

ADMISSION.

1. Regular Admission.

Requirements for the years 1903-4 to 1906-7 inclusive.

Admission to the freshman class may be secured in two ways:

1. Admission by examination.
2. Admission from an accredited school.

1.—*Admission by Examination.*

To be admitted in this way, students must pass an examination in specified and optional subjects amounting in the aggregate to fifteen units. The specified subjects are required of all students.

Full details of the ground each subject covers are found under the head of Suggestions for Preparation in the catalogue or in the circulars of Suggestions to Secondary Schools.

To count as a "unit" a subject must be taught four times a week, in periods of not less than forty-five minutes, for a school year of not less than thirty-six weeks.

Specified Subjects.	*Optional Subjects.*
English, 4 units.	Latin, 4 units.
Mathematics, 2½ units.	Greek, 2 units.
General History, 1 unit.	German, 2 units.
Physics, 1 unit.	French, 2 units.
Civics, ½ unit.	Solid Geometry, ½ unit.
Total, 9 units.	Trigonometry, ½ unit.
	American History, ½ unit.
	Greek and Roman History, 1 unit.
	Physical Georgraphy, ½ unit.
	Physiology, ½ unit.
	Zoology, ½ or 1 unit.
	Botany, ½ or 1 unit.
	Chemistry, 1 unit.
	Geology, 1 unit.
	Mechanical Drawing, 1 unit.

Note 1. In English the requirement of four units may be satisfied by three years' work of five recitations a week for thirty-six weeks.

Note 2. In addition to the specified subjects a student must offer from the optional studies certain units determined by each particular course as follows:

For the Classical course, four units of foreign language, not less than two being Latin.

For the Literary course, four units of foreign language.

For the Scientific course, two units of foreign language.

For the Engineering course, two units of foreign language (modern language preferred), one unit of Chemistry, one-half unit of Solid Geometry.

Suggested Outline of Courses for Entrance.

Group I. (*Classical.*)	Group II. (*Literary.*)	Group III. (*Scientific.*)	Group IV. (*Engineering.*)
First year:			
English.	English	English.	English.
Algebra.	Algebra.	Algebra.	Algebra.
Physiography.	Physiography.	Physiography.	Physiography.
Latin.	Latin.	Option.	Mechanical Drawing and Manual Training or Option.
Second year:			
English.	English.	English.	English.
Plane Geometry.	Plane Geometry.	Plane Geometry.	Plane Geometry.
General History.	General History.	General History.	General History.
Latin.	Latin.	Biology.	Biology.
Third year:			
English.	English.	English.	English.
Physics.	Physics.	Physics.	Physics.
Latin	Latin.	German or French.	German or French.
Greek.	Algebra (½ yr), and Solid Geometry or Option (½ yr)	Algebra (½ yr), and Solid Geometry or Option (½ yr)	Algebra (½ yr), and Solid Geometry (½ yr)
Fourth year:			
English.	English.	English.	English.
Latin.	Latin.	2d yr. German, or 2d yr French	2d yr. German, or 2d yr French
Civics and Greek and Roman History	Civics and Greek and Roman History	Civics and American History	Civics and American History
Greek.	Option.	Science.	Chemistry.

SUGGESTIONS FOR PREPARATION.

The following suggestions for preparation will enable students intending to enter to understand exactly what is expected under the head of each subject. Attention is

called to the discussion of the methods of teaching the various high school subjects given in The University Bulletin, Series IV, Numbers 1 and 2.

I.—ENGLISH.

English A: Reading and Practice.—A certain number of books will be set for reading. The candidate will be required to present evidence of a general knowledge of the subject-matter, and to answer simple questions on the lives of authors. The form of examination will usually be the writing of a paragraph or two on each of several topics, to be chosen by the candidate from a considerable number—perhaps ten or fifteen—set before him in the examination paper. The treatment of these topics is designed to test the candidate's power of clear and accurate expression, and will call for only a general knowledge of the substance of the books.

In preparation for this part of the examination, it is important that the candidate shall have been instructed in the fundamental principles of rhetoric.

The books set for this part of the examination in the years 1903-1905 are:—

Shakespeare's Merchant of Venice and Julius Cæsar; The Sir Roger de Coverly Papers in The Spectator; Goldsmith's Vicar of Wakefield; Coleridge's Ancient Mariner; Scott's Ivanhoe; Carlyle's Essay on Burns; Tennyson's Princess; Lowell's Vision of Sir Launfal; George Eliot's Silas Marner.

English B: Study and Practice.—This part of the examination presupposes more careful study of each of the

works named below. The examination will be upon subject-matter, form, and structure, and will also test the candidate's ability to express his knowledge with clearness and accuracy. In addition the candidate may be required to answer questions involving the essentials of English grammar, and questions on the leading facts in those periods of English literary history to which the prescribed works belong.

The books set for this part of the examination in the years 1903-1905, are:—Shakespeare's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison.

II.—MATHEMATICS.

1. *Algebra.*—The amount of work in algebra should be at least five recitations a week for a year and a half. It should include factoring, fractions, simple equations, both numerical and literal, simultaneous equations, evolutions, surds, fractional and negative exponents, quadratic equations, ratio and proportion. Wentworth's New School Algebra, Fisher & Schwatt's School Algebra, Wells' Essentials of Algebra are good books to use in preparation for this subject.

Students entering the University with credit in algebra not exceeding one unit, will be required to pass an examination in the work outlined above before taking freshman algebra.

Credit cannot be allowed for algebra studied in the grades below the high school.

2. *Plane Geometry.*—This includes all of plane

geometry, as given in the usual text-books, like those of Milne, Wentworth and Wells. It is absolutely essential that the student should have a thorough drill in original theorems, problems and numerical exercises.

The amount of work in plane geometry should be at least five recitations a week for a year.

3 and 4. *Solid Geometry and Plane Trigonometry.*—Books VI, VII and VIII of Milne's Geometry, or equivalent, should be carefully studied. The work should include original theorems, problems and numerical exercises. The work in plane trigonometry should include the solution of plane triangles and logarithmic computation.

III—HISTORY AND GOVERNMENT.

1. *American History.*—Study the history of the United States and the general facts of physical, political and descriptive geography. McLaughlin's History of the American Nation; Montgomery's Student's American History; and Channing's Student's History of the United States are recommended as good works for preparation.

2. *Civics.*—A careful study of John Fiske's Civil Government should be made. The candidate will be examined on the topics of the text and be required to write an essay on one of them assigned at the time of the examination.

3. *General History.*—Myer's General History is suggested as text-book in general history. This subject will require one full year of high school or academic training for university entrance.

4. *English History.*—Larned's History of England, Gardiner's Student's History of England and Montgomery's Leading Facts of English History are recommended as text-books. There should be collateral reading in more extensive works, such as the Epoch monographs, Gardiner's larger history, Macaulay and Green. At least one year should be spent in preparation.

5. *Greek and Roman History.*—Myer's Ancient History is recommended as one of the best texts for preparation in this subject. The first 151 pages are devoted to the history of the Eastern Nations down to 527 B. C., and the rest of the book is given to Greece and Rome. Another excellent work in this field is Wolfson's Essentials in Ancient History, published in 1903 by the American Book Company. The subject will make a full year's work in preparation.

IV.—BOTANY.

As stated in the requirements for admission, botany may be offered as one unit or as one-half unit. In the former case it should consist of at least two recitations and four laboratory hours a week for nine months; in the latter, similar work for half that period.

The student should be familiar with the gross anatomy of the flowering plants, and should have some knowledge of plant physiology and ecology. He should have at least enough experience with the compound microscope to enable him to use it properly in the laboratory, and above all he should have a good set of drawings and laboratory notes as evidences of his year's work.

The work and methods outlined in any of the following texts will serve to indicate what is desired: Spaulding's Introduction to Botany; Atkinson's Elementary Botany; Coulter's Plant Studies or his Plant Relations; Barnes' Plant Life; Bergen's Foundations of Botany.

V.—ZOOLOGY.

The student applying for a full unit of entrance credit in this subject must give evidence of nine months' work under a competent teacher, in the form of notes and drawings illustrating the course pursued. He should be familiar with the general structure of the more common forms of animal life and is expected to have some knowledge of the manipulation of the compound microscope. As a basis for preparation the use of Packard's Zoology or Jordan's Animal Life, accompanied by practical laboratory work, is suggested.

VI.—PHYSICS.

An amount represented by Carhart & Chute's Physics should be given in the senior year and be preceded by algebra and plane geometry.

At least fifty hours of quantitative laboratory work must accompany the study of the text. The following list of exercises taken from Chute's Laboratory Manual indicates the problems desired: 30, 31, 35, 36, 44, 46, 48, 52, 58, 63, 64, 70, 73, 79, 80, 86, 90, 94, 104.

VII.—LATIN.

Freshman Latin is the fifth year's work in the subject. The four years' work done in the high school

must be the equivalent of the Latin course outlined by the State Board of Education and cover substantially the following courses and subjects:

First Year.—Collar and Daniell's First Year Latin, or equivalent. Subjects that must be mastered are pronunciation (with accent and quantity of vowels), regular declensions and conjugations, the vocabularies (with etymologies and English derivatives), simple rules of syntax, simple translation and Latin writing.

Second Year.—Second Year Latin, Greenough, D'Ooge and Daniell; and Latin Composition, D'Ooge. Part II of Second Year Latin should be covered, with selections from Part I, and work should be done in Latin Prose Composition, the equivalent of one day's work a week throughout the year. If Caesar is used instead of Second Year Latin, four books should be read and prose work done one day in the week with Jones' Latin Prose, Daniell's New Latin Composition, Part I, or Riggs-Scott's In Latinum (Caesar). The student should be familiar with the life and times of Caesar, the Roman army and methods of war.

Third Year.—Six of Cicero's Orations, with prose work one day in the week throughout the year. The prose work may be done with the Cicero section of the prose books recommended for Caesar. The student should be familiar with the life and times of Cicero, the subject of Roman oratory, Roman institutions, particularly the courts and Roman public officials. Through reading independently, the student should be able to translate an average passage of Caesar or Cicero at sight, when these authors are completed.

Fourth Year.—Vergil, six books of the Aeneid. Special attention should be paid to prosody, the syntax of Vergil, mythology, and the history and purpose involved in the poem.

VIII.—GREEK.

First Year.—White's First Greek Book. Drill in inflections and constructions. Goodwin and White's Xenophon's Anabasis, Book I. Exercises in translating English into Greek.

Second Year.—Xenophon's Anabasis, Books II-IV. Seymour's Iliad of Homer, Books I-III. Woodruff's Greek Prose Composition. Sight translation.

IX.—GERMAN.

Students entering with two years of High School German should know the elements of the grammar and be able to translate simple sentences from English into German. The reading course should have covered at least 300 pages.

Students who offer more than two years of the language should have read some German classics. Teachers will find valuable suggestions concerning method and the selection of texts in the Report of the Committee of Twelve, published by D. C. Heath & Co.

X.—FRENCH.

A good knowledge of grammar, such as may be acquired from Frazer and Squair's French Grammar, or an equivalent, is necessary.

The student must have the ability to use readily any

of the elements of the language which are essential to the continuation of his studies in this department. Constant drill in the composition of easy French sentences should be a large part of the student's training. Dictation should be given frequently enough to familiarize the ear with the spoken language, and emphasis should be laid upon the accuracy of pronunciation.

The reading of not less than three hundred pages of easy French prose, from at least three authors, should give the required ability to translate any passage of moderate difficulty. Practical exercises in syntax should be given in connection with the texts read.

XI.—CHEMISTRY.

The equivalent of one year's work in the high school. The text recommended is Hessler and Smith. Laboratory work is required and the student must offer satisfactory evidence of a reasonable amount of work done and approved by his instructor in the preparatory school.

XII.—PHYSICAL GEOGRAPHY.

The preparation on this subject should include at least one full year's work in elementary geology or physiography. Shaler's First Book in Geology, and Davis' or Tarr's Physical Geography are examples of good texts.

XIII.—DRAWING.

The equivalent of one year's work in mechanical or freehand drawing.

XIV.—PHYSIOLOGY.

Study of the elements of the mechanics, the physics

and the chemistry of the living body, as outlined in Walker's or Hutchinson's Physiology. The text-book should be accompanied by experiments, dissection of animals and organs, and a certain amount of study of the tissues with the compound microscope.

2.—Admission From an Accredited School.

Upon request of the principal of any high school or academy whose course of study embraces in kind and extent the subjects required for admission to the College of Liberal Arts, a committee of the faculty will visit said school and report upon the quality of the instruction and equipment. If the report is favorable, any graduate of that school will be admitted without examination from courses accredited.

Students, in order to be admitted without examination, must bring with them a full statement of their high school or academy studies, signed by the proper authorities.

As a rule, the accredited school list of other state universities will be accepted by the University of Washington. Graduates of accredited schools, in other states, will present diploma or certified record of work as in the case of local students.

LIST OF ACCREDITED SCHOOLS.

The following high schools and academies have been accredited for the year. Graduates of the class of 1904 in courses named will be admitted to the freshman class of the College of Liberal Arts without examination. Other students from these schools will be accred-

ited individually as their courses meet the entrance requirements of the University:

Aberdeen—
Classical.

Ballard—
Classical; scientific.

Bellingham—
(Whatcom)
Classical; scientific.
(Fairhaven)
Classical; scientific.

Centralia—
Latin; literary.

Chehalis—
Latin.

Colfax—
Elective system.
See Tacoma.

Davenport—
Classical.

Dayton—
Classical.

Everett—
Latin; scientific.

Kent—
Classical; scientific.

La Conner—
Latin; scientific.

North Yakima—
Classical; Latin; scientific.

Olympia—
Latin; literary.

Port Angeles—
Latin.

Port Townsend—
All courses.

Puyallup—
Classical; scientific.

Seattle—
College preparatory; individually.

Snohomish—
Elective system.
See Tacoma.

Spokane—
Classical, literary, scientific, engineering.

Tacoma—
Elective system; students accredited as their courses meet requirements.

Vancouver—
All courses.

Walla Walla—
Classical; literary.

Waterville—
Classical; scientific.

The above schools have been visited at least once during the year by a member of the committee on accredited schools. The rules governing the accrediting of schools will be sent upon application to the committee.

II.—ADMISSION AS SPECIAL STUDENTS.

Persons who are at least eighteen years of age will be allowed to enroll for special courses of study, on giving satisfactory evidence of their fitness to pursue the particular courses which they desire to elect. Such students will be classified, as in the case of regular students, on the basis of the term hours which have been entered to their credit on the University records. They will have all the privileges and be subject to the regulations of the members of the class in which their credits rank them. Special students are not eligible for degrees.

III.—ADMISSION TO ADVANCED STANDINGS.

Students from classes above the freshmen in other colleges of recognized rank, who present letters of honorable dismissal may be admitted to the advanced standing for which their training seems to fit them. No advanced credit will be given for work done in institutions whose standing is unknown, except upon examination. Definite advanced standing will not be given until the student has been in residence for a term.

REGISTRATION.

Registration Day is the first and second days of each semester. A student is to present himself before the Committee on Admission and be assigned to the proper class officer and given the necessary blank enrollment forms.

COLLEGE OF LIBERAL ARTS.

THE FACULTY.

THOMAS FRANKLIN KANE, PH. D.
(Johns Hopkins University),
President.

HENRY LANDES, A. M.
(Harvard University),
Professor of Geology and Mineralogy.

EDMOND STEPHEN MEANY, M. L.
(University of Wisconsin),
Professor of History.

J. ALLEN SMITH, PH. D.
(University of Michigan),
Professor of Political and Social Science.

*ARTHUR RANUM, A. B.
(University of Minnesota),
Professor of Mathematics and Astronomy.

ARTHUR R. PRIEST, A. M.
(De Pauw University),
Professor of Rhetoric and Oratory.

HORACE G. BYERS, PH. D.
(Johns Hopkins University),
Professor of Chemistry.

*CHARLES W. VANDER VEER, Director of Gymnasium.
Professor of Physical Culture and Hygiene.

CAROLINE H. OBER,
Professor of Spanish.

TREVOR C. D. KINCAID, A. M.
(University of Washington),
Professor of Zoology.

*Retires August 1, 1904.

FREDERICK M. PADELFORD, PH. D.
(Yale University),
Professor of English Literature.

ALBERT H. YODER, A. B.
(Indiana University),
Professor of Pedagogy.

ARTHUR SEWALL HAGGETT, PH. D.
(Johns Hopkins University),
Professor of Greek.

FREDERICK ARTHUR OSBORN, PH. B.
(University of Michigan),
Professor of Physics and Director of the Physical and Electrical Laboratories.

WILLIAM B. SAVERY, PH. D.
(Harvard University),
Professor of Philosophy.

DAVID THOMSON, A. B.
(University of Toronto),
Professor of Latin.

JAMES EDWARD GOULD, PH. B.
(University of Washington),
Assistant Professor of Mathematics.

OTTILIE G. BOETZKES, A. M.
(University of Washington),
Assistant Professor of Modern Languages.

HENRY G. KNIGHT, A. B.
(University of Washington),
Assistant Professor of Chemistry.

PIERRE JOSEPH FREIN, PH. D.
(Johns Hopkins University),
Professor of French.

THEODORE C. FRYE, PH. D.
(University of Chicago),
Professor of Botany.

HERBERT D. CARRINGTON, PH. D.
(University of Heidelberg),
Professor of German.

GEORGE H. ALDEN, PH. D.
(University of Wisconsin),
Assistant Professor of History.

THOMAS K. SIDEY, PH. D.
(University of Chicago),
Assistant Professor of Latin and Greek.

CHARLES H. GORDON, PH. D.
(University of Chicago),
Acting Professor of Geology.

Instructors and Assistants.

HENRY C. DAVIS, A. B.
(South Carolina College),
Instructor in Rhetoric and Oratory.

JEAN WOLD,
Instructor in Physical Culture and Director of Gymnasium for Women.

HENRY L. BRAKEL, A. B.
(Olivet College),
Instructor in Physics.

*W. LEE LEWIS, A. B.
(Stanford University),
Instructor in Chemistry.

PAUL HOPKINS, A. M.
(University of Washington),
Instructor in Chemistry.

ROBERT M. GARRETT, A. M.
(University of Washington),
Assistant in English.

CHARLA A. H. BLODGETT, A. B.
(University of Washington),
Assistant in Spanish.

DAVID H. WOLFLE, A. B.
(University of Oregon).
Assistant in Physics.

*Retires August 1, 1904.

Under-Graduate Assistants.

DONALD F. MCDONALD,
Assistant in Geology.

NORMAN P. LAWSON,
Assistant in Political Science.

CHARLES A. NELSON,
Assistant in Zoology.

MARY G. O'MEARA,
Assistant in Pedagogy.

ANNA E. COREY,
Assistant in Botany.

CLAUDE A. LINK,
Assistant in Chemistry.

PURPOSE.

The College of Liberal Arts is intended to furnish a general training in language, literature, science and philosophy, of the same standard as that set by the oldest colleges of this country.

Throughout the course the student has large liberty in chosing his subjects, but through the advice of some member of the faculty he is guided in everything after the general direction of his work has been once determined.

ADMISSION.

Students may be admitted to the College of Liberal Arts in the two ways indicated on page 65.

COURSE OF THE COLLEGE OF LIBERAL ARTS.

The requirement for graduation from the College of Liberal Arts is the satisfactory completion of subjects aggregating one hundred and twenty hours, exclusive

of eight credits in physical culture required of every student.

The unit hour is used to represent one recitation a week for a period of one semester. A subject requiring four hours a week for one semester represents four hours; if it requires four hours a week for one year, it represents eight hours.

Plan of the Course.

The general plan below shows how the one hundred and twenty hours are to be divided. The numerals indicate various subjects in each department, which are described in full under the departmental statements, page .... and following.

Classical.	*Hours.*	*Literary.*	*Hours*	*Scientific.*	*Hours.*
Ancient Languages.	24	Anc. or Mod. Lan.	24	Modern Language..	16
English	12	English	12	English	12
Mathematics	4	Mathematics	4	Mathematics	4
Pol. Econ. or Hist.	8	Pol. Econ. or Hist.	8	Pol. Econ. or Hist.	8
Philosophy	8	Philosophy	8	Philosophy	8
Science	8	Science	8	Science	16
	64		64		64

Major 24 hours. Elective to make total of 128 hours, including 8 hours of Gymnasium.

Requirements by Years.

Classical—		*Literary*—		*Scientific*—	
Freshman.		Freshman.		Freshman.	
Latin	8	Lat. or Mod. Lan..	8	Modern Language..	8
Greek	8	Science	8	Science	8
English	4	English	4	English	4
Mathematics	4	Mathematics	4	Mathematics	4
Science	8	Elective	8	Elective	8
Sophomore.		Sophomore.		Sophomore.	
Latin or Greek*...	8	Lat. or Mod. Lan..	8	Modern Language..	8
English	8	English	8	English	8
Pol. Econ. or Hist.	8	Pol. Econ. or Hist.	8	Pol. Econ. or Hist.	8
Elective	8	Elective	8	Elective	8
Junior.		Junior.		Junior.	
Philosophy	8	Philosophy	8	Philosophy	8
Major		Major		Major	
Elective		Elective		Elective	
Senior.		Senior.		Senior.	
Major		Major		Major	
Elective		Elective		Elective	

*For graduation from the classical course students must have finished Greek courses 1 to 4 (or an equivalent) and courses 5 and 6 in addition.

SUMMARY OF THE COURSE.

It will be seen that while every line of study is represented in the foregoing course, the student is given considerable freedom in choosing specific subjects, and that wide opportunities for developing individuality and preparing for a specialty or for professional study are likewise afforded.

MAJOR AND COLLATERAL STUDIES.

At the beginning of his junior year every student is required to select a major study. He then has the head of that department as his adviser and must consult him with regard to every step in his course. The student must then do work in his major study, which, with the addition of the work already done in this study, will amount to at least twenty-four hours.

Degrees.

Students who complete the course of the College of Liberal Arts will receive the degree of Bachelor of Arts (A. B.).

Degree With Honors.

A degree with honors in his major study will be conferred upon a student who has attained a grade of A in his major department, an average grade of B+ in other departments, and has never been conditioned in any subject.

Early in May each head of a department shall bring to the attention of the committee on honors such seniors making majors in his department as he thinks may be eligible for honors.

A student is not allowed to take honors in more than one subject.

The following is the system of grades:

A	:	93-100 Per cent.
B+	:	85-92.
B	:	75-84.
B—	:	70-74.
C	(conditioned) :	59-60
D	(failed) :	Below 50.

THE NORMAL DIPLOMA.

It is the proper function of the University, as the head of the system of public instruction, to furnish properly trained persons to act as superintendents, principals and assistants in the larger public schools, and as instructors in high schools and academies. It is hoped, by giving instruction in the theory and art of teaching, that these schools may be brought into closer relations with the University. To this end a normal diploma will be granted to students taking a baccalaureate or higher degree in the College of Liberal Arts, who shall have completed eight hours of prescribed work in the department of pedagogy, provided they give satisfactory evidence of their fitness for teaching. These diplomas are equivalent to the life diplomas issued by the state superintendent of public instruction.

MASTERS' DEGREES.

The degree of Master of Arts (A. M.) or Master of Science (M. S.) is conferred upon graduates of the University, and upon others who have had an equivalent training of one year of graduate work, and on the presentation of an approved thesis, and the passing of a satisfactory examination.

DEPARTMENTS OF INSTRUCTION.

GREEK.

PROFESSOR HAGGETT AND ASSISTANT PROFESSOR SIDEY.

The general plan of the courses is as follows: Courses 1 to 4 are intended for students who do not present Greek for entrance and are preparatory to the other courses. In these courses special attention will be paid to the mastery of the fundamental forms and constructions of the language, to the acquisition of a vocabulary sufficient for fairly easy and rapid translation, and to a general knowledge of the language sufficient for the translation of simple English into idiomatic Greek. All students who wish to enter the classical department are strongly urged to present the substance of Courses 1 to 4 for entrance. In the remaining courses more attention will be given to the reading of Greek as literature and to the life and thought of the Greeks.

1.—**Elementary Greek.**—For beginners. (T. W. Th. F., 8:30. First Semester. No credit allowed if presented for entrance.)

PROFESSOR HAGGETT OR ASSISTANT PROFESSOR SIDEY.

2.—**Elementary Greek.**—Continuation of Course 1; Xenophon's Anabasis, Book I; Greek composition. (T. W. Th. F., 8:30. Second Semester. No credit allowed if presented for entrance.)

PROFESSOR HAGGETT OR ASSISTANT PROFESSOR SIDEY.

3.—**Xenophon.**—Anabasis, Books II-IV; Greek composition; sight translation. (M. T. Th. F., 10:20. First Semester. No credit allowed if presented for entrance. Prerequisite 2.)

PROFESSOR HAGGETT.

4.—**Introduction to Epic Poetry.**—Homer's Iliad, Books I-III with special reference to Homeric grammar and prosody. (M. T. Th. F., 10:20. Second Semester. No credit allowed if presented for entrance. Prerequisite, 3.)

PROFESSOR HAGGETT.

5.—**(a) Advanced Course on Epic Poetry.**—Rapid reading of selections from Homer's Odyssey with frequent exercises in

translation at sight; careful reading of the rest of the Iliad and Odyssey in the metrical translations; study of the prehistoric age of Greece and the history of epic poetry; lectures and collateral reading.

(b) **Introduction to Greek Historical Prose.**—Translation of selections from Herodotus with frequent exercises in translation at sight; the history of Greece in outline from the prehistoric period to the close of the Persian war; lectures and collateral reading. (M. W. Th. F., 9:25. First Semester. Prerequisite, 4.) PROFESSOR HAGGETT.

6.—(a) **Introduction to Greek Philosophical Prose.**—Translation of Plato's Apology and Crito, with sight reading in Xenophon's Memorabilia; the history of Greece in the Periclean Age and the Peloponnesian War as a background for the study of the life of Socrates; outline of the history of Greek philosophy to the time of Plato; lectures and collateral reading.

(b) **Hellenistic Greek.**—Selections from the New Testament; collateral reading and the writing of essays. In 1905 the gospel according to Mark will be read and interpreted (M. W. Th. F., 9:25. Second semester. Prerequisite, 5.) PROFESSOR HAGGETT.

7.—**Introduction to Lyric and Tragic Poetry.**—(a) Translation of selections from the elegiac, iambic, and melic poets; history of lyric poetry; lectures and collateral reading.

(b) Translation of Euripides' Alcestis or Sophocles' Antigone, with the reading of other tragedies in the metrical translations; study of the history of the Greek drama and the Greek theatre. (M. T. W. Th., Float. First semester. Prerequisite, 6.) PROFESSOR HAGGETT.

8.—**Introduction to Greek Oratory.**—Translation of selections from Lysias and Demosthenes; history of Greece in outline from the Peloponnesian War to the death of Alexander; study of the history of Greek oratory; lectures and collateral reading. (M. T. W. Th., Float. Second semester. Prerequisite, 7.) PROFESSOR HAGGETT.

9.—**Advanced Course on The Greek Drama.**—(a) Tragedy: Translation of Aeschylus' Persians, or Prometheus Bound, with the reading of other tragedies in the metrical translations; historical and literary study of the three great tragedians.

(b) Comedy: Translation of Aristophanes' Birds or Frogs, with the reading of other plays in the metrical translations; study of the history of Greek comedy and of the public and private life of the Greeks as illustrated by Aristophanes' plays. (M. T. W. F., 11:15. First semester. Elective for Juniors and Seniors who have finished Course 8.)

PROFESSOR HAGGETT.

10.—**Advanced Course on Greek Historical Prose.**—Translation of selections from Thucydides and Xenophon; history of the fifth century before Christ, with special emphasis on the Peloponnesian War; lectures on the development of Greek historiography; study of the themes, characteristics, and style of Herodotus, Thucydides, and Xenophon; collateral reading on important characters in Greek history. (M. T. W. F., 11:15. Second semester. Elective for Juniors and Seniors who have finished Course 8.) PROFESSOR HAGGETT.

11.—**Advanced Course on Greek Philosophy.**—(a) Translation of selections from Plato's Republic; lectures and collateral reading on Platonism.

(b) Translation of selections from Aristotle's Ethics; lectures and collateral reading on Aristotle's philosophy. (M. T. W. F., 11:15. First semester. Elective for Juniors and Seniors who have finished Course 8.) PROFESSOR HAGGETT.

12.—**Advanced Course on Greek Oratory.**—Translation of selections from the Attic Orators; study of their themes, characteristics, and style, and of the legal procedure and political institutions of the Athenians; lectures and collateral reading. (M. T. W. F., 11:15. Second semester. Elective for Juniors and Seniors who have finished Course 8.)

PROFESSOR HAGGETT.

Note: Courses 9-10 and 11-12 will be given in alternate years.

13.—**Advanced Course on Lyric Poetry.**—Translation of selections from Pindar and Bacchylides; study of their themes, characteristics, and style. (T. Th., 8:30. First semester.)

PROFESSOR HAGGETT.

14.—**Advanced Reading Course.**—Rapid reading of the entire works (or a considerable portion) of some one author, or extensive work in some one department of Greek literature. This course is designed to give a comprehensive knowledge of a particular author or period of Greek literature, and is supplemented by topical reading and thesis work on the author or period selected. (T. Th., 8:30. Second semester.)

PROFESSOR HAGGETT.

15.—**Literature of the Alexandrian Period.**—Translation of selections from Theocritus and Apollonius Rhodius; lectures and collateral reading on the history and literature of the Alexandrian epoch. (W. F., 8:30. First semester.)

PROFESSOR HAGGETT.

16.—**Literature of the Graeco-Roman Period.**—Translation of selections from Plutarch and Lucian; lectures and collateral reading on the history and literature of the Graeco-Roman period. (W. F., 8:30. Second semester.)

PROFESSOR HAGGETT.

Note: Courses 13, 14, 15, 16, are for graduate students.

17.*—**Greek Antiquities.**—(1) Public and Private Life; (2) Mythology and Religion; (3) Art and Archaeology. (T., Th., Float. First semester. Open to all students. This course is designed to be taken in connection with Latin 15.)

ASSISTANT PROFESSOR SIDEY.

18.—**Linguistic Science.**—Lectures on the Indo-European peoples; their origin, history, mythology, language, literature, etc., in the light of the results of comparative philology. (M. W., 1:15 p. m. Both semesters.)

PROFESSOR HAGGETT.

Note: This course is open to all students of language, and is designed to furnish a background for a broader appre-

*In connection with this course students are advised to take history 3a.

ciation not only of language, but also of history and literature.

LATIN.

PROFESSOR THOMSON AND ASSISTANT PROFESSOR SIDEY.

The college courses outlined below are planned for students who have already had four years of training in Latin. For those who, on entering the University, substitute modern language credits in part for the necessary amount of Latin, preliminary courses are offered, corresponding to the third and fourth year courses in the High Schools. It is assumed that those who have had the four years of training have gained a mastery of Latin forms and inflections, a general knowledge of syntax, the ability to read Latin correctly, and a vocabulary sufficient to enable them to translate simple passages at sight with considerable ease. Hence, in these courses, less prominence is given to this technical training and attention is directed rather to Latin as literature and to the study of Roman life and customs.

In the freshman year, however, a systematic survey is taken of syntax and construction, and practice is given in the writing of Latin. This serves as a review and allows a closer observation of the principles underlying syntax than is practicable in the earlier work. Other special topics taken up are briefly indicated in the statement of the courses.

COLLEGE COURSES.

1, 2.—**Cicero**, De Senectute and De Amicitia; **Livy**, Book XXI. Work in syntax, Latin prose composition and sight translation. Section I. M., T., W., Th., Float, both semesters. Professor Thomson. Section II. M., W., Th., Fr., 9:25, both semesters. Assistant Professor Sidey.

PROFESSOR THOMSON.

3, 4.—**Ovid**, selections from Tristia, Heroides, Amores, Fasti and Epistulae, and the continuous reading of several books of the Metamorphoses; Life and Times of Ovid. **Horace**, Odes and Epodes. Prosody, Lyric poetry and the services of the Poet Laureate. **Plautus**, Captivi and Menaechmi. **Terence**,

Andria and Phormio; Roman Drama, Archaic Forms, Syntax and Prosody. (M., T., W., F., 11:15; both semesters. Prerequisite, 1, 2.)

PROFESSOR THOMSON.

5, 6.—The Letters of Cicero, Seneca, Pliny and Horace. The Familiar Style and its Characteristics, Letter Writing and Private Antiquities, Inside History of the Periods Furnished by the Letters. [Prerequisite, 3, 4. Not to be given in 1904-05.]

PROFESSOR THOMSON.

5a, 6a.—Livy, Books I, II; Tacitus, Agricola and Germania; Caesar, B. G. Book VI; The early history of Rome, the history of Britain as a Roman province, and an account of the early institutions of the Teutonic peoples. (M., T., Th., F., 10:20; both semesters. Prerequisite, 3 and 4.)

PROFESSOR THOMSON.

7, 8 and 9, 10.—These are complementary, and together constitute a Teachers' Course, provided especially for those who are preparing to teach Latin in the High Schools. The object of the course is a twofold one; first, to equip the intending teacher with a wider knowledge of Caesar, Cicero and Vergil, and, second, to train him in the best method of teaching these authors and preparatory Latin generally.

Course 7, 8 is designed to attain the first of these ends, and 9, 10 the second.

7, 8.—Collateral Reading.—Caesar: Viri Romae, Caesar's Bellum Civile, and Seutonius' Julius Ceasar. Cicero: Viri Romae, Letters of Cicero, and Sallust's Catiline. Vergil: Ancient Lives of Vergil and portions of Vergil's Bucolics and Georgics. T., F., 11:15; both semesters. Prerequisite, 5a, 6a, or may be taken with 5a, 6a.)

ASSISTANT PROFESSOR SIDEY.

9, 10.—Lectures on the teaching of preparatory Latin and discussion of matters connected therewith. Practice in the writing of Latin. Portions of Caesar, Cicero and Vergil will be read in class and the members will take their turns in teaching under the supervision of the instructor. Visits will, from time to time, be made to schools where Latin is taught

and reports will be made by each member of the class. (M., W., 11:15; both semesters.)

ASSISTANT PROFESSOR SIDEY.

11, 12.—Roman Satire: Selections from Ennius, Lucilius, Varro, Horace, Persius, Juvenal and Petronius. Lectures on the development of Roman Satire. (T., Th., 8:30; both semesters.) PROFESSOR THOMSON.

13, 14.—Cicero: Tusculan Disputations and De Finibus. Lectures and papers on Roman Philosophy. (Not to be given in 1904-05.) PROFESSOR THOMSON.

15.*—Roman Antiquities: Lectures on such topics as the Roman name, the family, education, amusements, etc., illustrated by photographs and cuts, whenever possible. (Open to all students of Latin. M., W., Float. Second semester.)

ASSISTANT PROFESSOR SIDEY.

PRELIMINARY COURSES.

A.—Cicero: Six orations with exercises in Latin Syntax and Prose Composition. (M., W., Th., F., 9:25; both semesters.) PROFESSOR THOMSON.

B.—Vergil: Six books of the Aeneid. (M., T., Th., F., 9:20; both semesters.)

ASSISTANT PROFESSOR SIDEY.

GERMAN.

PROFESSOR CARRINGTON AND ASSISTANT PROFESSOR BOETZKES

The object of courses 1-4 is to give the student a fair reading knowledge of German and make him acquainted with at least one classic. The higher courses are devoted for the most part to the study of literature, though 5 may occasionally be adapted to the needs of students of science, until such a course can be offered regularly. (See 5, 6.)

1, 2.—Elementary.—Grammar and easy reading, with prac-

*In connection with this course students are advised to take History 8b.

tice in speaking and writing. (Section A: T., W., Th., F., 8:30; Section B: M., T., W., F., 11:45.)

PROFESSOR CARRINGTON AND ASSISTANT PROFESSOR BOETZKES.

*3, 4.—Modern Prose, followed in the second semester by a drama of Goethe, Schiller or Lessing. Composition work is continued throughout the year. (Section A: M., T., Th., F., 10:20; Section B: M., T., W., Th., Float.)

PROFESSOR CARRINGTON AND ASSISTANT PROFESSOR BOETZKES.

*5, 6.—Classics.—Selected works of Goethe or Schiller. The program may at times be varied by devoting one semester to a modern novel and a scientific essay. (M., W., F., 9:25.)

PROFESSOR CARRINGTON.

7, 8.—German Composition. (Courses 5, 6, and 7, 8 may be taken together as a four-hour course.) (Th., 9:25.)

PROFESSOR CARRINGTON.

9, 10.—Goethe's Faust, parts I, and II, or Lessing's Nathan der Weise, and Laokoon. In 1904-1905 Fault II is given the first, and Lessing's Laokoon the second semester. (T., Th., Float.)

PROFESSOR CARRINGTON.

11, 12.—Outlines of the History of German Literature. (W., 11:15.)

PROFESSOR CARRINGTON.

13, 14.—Middle-High-German. (F., 11:15.)

PROFESSOR CARRINGTON.

15, 16.—Teachers' Course. (May be omitted in 1904-1905.)

PROFESSOR CARRINGTON.

FRENCH.

PROFESSOR FREIN AND ASSISTANT PROFESSOR BOETZKES.

The first year of the work in this department is devoted to a thorough study of grammatical forms. The French texts read are made the basis for a practical application of the rules of grammar and are also used for drill in pronounciation.

The work of the second year is divided into two parts:

*High school students who have had two or three years of German may elect 3 or 5 according to their preparation.

one-half of the time is devoted to modern syntax, and the other half to the translation into English of some of the best literary works of the nineteenth century. Towards the middle of the second semester, the recitations are conducted as far as practicable, in French.

The advanced courses are so planned that those who have studied French during two years in the High Schools may continue their work so as to become familiar with the entire field of modern French literature, and also to get a reading knowledge of Old French.

SUBJECTS.

1, 2.—**Elementary.**—Frazer and Squair's French Grammar, Part I; Super's French Reader; Halevy, L'Abbé Constantin; Daudet, Le Petit Chose. Emphasis is laid upon the acquirement of a correct pronunciation, and a systematic drill in composition is given. (Section A: M., T., W., Th., Float. Section B: T., W., Th., F., 8:30. No credit if offered for entrance.)

3, 4.—**Nineteenth Century Reading and Syntax.**—In one section of the class (Section A) two hours per week will be devoted to the syntax of the latter part of the century, and two hours per week will be spent in translating masterpieces of the literature of the entire century. The other section (Section B) is intended for such as care most for facility in translation; in this section three hours per week are devoted to translation, and only one hour per week to syntax. Those who need more than sixteen credits in French are expected to go into Section A. The work in syntax is based upon Frazer and Squair's French Grammar, Part II. The texts read in 1903-4 were: France, Le Crime de Sylvestre Bonnard; Balzac, Le Cure de Tours; Daudet, Tartarin de Tarascon; Hugo, Hernani; Rostand, Cyrano de Bergerac. (Section A: M., T., W., F., 11:15; section B: M., T., Th., F., 10:20. Prerequisite, 2. No credit if offered for entrance.)

5, 6.—**Classical French.**—The student is given a general knowledge of the literature of the entire classical period, but the reading is selected from the works of only a few of the

most noted writers. The texts to be read are: Corneille, Le Cid, Horace, Polyeucte; Molière, Le Bourgeois Gentilhomme, Les Précieuses Ridicules, Le Misanthrope; Racine, Andromaque, Athalie; Boileau, L'Art Poétique; La Fontaine, Fables. (M., T., Th., 10:20. Prerequisite 4, or an equivalent.)

7, 8.—**Advanced Prose Composition.**—Systematic review of French syntax, and the translation into idiomatic French of moderately difficult English prose. Francois' Advanced Prose Composition. (F., 10:20. Prerequisite, 4.)

9, 10.—**Lyric Poetry.**—An introduction to French versification: structure of the verse, hiatus, rhyme; variations in the stanzas, and in the forms of the lyric poems. Short history of French lyric poetry.

Special attention is given to the lyrics of the Romantic period. Canfield's French Lyrics is used to give the student a knowledge of the important writers of the French lyric, but the poems of Lamartine, De Musset and Hugo are studied from more complete editions of their works. (M., Th., 9:25. Prerequisite, 4.)

[This course will be omitted in 1904-5; it will be given in alternate years with course 11, 12.]

11, 12.—**The French Drama.**—The aim of this course is twofold: to acquaint the student with the best French dramatic literature since the Pléiade, and to furnish an admirable medium for French conversation in the class room. (M., Th., 9:25. This course may be taken in the same year with course 5, 6, but it may not precede it.)

[Given in alternate years with course 9, 10. It will be given in 1904-5.]

13, 14.—**History of the French Literature of the Nineteenth Century.**—Lectures in French; assigned reading of some of the works of each important author, with copious notes to be submitted for inspection; special topics assigned to each student for careful study, and report to the class. (W., F., 9:25. Prerequisite, 6.)

15, 16.—**History of French Literature from the Renaissance to the Romanic Movement.**—Lectures in French, and as-

signed reading from the important authors. Prerequisite, 6. [Given in 1903-4; not to be given in 1904-5.]

17, 18.—**Old French Reading.**—Elements of Old French grammar, and translation of Old French from some standard text-book, such as Bartsch, Chrestomathie de l'Ancien Francais. Open only to advanced students. (T., Th., 2:10—3:05.)

SPANISH.

PROFESSOR OBER AND MISS BLODGETT.

In this department considerable time is given to colloquial Spanish. The close relations of the United States with Central and South America, and the various lands where Spanish alone is spoken, have increased the value of a speaking knowledge of this language.

While due attention is given to the rich, but little known literature of the Golden Age, and the varied writings of the present century, full opportunities are also offered to acquire a knowledge of practical and commercial Spanish.

SUBJECTS.

1, 2.—**Elementary.**—Lessons in Spanish on everyday topics; training of the ear and tongue. Essentials of the Spanish grammar; readings from modern Spanish authors. (Section A: T., W., Th., F., 8:30; Section B: M., W., Th., F., 9:25; Section C: M., T., W., F., 11:15.)

3, 4.—**Practical.**—Business correspondence, commercial terms and conversation, readings selected chiefly from Spanish newspapers and magazine articles of the day. (M., T., Th., F., 10:20. Prerequisite, 2.)

5, 6.—**Literary.**—Knapp's Spanish Readings. Spanish poetry. Ford's Spanish Anthology. Essays written on literary subjects. (M., W., Th., F., 9:25. Prerequisite, 2.)

7. 8.—**Advanced.**—Literature of the sixteenth and seventeenth centuries. Lope de Vega; Calderon; the Auto Sacramental; early Spanish; poems of the Cid; Spanish literature of the fifteenth century. (T., W., Th., 8:30. Prerequisite, 4, 5.)

9, 10.—**Spanish Novel.**—Study of the Spanish novel, beginning with the "Novela Picaresca," having its origin in Spain, and including the "Novela de Costumbres," the historical novel, and the religious novel. Works read partly in class and partly outside—Gil Blas, Dona Perfecta, Pepita Jimenez, and selections from Perez Galdos and Perez Escrich. T., Th., Float. Prerequisite, 4, 5.)

RHETORIC AND ORATORY.

PROFESSOR PRIEST AND MR. DAVIS.

The objects sought for in the courses here outlined are: (1) to secure a skillful use of English in writing, and an appreciation of it in literature; and (2) to develop skill, power, and readiness in oratory and debate. To these ends there will be much writing, and frequent practice in prepared and in impromptu speaking.

SUBJECTS.

1, 2.—**English Composition.**—Daily and fortnightly themes together with the study of the principles of Rhetoric. Text: Genung's "The Working Principles of Rhetoric." Each student will meet the instructor for private consultation on his work at least once every two weeks. Required of Freshmen in all courses. (Section A: M., T., Th., F., 10:20; Section B: M., T., W., Th., Float. First semester. Section A: M., W., Th., F., 9:25; Section B: M., T., W., Th., Float. Second semester.) MR. DAVIS.

3.—**Grammar and Rhetoric.**—For students wishing to prepare themselves for the teaching of English. A survey will be made of various texts of Grammar and Rhetoric. M., T., Th., F., 10:20. Second semester.) MR. DAVIS.

4.—**Advanced English Composition.**—A higher course for those desiring further training in writing. Daily and fortnightly themes, with conferences every other week. Exercises in the Essay, Correspondence, Criticism, Debate and the Short Story. Reference book: Genung's "Working Principles of Rhetoric." (M., T., W., F., 11:15. First semester.) MR. DAVIS.

5, 6.—**Oral Expression.**—Reading and declamation with particular reference to the analysis of emphasis, and to the interpretation of thought and feeling by voice and gesture. Text: Fulton and Trueblood's "Practical Elocution." (M., T., W., Th., Float. Both semesters.) PROFESSOR PRIEST.

7.—**English Oratory.**—Study of Edmund Burke and his contemporaries. Each member of the class will be required to write an original oration. (T., W., Th., F., 8:30. First semester.) PROFESSOR PRIEST.

8.—**American Oratory.**—Study of Webster, Hayne, Calhoun, Everett, Sumner, Phillips, Beecher, Curtis, Grady and others. Each member of the class will be required to revise the oration written the preceding semester, and deliver the revised form before the class. (T., W., Th., F., 8:30. Second semester.) PROFESSOR PRIEST.

9, 10.—**Forensics.**—Practice in Argumentation and formal debating. (M., W., Th., F., 9:25. Both semesters.)

PROFESSOR PRIEST.

In addition to offering the courses outlined the instructors in the department will assist in supervising the work in the three literary societies, and in training the intercollegiate debaters and orators.

ENGLISH LANGUAGE AND LITERATURE.

PROFESSOR PADELFORD AND MR. GARRETT.

The work in literature lays emphasis rather more upon forms, such as the drama, the epic, and the lyric, than upon periods, although the historical study of literature is not ignored. The courses in language are designed to give a knowledge of the development of our language from the earliest monuments to the time of Shakespeare.

SUBJECTS.

1, 2.—**Shakespeare and Victorian Literature.**—Critical study of a few plays of Shakespeare, with special attention to the laws and technique of the drama; selected essays of Ruskin,

Arnold, Newman, and Carlyle. The study of the literature is accompanied with practice in English composition and the criticism of themes. (Section A: T., W., Th., F., 8:30; Section B: M., T., W., Th., Float. Both semesters. Prerequisite, Rhetoric I.) MR. GARRETT.

3, 4.—**Browning and Wordsworth.**—The first semester is devoted to Browning; the second to Wordsworth, with supplementary reading in other nineteenth century poets. One long theme is required each semester. (M., T., W., F., 11:15. Both semesters. Prerequisite, 2.) PROFESSOR PADELFORD.

5.—**The Bible as Literature.**—Study of a few of the Old Testament books as literature. (M., T., Th., F., 10:20, first semester. Prerequisite, Rhetoric, I.) PROFESSOR PADELFORD.

6.—**Principles of Literary Criticism.**—An inductive course, designed to furnish sound principles for literary criticism. English literature of a wide range will be discussed. (M., T., Th., F., 10:20, second semester.. Prerequisite, 4.) PROFESSOR PADELFORD.

*7.—**History of English Literature.**—A rapid survey from the earliest times to the present day, designed to give an idea of the literature as a whole. (M., T., Th., F., 10:20, first semester. Prerequisite, Rhetoric, I.) MR. GARRETT.

*8.—**History of American Literature.**—A course in American literature similar to 7. (M., T., Th., F., 10:20, second semester. Prerequisite, Rhetoric, 1.) MR. GARRETT.

9, 10.—**College Entrance Requirements.**—A normal course designed especially for those advanced students who wish to prepare to teach English in the high school. The history of English teaching is reviewed, problems in the teaching of English are discussed, the entrance requirements are critically studied, bibliographies for high school libraries are prepared, and a large number of editions of the required classics are examined. (T., W., Th., F., 8:30, both semesters. Prerequisite, two courses in literature.) PROFESSOR PADELFORD.

11, 12.—**Old and Middle English.**—During the first semester

*Not to be offered in 1904-1905.

the Old English language and literature are studied. Reading is begun at the earliest practicable moment, and the study is made as literary in character as is consistent with a thorough grounding in the rudiments of the language. Some time is given to considering the early English civilization. During the second semester many Middle English texts are read and much attention is given to the historical development of Modern English. (M., T., W., F., 11:15, both semesters. Prerequisite, two courses in literature.)

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*13, 14.—**Theories of Poetry.**—A course in the theories of poetry in general, and in the principles applicable to its various departments, as the epic, dramatic, and lyric. Such works as Aristotle's Poetics, Lessing's Laokoon, Horace's Ars Poetica, and Sidney's Defense of Poesy are studied critically. Masterpieces are read to test the principles advanced in theoretic works. This course is for graduate students. The time will be arranged with the class. PROFESSOR PADELFORD.

15, 16.—**Dante.**—The Divine Comedy and the New Life are studied in the best English translations. The historical, literary, and cultural background of the poet and his work receive much attention. This course is for graduate students. The time will be arranged with the class. PROFESSOR PADELFORD.

*Not to be offered in 1904-1905.

PHILOSOPHY.

PROFESSOR SAVERY.

The aims of this department are five:

First—To aid students to entertain clear ideas and to think consistently on any subject. (To this end the courses in Logic and the Principles of Philosophy are especially adapted.)

Second—To help such students as desire to entertain clear ideas and to think consistently and independently on the ultimate problems of reality, the human self, the physical world and God; and to aid them to steer clear of the errors of popular mythology and an easy scepticism.

Third—To furnish a part of the general culture of some

students by acquainting them with the thoughts of the great thinkers of the past. (History of Philosophy.)

Fourth—To teach worthy moral ideals and to elucidate a proper basis for conduct. (Ethics.)

Fifth—To teach the facts of Psychology to those interested in the study of the mind or in the allied studies of Biology, Sociology or Pedagogy. (Psychology, elementary, experimental and advanced.)

SUBJECTS.

1, 2.—**Elements of Psychology, Logic and Ethics.**

(a) Psychology. A study of the facts and laws of consciousness and their relation to the body. Text: Hoeffding's Outlines of Psychology. Required readings in James' Larger Psychology. Three hours, first semester.

(b) Logic, Deductive and Inductive. A study of the differences between good and bad reasoning and of the methods and aims of the natural sciences. Analysis of fallacies. Text: Minto's Logic, Inductive and Deductive. Three hours, second semester.

(c) Ethics. An analysis of conduct, a study of the nature of value, duty, the moral virtues and institutions, moral progress, pessimism, the relation of morality to religion. Required reading of Aristotle's Ethics. One hour, throughout the year.

Lectures and recitations in the three courses. Required for Juniors. (M., T., W., Th., Float.)

3, 4.—**History of Philosophy.**—The aim in this course is both historical and constructive. Text: Windelband's History of Philosophy. Readings in the philosophers studied. Lectures and recitations. Elective for Juniors and Seniors. (M., W., F., 11:15.)

5, 6.—**Principles of Philosophy.**

(1) A study of the nature and validity of our knowledge.

(2) The application of the outcome of this study to the world of science—with an account of the resulting philosophical conception of the Universe.

(3) The synthesis of the foregoing with "what is felt or hoped": the problem of God.

Reading of Hobhouse's Theory of Knowledge, Parts I and III; Bradley's Appearance and Reality. Lectures and discussions. (M., Th., F., 10:20. Prerequisite, Philosophy, 1, 2.)

7.—**Advanced Psychology.**—A study of the fusion and arrangement of elements. Experiments in the psychology of sound and space. An introduction to laboratory methods and results. Titchener's Manual is followed. (T., Th., 1:15-4:00, first semester. Prerequisite, Elementary Psychology.)

8.—**Advanced Psychology.**—Seminary. The psychology of the processes of thought and will. Papers and discussions. Text: Stout's Analytic Psychology. This course is complementary to Philosophy 5, 6, and the two may well be taken together. (T., 1:15-3:05, second semester. Prerequisite, Elementary Psychology.)

PSYCHOLOGICAL LABORATORY.

A small laboratory is equipped with such apparatus as is necessary to perform the experiments outlined in Titchener's Introductory Manual.

PEDAGOGY.

PROFESSOR YODER.

The work in this department gives a knowledge of the child on the one side and a training in the presentation of subject-matter of education on the other. It is not academic and should not be undertaken until near the close of the college course. The normal diploma will be granted to students who have completed the following subjects: The child, 4 hours; the history of education, 4 hours. Major students will take the above 8 hours and 16 hours additional work arranged by the instructor. Before entering the department students should have completed one year in zoology, one year in psychology; the course in sociology is required of all students who major in the department.

1.—**The Child.**—First semester; textbook, one laboratory period and one lecture each week; deals with the physical and mental growth of the child and adolescent; eight charac-

terizations of children from literature; observation of children with reports. (M., W., Th., F., 9:25.)

2.—**History of Education.**—Second semester; textbook and one lecture each week; an attempt to outline educational theories and practices of the great nations; texts: History of Education, Davidson; Educational Reformers, Quick. (M., W., Th., F., 9:25.)

3.—**The Course of Study.**—Second semester; curriculum of the secondary school; various texts and reports, one visit to a high school and one lecture each week; deals with the organization of the work of a high school; study of the current volume of the School Review. (M., T., W., F., 11:15.)

4.—**School Organization and Supervision.**—Textbook, visits to various schools and one lecture each week; examination of city school systems; elements of curricula; study of the Educational Review and the Elementary Teacher. (M., W., Float.)

5.—**Problems.**—Throughout the year, two hours each semester; each major student will select, with the advice of the instructor, an educational problem for study during the semester. The results of the study will be presented to the department in the form of reports and a final thesis. Credit depends upon amount and quality of work. (T., W., Th., F., 8:30.)

6.—**Philosophy of Education.**—Throughout the year, one hour each semester; a course of lectures, discussions, assigned readings and reports; an attempt to formulate underlying principles of general education; first semester, institutional and individualistic forces; second semester, social pedagogy; a part of the time of each semester will be used to discuss state school law. (F., Float.)

7.—**Journal Club.**—Throughout the year, one hour each semester; reports, summaries and discussions of current educational literature. (T., Float.)

8.—**Observation and Practice Work.**—A limited number of students will be given an opportunity to observe and practice in the public schools. Credit depends upon amount and quality of work. (Time arranged.)

POLITICAL AND SOCIAL SCIENCE.

1.—**Elements of Political Economy.**—Textbook, lectures and collateral reading. (M., W., Th., F., 9:25, first semester.)

2.—**Industrial Problems.**—The subjects discussed in this course include the evils of unrestricted competition, the labor question, monopolies and trusts. Prerequisite, 1. (M., W., Th., F., 9:25, second semester.)

3.—**Principles of Sociology.**—A study of the development and functions of the family, church, state and other social institutions. (M., Th., 10:20, first semester.)

4.—**Principles of Sociology.**—Continuation of 3. (M., Th., 10:20, second semester.)

5.—**Money and Banking.**—Open to students who have had 1. (T., F., 10:20, first semester.)

6.—**The Principles and Methods of Taxation.**—Prerequisite, 1. (T., F., 10:20, second semester.)

7.—**Constitutional Government.**—A comparative and historical study of the American form of government, special attention being given to the influence of the political theory of checks and balances. Open to students who have had sufficient preparation in English and American constitutional history. (M., T., W., F., 11:15, first semester.)

8.—**Constitutional Government.**—Continuation of 7. (M., T., W., F., 11:15, second semester.)

HISTORY.

PROFESSOR MEANY AND ASSISTANT PROFESSOR ALDEN.

Effort is made to give the students a survey of the field of history as broad as possible without detracting from a thoroughness of the study. With this in view, the courses are arranged in the order it is desired that the work be followed. Stress is laid upon the use of the best authorities, and upon frequent reference to historical sources, whenever available. The library is being constantly enriched in the lines of history. A special library, known as the Frederic James Grant Memorial

Library of American History, has been greatly increased within the last few years. Students are also trained in methods of history, receiving practice in the collection and use of materials for local history, as well as in the preparation of theses in the broader fields.

SUBJECTS.

1.—**The English People and Institutions.**—From the Anglo-Saxon invasion to the reign of Elizabeth. Students beginning work in the department of history are recommended to start with this course. (M., W., Th., F., 9:25, first semester.)

ASSISTANT PROFESSOR ALDEN.

2.—**The English People and Institutions.**—Continuation of 1 to the nineteenth century. (M., W., Th., F., 9:25, second semester.)

ASSISTANT PROFESSOR ALDEN.

3a.—**Greece.**—A study of the Hellenic peoples from Homer till the Roman subjugation. (M., W., Float, first semester.)

ASSISTANT PROFESSOR SIDEY.

3b.—**Rome.**—From the foundation of the city to the death of Theodosius. Particular attention is given to the development of Roman political institutions. (M. W., Float, second semester.)

ASSISTANT PROFESSOR SIDEY.

4.—**Western Europe.**—A general course on feudalism, the church, the monarchy, and other institutions of mediaeval and modern times, together with the rise and development of the nations of Western Europe. (M., T., W., F., 11:15, second semester.)

ASSISTANT PROFESSOR ALDEN.

5.—**The American Colonies, the Revolution and the Constitution.**—Discussion of the period from 1492 to 1829. Lectures, collateral reading and reports. (M., W., Th., F., 9:25, first semester.)

PROFESSOR MEANY.

6.—**Era of Slavery, Civil War and Reconstruction.**—Discussion of the period from 1829 to 1889. Lectures, collateral reading and reports. (M., W., Th., F., 9:25, second semester.)

PROFESSOR MEANY.

7.—**The French Revolution and Napoleonic Era.**—A study of

the causes as seen in the conditions of the old regime, the forces that produced the excesses and made Napoleon's career possible, and the forces that brought about his final overthrow. (M., T., Th., F., 10:20, first semester.)

ASSISTANT PROFESSOR ALDEN.

8.—**Europe in the Nineteenth Century.**—Continuation of 7 from the fall of Napoleon through the century. The development of liberal political systems in European states and the course of international relations to the present time are studied as a means of understanding present political conditions in Europe. (M., T., Th., F., 10:20, second semester.)

ASSISTANT PROFESSOR ALDEN.

9, 10.—**Northwestern History.**—From the earliest voyages of discovery to the settlement and organization of the territories. Lectures. Theses on assigned topics. (M., W., 11:15, throughout the year.) PROFESSOR MEANY.

11.—**Spain in America.**—A study of the rise and fall of Spanish power in the new world and an outline of the history of the Spanish-American republics. Lectures and theses. (M., T., Th., F., 10:20, first semester.) PROFESSOR MEANY.

12.—**Development of the Pacific.**—History of the countries bordering upon the Pacific ocean, with special reference to the changes now in progress of development. Lectures, collateral reading and theses. (M., T., Th., F., 10:20, second semester.)

PROFESSOR MEANY.

13.—**History of the English Constitution.**—The evolution of the British governmental system is studied, particular attention being given to the British political system of today. Open to students who are sufficiently prepared in English history. (M., T., W., F., 11:15, first semester.)

ASSISTANT PROFESSOR ALDEN.

14.—**Training Course in American History.**—To meet the needs of those who expect to teach this subject in the high schools, a course of lectures is offered, supplemented with library research, study of sources and comparison of texts and other aids. (T., F., 11:15, first semester.)

PROFESSOR MEANY.

15, 16.—**Saturday Seminars for Teachers.**—Classes will be

organized for Saturday morning work for the benefit of public school teachers or any others qualified to pursue the studies.

15a.—**The Teaching of European History in High Schools.**—Public school texts, libraries and their use, and recitation methods are discussed along with the principles underlying the teaching of history. (Saturday, 10:20, first semester.)

ASSISTANT PROFESSOR ALDEN.

16a.—**Introduction to the Middle Ages.**—A normal course illustrating in practice the methods and principles discussed in 15a. (Saturday, 10:20, second semester.)

ASSISTANT PROFESSOR ALDEN.

15b, 16b.—**Makers of the Nation.**—Lectures on the lives of Washington, Franklin, Jefferson, Jackson, Clay, Webster, Lincoln, Grant, Lee and others. (Saturday, 9:25, throughout the year.)

PROFESSOR MEANY.

15c, 16c.—**Local History.**—Lectures and research work with special reference to the needs of school teachers in this field. (Saturday, 10:20, throughout the year.)

PROFESSOR MEANY.

15d.—**Modern European Statesmen.**—Lectures, collateral reading and reports. (Saturday, 11:15, first semester.)

PROFESSOR MEANY.

CHEMISTRY.

PROFESSOR BYERS, ASSISTANT PROFESSORS KNIGHT AND JOHNSON, MR. HOPKINS AND MR. LINK.

The instruction in this department is designed to satisfy as far as possible the requirements of those students who desire to study chemistry as a means of culture and as a necessary complement of a liberal education. It is also realized that the subject is eminently practical, and hence it is the desire of those in charge so to guide the student that he may fit himself for work in those lines in which chemistry has become an applied science.

SUBJECTS.

O.—To meet the needs of those students who come from schools in which chemistry is not required for graduation. It consists of one recitation and four laboratory hours per week

throughout the year, but must be taken, if at all, in conjunction with chemistry 1, 2, which it is designed to supplement and make possible for the unprepared student. Where the student has admission clear it will be given two university credits per semester. Where offered for entrance requirement it will count as one credit. (M., 11:15. Laboratory work, 8:30-12:30, Saturday.)

1, 2.—**General Inorganic.**—Experimental lectures supplemented by quizzes. Laboratory work during first semester on selected illustrative experiments. Second semester, qualitative analysis. Remsen's Advanced Course. Smith's Laboratory Manual. Qualitative analysis, Treadwell and Hall. Prerequisite, a high school course in chemistry or simultaneous taking of Chemistry O. (Lectures T., W., F., 11:15. Laboratory work for engineering students, T., Th. afternoons. For other students, to be arranged on two days selected from M., W., F.)

PROFESSOR BYERS, ASSISTANT PROFESSOR KNIGHT AND MR. HOPKINS.

3, 4.—**Organic.**—A study of the typical compounds of carbon, special stress being laid upon the principles of their classification; organic preparation, and practical study of important compounds. Remsen's Briefer course as lecture syllabus. Orndorff's Manual. (Lectures T., Th., F., 10:20. Laboratory, T., Th. afternoons.) PROFESSOR BYERS.

5.—**Advanced Qualitative Analysis.**—Lectures on Theory of solution and its application to qualitative analysis. Laboratory work, using Treadwell and Hall as a guide and Fresenius for reference. (Lectures, M., W., 9:25, first semester. Prerequisite, 2.)

PROFESSOR BYERS AND ASSISTANT PROFESSOR KNIGHT.

6.—**Quantitative Analysis.**—Gravimetric and volumetric analysis. Talbot's Quantitative Analysis. (Twelve laboratory hours per week, M., W., F. afternoons and S. morning. Credit, four semester hours. Prerequisite, 2.)

ASSISTANT PROFESSOR KNIGHT.

7.—**Industrial Chemistry.**—Required of sophomore civil, mechanical and electrical engineers. A lecture course of the

commercial methods of manufacture of compounds of great industrial importance. The course is supplemented by Saturday excursions to plants in and near the city of Seattle, Everett and Tacoma. Thorpe's Industrial Chemistry as guide and reference. T., F., 9:25, first semester.)

PROFESSOR BYERS.

8.—**Metallurgy of Iron and Steel.**—Required of sophomore civil, electrical, mechanical and mining engineers. A lecture course on the manufacture and properties of iron and steel products and by-products. This course will be supplemented by a trip to the furnaces at Port Townsend and by blue-print drawings and lantern slides of modern furnaces and machinery in use at the Illinois steel works. (M., W., 9:25, second semester.)

PROFESSOR BYERS.

9.—**Physical Chemistry.**—An elementary course which will consist of lectures upon the laboratory demonstration of the fundamental principles of chemistry based on physical measurements. Freezing and boiling-point methods of molecular weight determination. Theory of ionization, degree of ionization and speed of irons, etc. (Lectures, T., Th., 11:15. Laboratory, M., W., first semester. Prerequisite, Chemistry 6 and College Physics.)

ASSISTANT PROFESSOR KNIGHT.

10.—**Inorganic Preparations.**—Special methods of preparation of important inorganic compounds. Designed to illustrate special chemical principles. (Twelve laboratory hours per week. Second semester. Four semester credits. Prerequisite, Chemistry 6.)

ASSISTANT PROFESSOR KNIGHT.

11, 12.—**Special Methods.**—Quantitative analysis of gas, water, foods, food adulterants, etc. (Twelve hours' laboratory work, throughout the year. Four semester credits.)

ASSISTANT PROFESSOR KNIGHT.

13, 14.—**Organic Preparations.**—An advanced course in organic work which requires reference to original literature and which will render necessary a reading knowledge of German. This course will be supplemented by a course of lectures on the history of chemistry. (Two lectures and eight to sixteen

hours of laboratory work per week for six credits per semester. Prerequisite, Chemistry 4, 6.)

PROFESSOR BYERS AND ASSISTANT PROFESSOR KNIGHT.

15.—**Investigation.**—Any student who has completed at least three years' work in chemistry may, if he desires, undertake some original investigation under the direction of one of the instructors. Such work will not be encouraged, however, except when the student is presenting himself for a master's degree.

16.—**Prospector's Course.**—To meet the demand, a special course in chemistry will be given to miners who may enter January 1, and will continue to May 1. It will not require any previous knowledge of chemistry, and will be merged into a course of qualitative analysis. The textbook required is Hessler & Smith. (W., F., 8:30. Laboratory work, Saturday morning.) MR. HOPKINS.

17.—**Chemistry Alkaloids.**—Lectures and laboratory work on the alkaloids with reference to the estimation and their uses. This course is an extension of the work in Materia Medica, and is also an advanced course in organic chemistry especially fitted for those who wish advanced work along these lines as a preparation for medicine. (Lectures, M., T., Float. Laboratory, M. W., 1-4, second semester. Credit, four hours.)

PHYSICS.

PROFESSOR OSBORN, MR. BRAKEL AND MR. WOLFLE.

The instruction in this department is designed to meet the needs of three different classes of students. First, those who desire to complete a liberal education or to undertake the subject for its disciplinary value; secondly, those who wish to pursue it as a preparation for the engineering profession; and lastly, those who intend, for the purpose of teaching or investigation, to make the study of physics their life work.

O.—**Elementary Physics.** (M., T., Th., F., 10:20; laboratory, T., 1-4.) MR. BRAKEL AND MR. WOLFLE.

1.—**Mechanics and Sound.** (M., W., Th., 9:25; laboratory, F., 1-4. Four hours' credit. First semester.)

PROFESSOR OSBORN AND MR. WOLFLE.

2.—**Heat, Electricity and Light.** (M., W., Th., 9:25; laboratory, F., 1-4. Four hours' credit. Second semester.)

PROFESSOR OSBORN AND MR. WOLFLE.

A student may begin his university work in physics either the first or second semester.

Students presenting notebooks from high school physical laboratories approved by this department may be excused from about one-third of the laboratory work in Courses 1 and 2.

1a.—**Mechanics, Sound and Heat.** (T. W., Th., F., 8:30; laboratory, M., 1-4. Six hours' credit. First semester.)

PROFESSOR OSBORN MR. BRAKEL AND MR. WOLFE.

2a.—**Electricity and Light.** (T., W., Th., F., 8:30; laboratory, M. or W., 1-4. Five hours' credit. Second semester.)

PROFESSOR OSBORN, MR. BRAKEL AND MR. WOLFLE.

Courses 1a and 2a are primarily for students of engineering, but may be elected by students in other departments, provided they have have had eight hours of mathematics.

3.—**Light or Heat.**—Preston. (M., 8:30; laboratory, —. Two or four hours' credit. Second semester. Prerequisites, Physics 1, 2 and Calculus.) PROFESSOR OSBORN.

4.—**Electrical Measurements.** (M., 10:20; laboratory, —. Three or four hours' credit. First semester. Prerequisites, Physics 1, 2.) PROFESSOR OSBORN AND MR. BRAKEL.

5.—**Primary and Secondary Batteries.** (Th., 10:20; laboratory, —. Two or three hours' credit. First semester. Prerequisites, Physics 1, 2.)

PROFESSOR OSBORN AND MR. BRAKEL.

6.—**Theoretical Mechanics or Mathematical Electricity.** (T., Th., Float. Two hours' credit. Second semester. Prerequisites, Physics 1, 2 and Calculus.) PROFESSOR OSBORN.

7.—**Graduate Work.**—Graduate students may elect Courses 3 and 6, and other courses will be offered as there is a call for them.

Teachers' Course. This is designed for those who wish to teach physics. It will consider the history of physics, methods of teaching, organization and equipment of laboratories, and

a review of some of the literature on physics. The student will be given an opportunity to take up some of the simpler parts of physical technics. (Two hours, second semester. Open to those who receive special permission.)

PROFESSOR OSBORN.

BOTANY.

PROFESSOR FRYE AND MISS COREY.

The courses in botany are planned with the following things in view: (a) To give students an opportunity to familiarize themselves with the plants of this region, (b) to bring out the unity of the plant kingdom as a part of a general education, (c) to prepare students for teaching or investigation, (d) to meet the requirements of pharmacy students. Students offering botany for admission will be excused from a part of courses, 1-4.

SUBJECTS.

1.—**General Morphology.**—A course planned for those who wish a year of scientific botany as a part of a general education. Study of types with a view to the evolution of the plant kingdom. Recognition of the commoner plants. This course is the best basis for advanced work. (First semester. Lectures, M., W., 9:25. Six hours, laboratory; four hours' credit. Laboratory fee, $2.)

2.—**General Morphology.**—Continuation of course 1.

3.—**Field Botany.**—Collection, identification and preservation of plants. Work in all the groups. Some morphology as needed for identification. (First semester. Lecture, M., 10:20. Six hours, laboratory or field; three hours' credit. Laboratory fee, $2.)

4.—**Field Botany.**—Continuation of course 3.

5.—**Plant Physiology.**—The general laws of plant activities, discussing the manner in which gases, water and salts get into a plant, how food is formed from them, how it is digested and assimilated, and how the plant grows and moves. (First semester. Lectures, M., W., 11:15. Six hours, laboratory; four hours' credit. Laboratory fee, $2. Prerequisite, course 2.)

6.—**Ecology.**—Ecology attempts to explain why plants have particular colors, forms, habitats. It is a study of plant societies, the struggle for existence, and a comparison of plants in their water relation. (Second semester. Lectures, M., W., 11:15. Six hours, laboratory or field; four hours' credit. Laboratory fee, $2.)

7.—**Pharmaceutical Botany.**—How to use the microscope. Study of the cell. Structure of flowering plants. Classification. As far as possible medicinal plants will be studied. (First semester. Lecture, Th., 8:30. Six hours, laboratory; three hours' credit. Laboratory fee, $2.)

8.—**Pharmaceutical Botany.**—Continuation of course 7.

9.—**Histology.**—The preparation of slides for the microscope. Includes training in imbedding, use of the microtome and various stains. Examination of tissues. Methods of drawing. Measurements of magnifications. (First semester. Lecture, W., 11:15. Nine laboratory hours; four hours' credit. Laboratory fee, $2. Prerequisite, course 2.)

10.—**Evolution.**—Lectures on the factors and problems in the evolution of plants. Gradations in development in the plant kingdom. (Second semester. Lecture, W., 8:30. One hour credit.)

11.—**Pedagogy of Botany.**—For those who expect to teach the subject. Visiting of schools. Methods of presentation. Discussion of texts. Collection of material. (First semester. W., 8:30. One hour credit.)

12.—**Pedagogy of Botany.**—Continuation of course 11.

ZOOLOGY.

PROFESSOR KINCAID.

In this department the more elementary courses are designed with especial reference to the place of zoology in the general scheme of a liberal education. By means of the laboratory method the student is brought directly in contact with the facts of nature and taught to interpret the phenomena of life at first hand. An effort is also made to pave the way for a

more thorough understanding of the related sciences in which biological principles play an important role.

The advanced courses are more technical in character and are planned to meet the needs of those wishing to specialize in biology, and for students intending to enter the medical profession.

The environment of the university offers a most favorable opportunity for the study of natural history. The shores of Puget Sound are near at hand and make possible the study of marine animals in the living condition, while the great lakes forming portions of the boundaries of the campus of the university swarm with fresh-water organisms.

SUBJECTS.

1, 2.—**Elements of Zoology.**—A general review of zoological science, involving a study of the structure, classification and habits of the types included in the great branches of the animal kingdom. This course includes a series of lectures upon the more important theories of biology, in order that the student may be able to pursue the work from an interpretative standpoint. Field-work is also regarded as an essential feature and parties are frequently taken into the field during the season in order that the environment and habits of the local fauna may be studied as illustrating the principle of adaptation. Students entering this course who have had high school training in zoology will be excused from certain portions of the required laboratory exercises. (Lectures, T., F., 11:15. Six laboratory hours. Credit, four hours.)

2a.—**Animal Evolution.**—A series of lectures, illustrated by the stereopticon, and bearing upon the more elementary phases of organic evolution, and including the evidences and factors of the evolutionary process. (One period a week during the second semester. Credit, one hour.)

3.—**Vertebrate Zoology.**—A study of the vertebrates from the standpoint of comparative anatomy. Types of the principal groups of backboned animals will be dissected, and the classification of the phylum will be dealt with from the point of view of genetic relationship. This course also includes

some training in the technique of histology. Prerequisite, courses 1 and 2 or their equivalent. (Lectures, T., Th., 10:20. Six laboratory hours, first semester. Credit, four hours.)

4.—**Vertebrate Embryology.**—An investigation of the comparative developmental history of the vertebrates, based upon the embryonic development of the chick, with supplementary work upon other vertebrate forms. (Lecture, T., Th., 10:20. Six laboratory hours, second semester. Credit, four hours.)

5.—**Physiology.**—A general course, dealing with the physiological activities of the human body. No prerequisite is demanded for this work, but it is advised that it be preceded or accompanied by a course in chemistry. (Lectures, W., F., 8:30. Three laboratory hours, first semester. Credit, two hours.)

6.—**Physiology.**—A continuation of course 5.

7.—**Entomology.**—The structure, classification and natural history of insects. This course involves the collection, preservation, and identification of the insects found in the local fauna. (Lectures, W., F., 9:25. Six laboratory hours, first semester. Credit, four hours.)

8.—**Entomology.**—A continuation of course 7.

9.—**Histology.**—The investigation of the microscopic structure of vertebrate tissues by the paraffine and collodion methods. To be elected only by special permission. (Credit to be arranged.)

10.—**Neurology.**—A study of the gross and fine structure of the nervous system, involving the application of the Golgi method. To be elected only by special permission. (Credit to be arranged.)

11.—**History.**—Lectures upon the historical development of zoological science, including the rise of its more important theories and the life work of representative naturalists. Prerequisite, courses 1 and 2, or their equivalent. (Lectures, T., 8:30, first semester. One period a week. Credit, one hour.)

12.—**Problems in Evolution.**—A discussion of fundamental biological problems, including natural selection, utility and

heredity, together with reviews of important contemporary articles. (One period a week. Credit, one hour.)

13.—**Research.**—Designed for advanced students who are capable of undertaking research under the direction of the instructor in charge. (Credit to be arranged.)

14.—**Research.**—A continuation of course 13.

15, 16.—**Normal Course.**—Aimed to meet the needs of students who expect to teach zoology in the high schools of the state. (One period a week throughout the year. Credit, one hour. Th., 8:30.)

FORESTRY.

1.—History and progress of forestry as a science; problems presented for solution in the Pacific Northwest; uses and characteristics of our native trees. Lectures, collateral reading and field work. (T., F., 11:15, second semester.)

PROFESSOR MEANY.

2.—Condensation of the above course with special reference to the needs of school teachers. (Saturday, 11:15, second semester.)

PROFESSOR MEANY.

GEOLOGY.

PROFESSOR LANDES.

In this department about one-half of the subjects offered might be styled general subjects, and are such as may be taken by any one as a part of a liberal education. The remaining subjects are more technical and are designed for those who wish to engage in geological work as a profession. In all subjects enough time is given to insure thoroughness, and every precaution is taken that the student may be well grounded. The method of instruction is in the main by lectures, laboratory exercises and field work, and in every course a certain amount of reading is required. Lantern slides, photographs, maps, models, etc., are used extensively in a majority of the subjects as important means of illustration. In the laboratories for mineralogy and petrography there are good collections of minerals and rocks, several petrographical microscopes and

lathes for cutting and grinding rock sections. The country contiguous to the University is a rich field for all kinds of field work in geology; while the University library has in it all of the government publications pertaining to the work of the department, besides most of the general literature on geology.

SUBJECTS.

1, 2.—**General Geology.**—A year's course treating of the principal facts and general principles of the science. (Lectures and recitations T., W., F., 11:15. Four laboratory hours a week, to be arranged on two days selected from M., T., W., Th. Occasional field trips on Saturdays. Credit, four hours.)

3.—**Mineralogy.**—Principles of crystallography; blowpipe methods in testing minerals; descriptive and determinative mineralogy. (Lectures and recitations M., W., F., 9:25. Four laboratory hours a week, to be arranged on two days selected from M., T., W., Th. Credit, four hours. First semester.)

4.—**Physiography.**—An advanced or college course in physical geography, recommended for those who are preparing to teach in the public schools. The course includes a study of the earth's features, considered in the light of their origin and history; the elements of meteorology; lectures upon the ocean, dealing with such subjects as composition, temperature, waves, currents, tides, life, etc. (Lectures and recitations M., T., W., Th., 9:25. Credit, four hours. Second semester.)

5.—**Economic Geology.**—A study of the origin and extent of metalliferous veins and ore deposits; varieties of coal, extent and locations of coal fields; gas and oil; origin, occurrences and uses of clays; building and ornamental stones; some consideration of other mineral products of use in the arts and of commercial importance. (Lectures and recitations T., W., Th., F., 8:30. Credit, four hours. First semester. Prerequisites, general geology and mineralogy.)

6.—**Petrography.**—A study of the distinguishing characteristics of the different groups and species of rock, with the methods of classification employed. (Lectures and recitations T., W., Th., F., 8:30. Laboratory hours to be arranged. Credit,

four hours. Second semester. Prerequisites, general geology and mineralogy.)

(Given in alternate years. Offered in 1905.)

7.—**Paleontology.**—The elements of invertebrate paleontology, consisting of a study of the hard parts of animals preserved as fossils, with their geologic and geographic distribution. (Lectures and recitations on T., W., Th., F., 8:30. Laboratory hours to be arranged. Occasional field trips on Saturdays. Credit, four hours. Second semester.)

(Given in alternate years. Not offered in 1905.)

8.—**Field Work and Research.**—Instruction and practice in the methods of geologic field work; investigation of special problems in geology. (To be taken only by special permission; either semester. Credit to be arranged.)

ASTRONOMY.

PROFESSOR ———

The work of this department is directed toward two ends: (1) To widen the intellectual horizon by a comprehensive view of the structure of the material universe in its larger aspects; (2) to make practical use of astronomical theory for the purposes of engineering.

SUBJECTS.

1.—**General Astronomy.**—Outline of fundamental facts in regard to the solar system and the stellar universe. The observatory is used for illustrative purposes. Young's Manual of Astronomy. (M., Th., 9:25, first semester. Prerequisites, Mathematics, 1.)

2.—**Practical Astronomy and Spherical Trigonometry.**—Use of instruments, the solution of spherical triangles and the determination of time, latitude and longitude. Campbell's Practical Astronomy, Second Edition. (M., Th., 9:25, second semester. Prerequisite, 1.)

MATHEMATICS.

PROFESSOR ——— AND ASSISTANT PROFESSOR GOULD.

The instruction offered by this department is intended to meet the wants of three classes of students: (1) General

students, who pursue the study of mathematics principally as a means of culture and mental discipline; (2) students of engineering or physics, who require a thorough grounding in the methods of calculus and related subjects; (3) students who intend to specialize in mathematics.

Subjects 1, 2, 3, 4, 5, 6, of which 1 is required of all students in the College of Liberal Arts, are intended for the first class of students. They include a brief course in higher algebra, trigonometry, solid geometry, analytical geometry and calculus.

Subjects 1a, 2a, 3, 4, 5a, 6a, all of which are required of students in the College of Engineering, are intended for the second class of students. They include the same branches of mathematics as are included in subjects 1, 2, 3, 4, 5, 6, but the courses in higher algebra, trigonometry, analytical geometry and calculus are somewhat longer and more comprehensive.

Of the other courses, Solid Analytical Geometry and Differential Equations are valuable to the student of higher Physics, Least Squares is important in Civil Engineering, and the rest are mainly of interest to the student of pure mathematics.

SUBJECTS.

1.—**Higher Algebra and Trigonometry.**—This course may be taken either the first semester or the second. First semester: Section A, T., W., Th., F., 8:30; section B, M., Th., 9:25, laboratory, W., F., 1:15-3; section C, T., Th., Float. Laboratory, M., W., 1:15-3. Second semester: Section D, T., W., Th., F., 8:30; section E, T., Th., Float. Laboratory, M. W., 1:15-3.

2.—**Higher Algebra and Trigonometry.**—Continuation of 1. (M., Th., 9:25; laboratory, W. F., 1:15-3; second semester. Prerequisite, 1.)

1a, 2a.—**Higher Algebra and Trigonometry.**—For engineering students. (Section A, T., W., Th., F., 8:30; section B, M., T., Th., F., 10:20, both semesters.)

3, 4.—**Solid Geometry.**—Supplementary to 1, 2, or to 1a, 2a. (M., Th., 10:20, both semesters. Prerequisites, elementary algebra and plane geometry. Two hours' credit.)

5, 6.—**Analytic Geometry and Calculus.** (M., T., Th., F., 10:20; both semesters.)

5a.—**Analytic Geometry.**—For engineering students. (M., T., W., Th., Float, first semester. Prerequisites, 1a, 2a, 3, 4.)

6a.—**Calculus.**—For engineering students. (M., T., W., Th., Float, and W., F., 11:15. Prerequisite, 5a, second semester. Six hours' credit.)

7, 8.—**Solid Analytic Geometry.** (W., F., 9:25, both semesters. Prerequisites, 5, 6, or 5a, 6a.)

9, 10.—**Non-Elucidean Geometry.** (————. Prerequisites, 5, 6.)

11.—**Least Squares.** (W., F., 11:15, first semester. Prerequisites, 5, 6.)

12, 13.—**Differential Equations.** (M., T., 11:15. Prerequisites, 5, 6.)

14.—**The Teaching of Mathematics.**—This course is designed for those students who wish to prepare to teach mathematics in the high school. The following topics will be discussed: the several branches of mathematics; the educational value of the subject; the course in mathematics in the high school; the seven operations in mathematics; number as a continuous magnitude; definitions; real versus artificial problems; graphic methods; the laboratory method; proofs of principles; reviews and examinations; books for the library. (M., T., W., F., 11:15, both semesters.) This course will not be given in 1904-05.

Besides these collegiate courses there will be one preparatory course, viz:

Preparatory Algebra.—Review of Elementary Algebra, including quadratics. (M., T., W., Th., Float. Prerequisite, one year of Elementary Algebra, first semester.)

PHYSICAL TRAINING.

PROFESSOR VANDER VEER AND MISS WOLD.

Ample preparation has been made to give students the benefit of a full course in physical training. The courses are

graded,. systematic and progressive. They are intended to remedy the common physical defects, to foster a condition of vigorous health, and to give a fair degree of endurance and self-control; but they also seek results more directly educational and disciplinary than these. The whole man is reached through his motor activities and involved in them no less than in purely intellectual efforts, and physical training properly applied makes important contributions to sense and motor training and to the development of physical judgment. presence of mind, self-reliance, courage, and strength of will. Every student is strongly advised to give at least three hours a week to work in this department. Unless excused all students are required to take work in this department during the first two years of their collegiate residence. Of the one hundred and twenty-eight credits required for graduation eight must be earned in this department.

SUBJECTS.

1.—**Elementary Course.**—Two hours. First section, M., W., F., 2:00. Second section, T., Th., 3:00.

PROFESSOR VANDER VEER, MISS WOLD AND ASSISTANTS.

2.—**Elementary Course.**—Two hours. First section, M., W., F., 2:00. Second section, T., Th., 3:00.

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3.—**Advanced Course.**—Two hours. M., W., F., 3:00. Open to students who have completed courses 1, 2.

4.—**Advanced Course.**—Two hours. M., W., F., 3:00.

PROFESSOR VANDER VEER, MISS WOLD AND ASSISTANTS.

A continuation of course 3.

COLLEGE OF ENGINEERING.

THE FACULTY.

THOMAS FRANKLIN KANE, PH. D.,
President.

ALMON H. FULLER, C. E.,
Dean and Professor of Civil engineering.

HENRY LANDES, A. M.,
Professor of Geology and Mineralogy.

J. ALLEN SMITH, PH. D.
Professor of Political and Social Science

ARTHUR RANUM, A. B.,
Professor of Mathematics and Astronomy.

HORACE G. BYERS, PH. D.,
Professor of Chemistry.

CHARLES W. VANDER VEER, Director of Gymnasium,
Professor of Physical Culture and Hygiene.

MILNOR ROBERTS, A. B.,
Professor of Mining Engineering and Metallurgy.

FREDERICK ARTHUR OSBORN, PH. B.,
Professor of Physics and Director of Physical and Electrical Laboratories.

JAMES EDWARD GOULD, PH. B.,
Assistant Professor of Mathematics.

RUDOLF ERNST HEINE, B. S.,
Assistant Professor of Electrical Engineering.

HENRY G. KNIGHT, A. B.,
Assistant Professor of Chemistry.

JOHN C. THORPE, M. E.,
Assistant Professor of Mechanical Engineering.

CHARLES H. GORDON, PH. D.,
Acting Professor of Geology.

Instructors and Assistants.

HENRY C. DAVIS, A. B.
Instructor in Rhetoric and Oratory.

N. ADELBERT BROWN, C. E.,
Instructor in Civil Engineering.

WILLIAM B. HAMPSON, M. E.,
Director of Shop-work in Mechanical Engineering.

W. LEE LEWIS, A. B.,
Instructor in Chemistry.

PURPOSE.

The College of Engineering offers four complete courses: Civil, electrical, mechanical and chemical engineering.

The aim of this college is to impart such training as will prepare its graduates for immediate usefulness in their chosen professions. During the freshman and sophomore years there is laid a broad foundation of mathematics, physics, chemistry, English, drawing and surveying. The last two years are devoted to work more purely professional. The usual methods of text-book study, recitations and lectures are employed and the student is required to supplement these, as far as possible, with actual practice in the field and laboratory, and by making tests of available commercial plants. Occasional inspection tours among the varied engineering interests in Seattle and vicinity furnish excellent illustrations. Engineering students are strongly advised to devote their vacations to surveying, draughting, work in factories, repair shops, electric light and railway stations and similar work, in order to obtain commercial

experience and a better appreciation of the relation of technical training to practical work.

The course in chemical engineering is designed for those who wish to use chemistry in technical work.

ADMISSION.

The requirements for admission to the Freshman class of the College of Engineering are:

	Units.
English	4
Algebra	1½
Plane Geometry	1
Solid Geometry	½
Physics	1
Chemistry	1
Foreign Language	2
History	1
Civil Government	½
Elective	2½
Total	15

For more specific information concerning the preparation necessary to meet the above requirements and list of electives see pages 66-67.

It is desirable for the student to review his preparatory mathematics just before entering the College of Engineering. By such a step much time will be saved and the work of the College will be rendered far more valuable.

The Freshman work in the several courses is identical, thus making it possible for a student to delay the definite choice of a course until the beginning of the Sophomore year.

THESIS.

A graduating thesis is required of each student of the College of Engineering in his senior year. It is intended that this thesis shall represent original research or design in some branch of engineering, or the careful review of some existing construction. The subject must be approved by the professor in charge of the department under which it is classified, not later than the first of January in the senior year.

DEGREES.

The courses of the College of Engineering lead to the degree of Bachelor of Science (B. S.), in civil, mechanical, electrical and chemical engineering, respectively.

Degree With Honors.

A degree with honors in engineering may be conferred upon any student of the College of Engineering who is recommended by the engineering faculty.

Advanced Degrees.

The master's degrees in engineering, namely, Civil Engineer (C. E.), Mechanical Engineer (M. E.), and Electrical Engineer (E. E.), will be conferred upon graduates in engineering who give evidence of having been engaged in responsible work for three years in their chosen profession and present a satisfactory thesis.

COURSES IN THE COLLEGE OF ENGINEERING.

The subjects in each department are described in full under the departmental statements, page 86 and following.

Course in Civil Engineering.

First Semester—		*Second Semester—*	
FRESHMAN YEAR.			
	Hours.		Hours.
Higher Algebra, 1a	4	Trigonometry, 2a	4
Chemistry, 1	4	Chemistry, 2	4
English Composition, 1	4	Descriptive Geometry, 2a	4
Mechanical Drawing, 1	4	Plane Surveying, 3a	4
Shop, 1a	2	Shop, 1b	2
Physical Culture	2	Physical Culture	2
Tatal	16+4	Total	16+4
SOPHOMORE YEAR.			
	Hours.		Hours.
Analytic Geometry, 5a	4	Calculus, 6a	6
Physics, 1a	6	Physics, 2a	5
Industrial Chemistry, 7	2	Metallurgy of Iron & Steel, 8	2
City Surveying, 3b	3	Topographic Surveying, 3c	3
Descriptive Geometry, 2b	2		
Physical Culture	2	Physical Culture	2
Total	17+2	Total	16+2
JUNIOR YEAR.			
	Hours.		Hours.
Mechanics, 5a	4	Mechanics, 5b	5
Political Science, 1	4	Industrial Electricity, 3	2
Railroads, 4a	4	Railroads, 4b	4
Geology, 1	4	Masonry Construction, 8	4
Total	16	Total	15
SENIOR YEAR.			
	Hours.		Hours.
Hydraulics, 6a, 6b	4	Hydraulics, 6b, 6c	4
Bridges, 7a	4	Bridges, 7b	4
Astronomy, 1	2	Astronomy, 2	2
Least Squares, 11	2	Geodesy, 3d	2
Roads and Pavements, 9	2	Contracts & Specifications, 11	1
Structural Materials, 10	2	Thesis	3
Total	16	Total	16

Course in Electrical Engineering.

FRESHMAN YEAR.

	Hours.		Hours.
Higher Algebra, 1a	4	Trigonometry, 2a	4
Chemistry, 1	4	Chemistry, 2	4
English Composition, 1	4	Descriptive Geometry, 2a	4
Mechanical Drawing, 1	4	Plane Surveying, 3a	4
Shop, 1a	2	Shop, 1b	2
Physical Culture	2	Physical Culture	2
Total	16+4	Total	16+4

SOPHOMORE YEAR.

	Hours		Hours.
Analytic Geometry, 5a	4	Calculus, 6a	6
Physics, 1a	6	Physics, 2a	5
Industrial Chemistry, 7	2	Metallurgy of Iron & Steel, 8	2
Machine Design, 5	3	Machine Design, 6a	2
Elem. of Steam Engin'ing, 6	2	Engines and Boilers, 7	2
Shop, 3a	2	Shop	2
Physical Culture	2	Physical Culture	2
Total	17+4	Total	17+4

JUNIOR YEAR.

	Hours.		Hours.
Mechanics, 5a	4	Mechanics, 5b	5
Political Science, 1	4	Steam and Engineering, 10e.	2
Dynamo Machinery, 1a	2	Dynamo Machinery, 1b	2
Electrical Measurements, 4a.	4	Dynamo Lab., 1c	4
Primary and Secondary Batteries, 5a	2	Dynamo Design, 1e	1
		Electrical Measurements and Photometry, 4b	2
Total	16	Total	16

SENIOR YEAR.

	Hours.		Hours.
Hydraulics, 6a, 6b	4	Hydraulics, 6b	1
Electric Railways, 2	2	Telephones and Telegraphs, 9	2
Power Transmission, 8a	3	Power Transmission, 8b	3
Alternating Currents, 6a	2	Alternating Currents, 6b	2
Alt. Current Lab., 6c	2	Alt. Current Testing, 6d	2
Commercial Testing, 7	3	Thesis	4
Total	16	Total	14

Course in Mechanical Engineering.

First Semester—	Hours.	*Second Semester*—	Hours.
FRESHMAN YEAR.			
Higher Algebra, 1a	4	Trigonometry, 2a	4
Chemistry, 1	4	Chemistry, 2	4
English Composition, 1	4	Descriptive Geometry, 2a	4
Mechanical Drawing, 1	4	Plane Surveying, 3a	4
Shop, 1a	2	Shop, 1b	2
Physical Culture	2	Physical Culture	2
Total	16+4	Total	16+4
SOPHOMORE YEAR.			
Analytic Geometry, 5a	4	Calculus, 6a	6
Physics, 1a	6	Physics, 2a	5
Industrial Chemistry, 7	2	Metallurgy of Iron & Steel, 8	2
Machine Design, 5a	3	Machine Design, 5a	2
Elem. of Steam Engin'ing, 6	2	Engines and Boilers, 7a	2
Shop, 3a	2	Shop, 3b	2
Physical Culture	2	Physical Culture	2
Total	17+4	Total	17+4
JUNIOR YEAR.			
Mechanics, 5a	4	Mechanics, 5b	5
Political Science, 1	4	Gas & Com'p Air Engines, 15	2
Dynamo Machinery, 1a	2	Dynamo Machinery, 1b	2
Electrical Measurements, 4a	1	Graphic Statics of Mech., 12	3
Kinematics, 10	3	Experim'tal Engineering, 13a	2
Thermo-Dynamics, 11	3	Dynamo Lab., 1d	1
Shop, 4a	2	Machine Design, 5c	2
		Shop, 4b	2
Total	17+2	Total	17+2
SENIOR YEAR.			
Hydraulics, 6a, 6b	4	Hydraulics, 6b	1
Electrical Railways, 2	2	Machine Design, 5d	2
Engine and Boiler Design, 7b	3	Estimates, 23	1
Experim'tal Engineering, 13b	3	Experim'tal Engineering, 13c	2
Ry. Mechanical Eng'g, 20	2	Contracts & Specifications, 22	1
Structural Materials, 10	2	Industrial Electricity, 3	2
Seminary, 21a	1	Seminary, 21b	2
		Thesis	4
Total	17	Total	15

Course in Chemical Engineering.

First Semester—	Hours.	*Second Semester*—	Hours.
FRESHMAN YEAR.			
Higher Algebra, 1a	4	Trigonometry, 2a	4
Chemistry, 1	4	Chemistry, 2	4
English Composition, 1	4	Descriptive Geometry, 2a	4
Mech. Drawing, 1a	4	Plane Surveying, 3a	4
Shop, 1a	2	Shop, 1b	2
Physical Culture	2	Physical Culture	2
Total	16+4	Total	16+4
SOPHOMORE YEAR.			
Analytic Geometry, 5a	4	Calculus, 6a	6
Physics, 1a	6	Physics, 2a	5
Chemistry, 5	3	Chemistry, 6	4
Geology, 1	4	Physical Culture	2
Physical Culture	2		
Total	17+2	Total	15+2
JUNIOR YEAR.			
Mechanics, 5a	4	Mechanics, 5b	5
Organics Chemistry, 3	4	Chemistry, 8	2
Metallurgy, 1	4	Metallurgy, 2	4
Mineralogy, 3	3	Mineralogy, 4	3
Physics, 5	2	Dynamo Machinery, 1b	2
Total	17	Total	16
SENIOR YEAR.			
Hydraulics, 6a, 6b	4	Hydraulics, 6b and 6c	4
Gar and Water	4	Foods	4
Physical Chemistry, 9	4	Engines and Boilers, 7	2
Thermo Dynamics, 11	3	Thesis	4
Total	15	Total	14

DEPARTMENTS OF INSTRUCTION.

RHETORIC.

MR. DAVIS.

1.—**English Composition.**—Daily and fortnightly themes together with the study of the principles of Rhetoric. Text:

"Genung's The Working Principles of Rhetoric." Each student will meet the instructor for private consultation on his work at least once every two weeks. Required of freshmen in all courses. (Section A: M., T., Th., F., 10:20; Section B: M., T., W., Th., Float. First semester.)

POLITICAL AND SOCIAL SCIENCE.

PROFESSOR SMITH.

SUBJECTS.

1.—**Elements of Political Economy.**—(M., W., Th., F., 9:25. First semester.)

CHEMISTRY.

PROFESSOR BYERS, ASSISTANT PROFESSOR KNIGHT, MR. LEWIS AND MR. HOPKINS.

SUBJECTS.

O.—To meet the needs of those students who come from schools in which chemistry is not required for graduation. It consists of one recitation and four laboratory hours per week throughout the year, but must be taken, if at all, in conjunction with chemistry 1, 2, which it is designed to supplement and make possible for the unprepared student. Where offered for entrance requirement it will count as one credit. (M., 11:15. Laboratory work, 8:30-12:30, Saturday.)

1, 2.—**General Inorganic.**—Experimental lectures supplemented by quizzes. Laboratory work during first semester on selected illustrative experiments. Second semester, qualitative analysis. Remsen's Advanced Course. Smith's Laboratory Manual. Qualitative Analysis. Treadwell and Hall. Prerequisite, a high school course in chemistry or simultaneous taking of a high school course in chemistry O. (Lectures T., W., F., 11:15. Laboratory work for engineering students, T., Th., afternoons. For other students, to be arranged on two days selected from M., W., F.)

PROFESSOR BYERS, ASSISTANT PROFESSOR KNIGHT AND MR. LEWIS.

3, 4.—**Organic.**—A study of the typical compounds of carbon, special stress being laid upon the principles of their

classification; organic preparation, and practical study of important compounds. Remsen's Briefer course as lecture syllabus. Orndorff's Manual. (Lectures T., Th., F., 10:20. Laboratory, T., Th., afternoons.)

PROFESSOR BYERS AND ASSISTANT PROFESSOR JOHNSON.

5.—**Advanced Qualitative Analysis.**—Lectures on theory of solution and its applications to qualitative analysis. Laboratory work, using Volhard as a guide and Fresenius for reference. (Lectures, M., W., 9:25. First semester. Prerequisite, 2.)

PROFESSOR BYERS AND ASSISTANT PROFESSOR KNIGHT.

6.—**Quantitative Analysis.**—Gravimetric and volumetric analysis. Talbot's Quantitative Analysis. (Twelve laboratory hours per week, M., W., F., afternoons and S. morning. Credit, four semester hours. Prerequisite, 2.)

ASSISTANT PROFESSOR KNIGHT.

7.—**Industrial Chemistry.**—Required of sophomore civil, mechanical and electrical engineers. A lecture course of the commercial methods of manufacture of compounds of great industrial importance. The course is supplemented by Saturday excursions to plants in and near the city of Seattle, Everett and Tacoma. Thorpe's Industrial Chemistry as guide and reference. (T., F., 9:25. First semester.)

PROFESSOR BYERS.

8.—**Metallurgy of Iron and Steel.**—Required of sophomore civil, electrical and mechanical engineers. A lecture course on the manufacture and properties of iron and steel products and by-products. This course will be supplemented by a trip to the furnaces at Port Townsend and by blue print drawings and lantern slides. Modern furnaces and machinery in use at the Illinois steel works. (M., W., 9:25. Second semester.)

PROFESSOR BYERS.

9.—**Physical Chemistry.**—An elementary course which will consist of lectures upon and laboratory demonstration of the fundamental principles of chemistry based on physical measurements. Freezing and boiling-point methods of molecular weight determination. Theory of ionization, degree of ioniza-

tion and speed of ions, etc. (Lectures, T., Th., 11:15. Laboratory, M., W. First semester. Prerequisite, Chemistry 6 and College Physics.) ASSISTANT PROFESSOR KNIGHT.

11, 12.—**Special Methods.**—Quantitative analysis of gas, water, foods, food adulterants, etc. (Twelve hours' laboratory work, throughout the year. Four semester credits.)
ASSISTANT PROFESSOR KNIGHT.

PHYSICS.

PROFESSOR OSBORN, MR. BRAKEL AND MR. RATHBUN.

SUBJECTS.

1a.—**Mechanics.**—Sound and heat. (T., W., Th., F., 8:30; laboratory, M., W., 1:15-4. First semester.)

2a.—**Electricity and Light.**—(T., W., Th., F., 8:30; laboratory, M. or W., 1:15-4. Second semester.)

GEOLOGY.

PROFESSOR LANDES.

1.—**General Geology.**—A semester's course. Lectures and recitations. (T., W., F., 11:15. Four laboratory hours a week, to be arranged on two days selected from M., T., W., Th. First semester.)

ASTRONOMY.

PROFESSOR RANUM.

1.—**General Astronomy.**—Outline of fundamental facts in regard to the solar system and the stellar universe. The observatory is used for illustrative purposes. Young's Manual of Astronomy. (M., Th., 9:25. First semester.)

2.—**Practical Astronomy and Spherical Trigonometry.**—Use of instruments, the solution of spherical triangles, and the determination of time, latitude and longitude. Campbell's Practical Astronomy. (M., Th., 9:25. Second semester.)

MATHEMATICS.

PROFESSOR RANUM AND ASSISTANT PROFESSOR GOULD.

1a, 2a.—**Higher Algebra and Trigonometry.**—For engineer-

ing students. (Section A: T., W., Th., F., 8:30. Section B: M., T., Th., F., 10:20. Both semesters.)

3, 4.—**Solid Geometry.**—Supplementary to 1, 2; or 1a, 2a. (M., Th., 10:20. Both semesters. Prerequisites, elementary algebra and plane geometry. Two hours credit.)

5a.—**Analytic Geometry.**—For engineering students. (M., T., W., Th., Float; first semester. Prerequisites, 1a, 2a, 3, 4.)

PROFESSOR RANUM.

6a.—**Calculus.**—For engineering students. (M., 8:30; T., 9:25; W., 10:20 and 11:15; Th., 11:15; F., 11:15. Prerequisite, 5a.)

PROFESSOR RANUM.

11.—**Least Squares.**—(T., F., 11:15. First semester. Prerequisites, 5, 6.)

METALLURGY.

PROFESSOR ROBERTS.

The classroom and laboratory work in metallurgy is supplemented by frequent visits to the assay offices, smelting and refining plants located in Seattle and neighboring cities.

SUBJECTS.

1.—**Fire Assaying.**—Testing of reagents, sampling and assaying of ores, furnace and mill products for lead, silver and gold. (First semester.)

2.—**General Metallurgy.**—The properties of metals and alloys, the uses of various fuels, types of furnaces, and the blast-furnace treatment of ores (except iron). (Second semester.)

3.—**Wet Assaying.**—The determination of copper and other metals in ores and furnace products by electrolytic and volumetric methods. (Three afternoons, either semester.)

4.—**Metallurgical Analysis.**—Analysis of coal, slags, alloys, etc. (Three afternoons, either semester.)

CIVIL ENGINEERING.

PROFESSOR FULLER AND MR. BROWN.

SUBJECTS.

1.—**Mechanical Drawing.**—Instruction in the use of instru-

ments and practice in linear drawing; construction from printed descriptions in isometric, cabinet and orthographic projections; plane sections and section lining; intersection of simple geometric forms; lettering, including the Roman and Gothic alphabets and a practical freehand alphabet for working drawing. (M., W., F., 1:15-4; Th., 8:30-10:20; first semester. Four hours' credit.) MR. BROWN.

2a.—**Descriptive Geometry.**—Projections and rotations of points, lines, planes, curved and warped surfaces. (Lecture and recitations, M., Th., 9:25. Drawing period F. 1-4. Second semester, four hours' credit. Prerequisite, Drawing 1, and Mathematics, 2a.) ASSISTANT PROFESSOR THORPE.

2b.—**Descriptive Geometry.**—Shades, shadows and linear perspective. (Lecture and recitations, M., 11:15. Drawing period T., 10:20-12:10. First semester. Two hours credit.

MR. BROWN.

3a.—**Plane Surveying.**—Theory of chain, compass, and transit surveying, and leveling; the adjustment and use of instruments; computation of area, maps. (Lectures M., 8:30; W., 10:20. Field work M., W., 1-4. Alternate section. Lectures, T., 9:25; Th., 11:15. Field work, Sat., 8:30-3:00. Second semester. Credit four hours. Prerequisite, Drawing 1, preceded or accompanied by Mathematics 2 or 2a.)

MR. BROWN.

3b.—**City Surveying.**—Study of the precision necessary to be obtained; survey of a convenient portion of the city, and the field and office work of laying out a new addition. (Lecture W., 9:25. Field work, T., Th., 1-4. First semester, until Christmas recess. Pen topography will be taken up for the remainder of the semester, T., Th., F., 1-4. Total credit three hours. Prerequisite, 3a.) MR. BROWN.

3c.—**Topographic Surveying.**—Colored topography until Easter recess. (T., Th., F., 1-4.) Thereafter, base line measurement; transit triangulation; plane table and stadia work; maps. (Lecture, W., 9:25; field work, T., Th., 1-4; second semester. Total credit, three hours.) MR. BROWN.

3d.—**Elements of Geodesy.**—General study of the figure of

the earth and of the methods and instruments used in precise surveys over large areas; field work. (Second semester. M., W., 11:15, 1 and 2. Prerequisites, 3c, preceded or accompanied by Astronomy. Credit, two hours.) MR. BROWN.

4a, 4b.—**Railroads**—Location, construction and economics. The theory of curves, earthwork computation and the conditions controlling the economic relation of location, construction and maintenance are taken up in the class room. Reconnaissance and location are made in the field, from which maps and profiles are constructed and critically studied. (Class work, W., F., 8:30; field and office, S., 8:30-3:00. First semester. M., T., Th., F., 10:20. Second semester. Credit, four hours. Both semesters. Prerequisite, 3c.) MR. BROWN.

5a.—**Mechanics.**—Statics and dynamics. Lectures and recitations. Special attention is paid to practical applications. Original problems form a prominent feature. (M., T., W., Th., Float. First semester. Credit, four hours. Prerequisites, Mathematics, 6a, and Physics, 1a and 2a.)

PROFESSOR FULLER.

5b.—**Mechanics.**—Continuation of 5a and Mechanics of Materials. Lectures, recitations and seminary. (M., T., W., Th., Float; W., 1-4. Second semester. Five hours' credit.)

PROFESSOR FULLER.

6a.—**Theoretic Hydraulics.**—Hydrostatic pressure; immersion and floatation; steady flow of water through pipes and orifices, over weirs and in open channels. (Lectures and recitation, four hours a week. First semester until Christmas recess, 8:30. Three hours credit. Prerequisite, 5b.)

PROFESSOR FULLER.

6b.—**Hydraulic Motors.**—Special attention is given to the theoretic treatment of wheels of the Pelton type and to turbines. Laboratory tests are made of small motors and meters. (Lectures and recitations three times a week, 8:30. Laboratory work, Sat., 9-12, from Christmas recess to Easter recess. Credit, two hours. Prerequisite, 6a.) PROFESSOR FULLER.

6c.—**Water Supply.**—The design and construction of municipal water supply systems. Lectures, recitations and the

design of an imaginary system. The last few periods will be devoted to lectures on irrigation and sewerage. (Four hours a week, second semester after Easter recess, 8:30. Three hours credit.) PROFESSOR FULLER.

7a, 7b.—**Bridges.**—Stresses in simple trusses by analytic and graphic methods. Designs with working drawings, bills of material, and estimate of cost of a roof truss, a plate girder, and a pin-connected bridge, are made by each student. Lectures, recitations, computations and drawings. (Credit four hours. M., T., Th., F., 10:20. First semester. M., Th., 10:20. M., F., 1:15-4. Second semester. Prerequisites, 2b, 5b.) PROFESSOR FULLER.

7c, 7d.—**Higher Structures.**—Draw-bridges, cantilever bridges, suspension bridges, and metallic arches; stresses and deflections. Lectures, recitations and graphic determinations. (Credit, two hours throughout the year; must be preceded or accompanied by 7a, 7b. Not offered during 1903-04.) PROFESSOR FULLER.

8.—**Masonry Construction.**—A study of the properties of stone, brick, cement and concrete, and their use in foundations, dams, piers, abutments and retaining walls. Theory and design of masonry arches. Lectures, recitations, design and cement laboratory work. (Four hours' credit; second semester, T,, F., 11:15; T., Th., 1:15-4. Prerequisites, 2b, preceded or accompanied by 5b.) PROFESSOR FULLER.

9.—**Roads and Pavements.**—Fundamental principles of the location, construction, and maintenance of country roads and city streets. Lectures, recitations and assigned reading. (Two hours' credit; first semester; W., F., 9:25. Prerequisites, 3c and 8. Not offered during 1904-05.) PROFESSOR FULLER.

10.—**Structural Materials.**—A study of the physical properties of wood, iron, steel, stone, brick, etc. Lectures and laboratory work. (Two hours' credit; first semester; T., Th., 1-4. Prerequisite, 5b.) PROFESSOR FULLER.

11.—**Contracts and Specifications.**—Lectures on the law of contracts and a study of engineering specifications. (One hour a week; W., 11:15; second semester.)

ELECTRICAL ENGINEERING.

PROFESSOR OSBORN AND ASSISTANT PROFESSOR HEINE.

This department is associated with the department of Physics.

SUBJECTS.

1a, 1b.—**Dynamo Electric Machinery.**—Theory of magnetic circuit, construction, operation and characteristics of direct current dynamos. (W., F., 8:30. Two hours credit. Prerequisite, Physics 1, 2.) ASSISTANT PROFESSOR HEINE.

1c.—**Dynamo Testing.**—Experimental study of a direct current machinery. (T., W., Th., 1:15-4. Second semester. Prerequisite, 1a. Four hours credit.)

ASSISTANT PROFESSOR HEINE.

1d.—**Short Course in Dynamo Testing.**—Abridgment of course 1c for Mechanical Engineers. (T., Th., 1:15-4, second semester. Prerequisite, 1a. Two hours credit.)

ASSISTANT PROFESSOR HEINE.

1e.—**Dynamo Design.**—Complete design of one direct current machine. (One hour credit; T., 11:15. Second semester.)

ASSISTANT PROFESSOR HEINE.

2.—**Electric Railways.**—Electric circuit, roadbed, rolling stock, construction and operation. (M., Th., 10:30. First semester. Two hours credit.) ASSISTANT PROFESSOR HEINE.

3.—**Industrial Electricity.**—Outline of industrial application, Ohm's law, wiring, etc. (T., Th., 8:30. Second semester. Prerequisite, Physics, 1a, 2a. Two hours credit.)

ASSISTANT PROFESSOR HEINE.

4a.—**Electrical Measurements.**—(Recitation, M., 10:20. Three laboratory periods. First semester. Four hours credit. Prerequisite, Physics, 1a, 2a.) PROFESSOR OSBORN.

4b.—**Electrical Measurements and Photometry.**—Two laboratory periods. (F., 1-4, and S., 8:30-12. Second semester. Two hours credit. Prerequisite, 4a.) PROFESSOR OSBORN.

5a.—**Primary and Secondary Batteries.**—(Recitation, Th., 10:20. Laboratory, 10:20-12-10 T., F. First semester. Prerequisite, Physics, 1a, 2a. Two hours credit.)

PROFESSOR OSBORN.

6a, 6b.—**Alternating Currents.**—Theory and applications of alternating currents, power measurements, transformers. (T., F., 10:20, throughout the year. Prerequisite, 1a, 1b. Two hours credit.) ASSISTANT PROFESSOR HEINE.

6c, 6d.—**Alternating Current Testing.**—T., W., 1:15-4, throughout the year. Two hours credit.)

ASSISTANT PROFESSOR HEINE.

7.—**Commercial Testing.**—M., Th., F., 1:15-4. Nine hours per week during the first semester. Three hours credit. Prerequisites, 4a, 5a.) ASSISTANT PROFESSOR HEINE.

8a, 8b.—**Electric Lighting and Power Transmission.**—Construction and operation of transmission systems; lighting plants and their operation. (M., W., F., 9:25. Throughout the year. Three hours credit.) ASSISTANT PROFESSOR HEINE.

9.—**Telephones and Telegraphs.**—Theory of telephones, telephone systems, submarine, multiplex and wireless telegraphy. (M., Th., 10:20. Second semester. Two hours credit.)

ASSISTANT PROFESSOR HEINE.

Mechanical Engineering.

ASSISTANT PROFESSOR THORPE AND MR. HAMPSON.

Course of Study, 1904-1905.

1a.—**Shop—Work in Wood.**

1b.—**Shop.—Pattern Making.**

2a.—**Shop.—Foundry Work.**

3a.—**Shop.—Forge Work.**

4a.—**Shop.—Bench Work in Iron.**

4b.—**Shop.—Machine Work in Iron.**

5a.—**Machine Design.—a.—Elements of Machine Design.**—A study of the design of machine details, giving practice in the application of modern formulae and methods of calculation. Design of bolts, riveted joints, boiler braces and bracing, journals and bearings. Kent's Mechanical Engineer's Pocket Book and Unwin's Elements of Machine Design form a basis for the work. Constant reference is had to the mod-

ern trade lists and catalogues. Practice is given in tracing and blue-printing. (I semester. Three hours credit. T., Th., 1:15-4 p. m.)

5b.—**A continuation of 5a.**—Consisting of the design of gearing and cone pulleys. (II semester; 2 hours credit. T., Th., 1:15-4 p. m.) (5a and 5b must be preceded by Drawing 1, and must be preceded or accompanied by Descriptive Geometry 2a.)

5c.—**Design of Special Machinery.**—Including the design of hoisting machinery, such as jib and travelling cranes for light and heavy duty; pumping machinery, etc. Subject is studied from the theoretical and practical points of view. Constant reference is had to the works of Klein, Unwin, and Reuleaux. (II semester; 2 hours' credit. T., W., 1:15-4 p. m. Must be preceded by 5a, 5b, 10 Mechanics 5a, and preceded or accompanied by 12 and Mechanics 5b.)

5d.—**Design of Steam Engines and Boilers.**—The theory of the design of the various types of engines and boilers is studied. Special attention is given to the design of parts for maximum economy. Valve gears, governors, and fly wheels receive detailed consideration. Various auxiliary apparatus pertaining to the steam generation is designed. (3 hours credit. I semester. W. 10:20, T., F., 1:15-4. Must be preceded by 5, 7, 11, 13a, Mechanics 5a, 5b.)

5e.—**Advanced Design**—Not offered in 1904-1905.

6.—**Elements of Steam Engineering.**—Brings before the student the various forms of steam apparatus used in modern power plants, considering the construction, use and the reasons for using such apparatus. Tends to create a working vocabulary in this branch of engineering. Visits are made to the various power plants where the apparatus studied in the class room may be seen in operation. (I semester; 2 hours credit. W., F., 9:25 a. m.)

7.—**Engines and Boilers.**—A study of the generation and use of steam in steam boilers and engines; conditions necessary for maximum economy; the influence of economizers, feed water heaters, superheaters, mechanical stokers, con-

densers, etc., upon engine and boiler performance. (2 hours credit. II semester. W., F., 9:25. Prerequisite, 6.)

7a.—**Design of Engines and Boilers.**—A study of the theory of design and its application. Special attention is given to valve gear, governors, etc. Comparisons of the theory and existing modern practice form a feature of the work. (3 hours credit. T., F., 1:15-4. I semester.)

10.—**Kinematics.**—A study of plain motion including the determination of centrodes, instantaneous centers, and the velocities of important points of familiar mechanisms; and the construction of acceleration diagrams. Special attention is given to steam engine mechanism, link motions, indicator reducing motions, etc. (3 hours credit. I semester. T., Th., 8:30, W., 1:15-4.) Must be preceded by 5a, 5b, and 7, and preceded or accompanied by Mechanics 5a.)

11.—**Thermodynamics.**—The consideration of the fundamental principles underlying the transformation of heat into work, with especial reference to steam engine practice. The solution of numerous examples that arise in steam, gas and compressed air engineering is required. (3 hours credit. I semester. T., Th., F., 10:20. Must be preceded by Physics 1a, 2a, Mathematics 5a, 6a, M. E. 6. 7.)

12.—**Graphic Statics of Mechanism.**—The graphic determination of the forces acting at different points in machines used for hoisting, crushing, punching, and power transmission. Also a study of the effect of sliding, rolling and journal friction, and the stiffness of ropes and belts. (3 hours credit. II semester. T., Th., F., 10:20, and T. and F., 11:15. Must be preceded by Mechanics 5a, and M. E. 5a, 5b, 10.)

13.—**Experimental Engineering.**—a. A course for Electrical and Mechanical Engineers. Calibrations of thermometers, steam gauges, indicator springs, pyrometers. Friction and efficiency tests of simple steam engine. The lectures given from time to time during the progress of the course consider the standard methods of steam engine and boiler tests and compare the results obtained. (Two hours' credit. II semester. M., 1:15-4 p. m. Must be preceded by 7.)

13b.—A continuation of the work of the previous year, involving tests of steam engines, boilers, pumps, injectors, gas engines, etc., with a view to determining the conditions necessary for maximum economy. Special attention is given to theoretical investigations of indicator diagrams. Tests of neighboring power plants comprise an important part of the course. (3 hours credit. I semester. Th., 1-4, Sat. 8-12. Must be preceded by 11, 13a, 15.)

13c.—**Advanced Experimental Engineering.**—Gas analysis, calorific determinations of fuels, tests of lubricants, pipe coverings, etc. Complete tests of power plants form an attractive part of the course. (Not given in 1904-1905.)

20.—**Railway Mechanical Engineering.**—A lecture course for the consideration of the relation of mechanical engineering to the railroads. Special attention will be given to railway rolling stock and motive power, power plants, shop design and management, testing laboratory, organization, etc. (2 hours credit. I semester. M., W., 9:25. Must be preceded by 6, 7, Mechanics 5a, 5b.)

21a and b.—**Seminary.**—Work closely allied with thesis and other work of the senior year. Students are required to present papers on assigned subjects, usually selected by the student after consulting with the professor in charge. Special attention is given to discussions of current engineering topics. (1 hour credit, I semester, 2 hours' credit, II semester. Not given in 1904-1905.)

22.—**Contracts and Specifications.**—Lectures on the law of engineering contracts and the consideration of specifications pertaining to mechanical engineering. (Not offered in 1904-1905.)

23.—**Estimates.**—Work supplementary to the consideration of specifications in course 22. Student is required to prepare tables of the costs of engineering materials, investigate available discount sheets, and submit carefully prepared estimates of the cost of engineering works. (Not offered in 1904-1905.)

Chemical Engineering.

The courses which are distinctively chemical will be found under the heading Chemistry, page 107.

PHYSICAL TRAINING.

PROFESSOR VANDER VEER AND MISS WOLD.

Ample preparation has been made to give students the benefit of a full course in physical training. The courses are graded, systematic and progressive. They are intended to remedy common physical defects, to foster a condition of vigorous health, and to give a fair degree of endurance and self-control; but they also seek results more directly educational and disciplinary than these. The whole man is reached through his motor activities and involved in them no less than in purely intellectual efforts, and physical training properly applied makes important contributions to sense and motor training and to the development of physical judgment, presence of mind, self-reliance, courage, and strength of will. Every student is strongly advised to give at least three hours a week to work in this department. Unless excused all students are required to take work in this department during the first two years of their collegiate residence. Of the one hundred and twenty-eight credits required for graduation eight must be earned in this department.

SUBJECTS.

1.—**Elementary Course.**—Two hours. First section, M., W., F., 2:00. Second section, T., Th., 3:00.

PROFESSOR VANDER VEER, MISS WOLD AND ASSISTANTS.

2.—**Elementary Course.**—Two hours. First section, M., W., F., 2:00. Second section, T., Th., 3:00.

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3.—**Advanced Course.**—Two hours. M., W., F., 3:00. Open to students who have completed courses 1, 2.

4.—**Advanced Course.**—Two hours. M., W., F., 3:00.

PROFESSOR VANDER VEER, MISS WOLD AND ASSISTANTS.

A continuation of course 3.

THE SCHOOL OF MINES

THE FACULTY.

THOMAS FRANKLIN KANE, PH. D.,
President.

MILNOR ROBERTS, A. B., Dean,
Professor of Mining Engineering and Metallurgy.

HENRY LANDES, A. M.,
Professor of Geology and Mineralogy.

J. ALLEN SMITH, PH. D.,
Professor of Political and Social Science.

ARTHUR RANUM, A. B.,
Professor of Mathematics and Astronomy.

ALMON H. FULLER, C. E.,
Professor of Civil Engineering.

HORACE G. BYERS, PH. D.,
Professor of Chemistry.

CHARLES W. VANDER VEER,
Professor of Physical Culture.

TREVOR C. D. KINCAID, A. M.,
Professor of Zoology.

FREDERICK A. OSBORN, PH. B.,
Professor of Physics and Director of Physical and Electrical Laboratories.

JAMES E. GOULD, PH. B.,
Assistant Professor of Mathematics.

RUDOLF E. HEINE, B. S.,
Assistant Professor of Electrical Engineering.

JOHN C. THORPE, M. E.,
Assistant Professor of Mechanical Engineering.

HENRY C. DAVIS, A. B.,
Instructor in Rhetoric.

N. ADELBERT BROWN, C. E.,
Instructor in Civil Engineering.

*Hon. FRED RICE ROWELL, A. B.,
Lecturer on Mining Law.

WILLIAM LEE LEWIS, A. B.,
Instructor in Chemistry.

PAUL HOPKINS, M. A.,
Instructor in Chemistry.

WALTER B. BEALS, A. B.,
Lecturer on Mining Law.

*Died April 27th, 1904.

PURPOSE.

The School of Mines was established to give thorough technical education to those desiring to become mining engineers, metallurgists and geologists, and thus to supply the demand for men competent to develop the resources of the state.

There are three courses: (1) Mining engineering; (2) geology and mining; (3) short course in mining for prospectors.

The course in mining engineering with geology contains more geology, biology and electives than the other courses. It is designed for those students who wish to fit themselves for geological surveys or for reporting upon the economic geology of mining districts.

ADMISSION.

The requirements for admission to the Freshman class of the School of Mines are:

	Units.
English	4
Algebra	1½
Plane Geometry	1
Solid Geometry	½
Physics	1
Chemistry	1
Foreign Language	2
History	1
Civil Government	½
Elective	2½
Total	15

For more specific information concerning the preparations necessary to meet the above requirements and for list of electives see pages 66 and 67.

Students at least sixteen years of age may be admitted:

(1) By presenting a certificate of graduation from an accredited school (for list see page 77), covering the above subjects.

(2) By passing a satisfactory examination in above subjects.

It is desirable for the student to review his preparatory mathematics just before entering the School of Mines. By such a step much time will be saved and the work of the School will be rendered far more valuable.

SUMMER WORK.

Every mining student who is a candidate for a degree is required to spend a portion of his summer vacations

in actual work in a mine, mill or smelter. An exhaustive report of such work must be presented before the middle of the following semester. Students in course II may present geological field work as a partial substitute.

DEGREE.

The four year course of the School of Mines leads to the degree of Bachelor of Science (B. S.) in mining engineering.

DEGREES WITH HONORS.

A degree with honors may be conferred upon any student who has been recommended by the faculty of the School of Mines.

SHORT COURSE FOR PROSPECTORS.

From January 1st to April 1st the instructors in mining engineering offer a course for the benefit of mature persons who are interested in prospecting and mining. Admission to the classes is without examination. The subjects are suited to the needs of those who wish sufficient information in geology, mineralogy, chemistry and related subjects to take up practical work with a proper understanding of it. Instruction is given by lectures, laboratory exercises and visits to reduction plants. The advantages of the University laboratories and libraries are open to all. The past experience and future aims of each student are taken into consideration, and the character of his work arranged acordingly. For stu-

dents who return a second year, a special course is arranged in continuation of their previous work.

For the purely lecture subjects no fees are charged. In the laboratory subjects sufficient charges are made to cover the cost of materials actually consumed. In subject 1 a fee of five dollars is charged, and a deposit of five dollars is required to cover the cost of apparatus which may be broken; in subject 3 a fee of three dollars is charged, and a deposit of two dollars required as a surety for the return of the blowpipe outfit and other apparatus loaned; in subject 4 a fee of ten dollars is charged, and a deposit of five dollars required to cover breakage of apparatus. All fees must be paid, and all deposits made, at the beginning of each subject.

(For subjects in this course see page 149.)

STATE ASSAYING.

Owing to the constant demand which is made upon the department of assaying for ascertaining the value of various minerals, the following scale of prices has been adopted:

Gold	$1.00
Gold and silver	1.00
Silver	.50
Lead	.50
Copper	2.00
Tin	2.00
Zinc	2.00
Qualitative analysis	$2.00 to 5.00
Quantitative analysis, for each element determined, $2.00, or a complete analysis	5.00 to 25.00

COURSES OF THE SCHOOL OF MINES.

Course in Mining.

First Semester— *Second Semester*—

FRESHMAN.

	Hours.		Hours.
Rhetoric, 1	4	Descriptive Geometry, 2a	4
Mathematics, 1a	4	Mathematics, 2a	4
Chemistry, 1	4	Chemistry, 2	4
Drawing, 1	4	Surveying, 3a	4
Shop, 1a	2	Shop, 1b	2
Physical Culture	2	Physical Culture	2
Total	16+4	Total	16+4

SOPHOMORE.

	Hours.		Hours.
Geology, 3	4	Metallurgy, 8	2
Mathematics, 5a	4	Mathematics, 6a	6
Physics, 1a	6	Physics, 2a	5
Surveying, 3b	3	Chemistry, 6	4
Physical Culture	2	Physical Culture	2
Total	17+2	Total	17+2

JUNIOR.

	Hours.		Hours.
Metallurgy, 1	4	Metallurgy, 2	4
Geology, 1	4	Geology, 2	4
Mechanics, 5a	4	Mechanics, 5b	4
Political Science, 1	4	Surveying, 3c	3
Total	16	Total	15

SENIOR.

	Hours.		Hours.
Mining, 1	4	Mining, 2	4
Geology, 5	4	Geology, 6	4
Metallurgy, 3	4	Industrial Electricity, 3	2
Hydraulics, 6a	4	Steam Engineering	2
		Hydraulics, 6b	4
Total	16	Total	16

Course in Geology and Mining.

First Semester—	Hours.	*Second Semester*—	Hours.
FRESHMAN.			
Rhetoric, 1	4	Descriptive Geometry, 2a	4
Mathematics, 1a	4	Mathematics, 2a	4
Chemistry, 1	4	Chemistry, 2	4
Drawing, 1	4	Surveying, 3a	4
Shop, 1a	2	Shop, 1b	2
Physical Culture	2	Physical Culture	2
Total	16+4	Total	16+4
SOPHOMORE.			
Geology, 3	4	Metallurgy, 8	2
Mathematics, 5a	4	Mathematics, 6a	6
Physics, 1a	6	Physics, 2a	5
Surveying, 3b	3	Chemistry, 6	4
Physical Culture	2	Physical Culture	2
Total	17+2	Total	17+2
JUNIOR.			
Metallurgy, 1	4	Metallurgy, 2	4
Geology, 1	4	Geology, 2	4
Zoology, 1	4	Zoology, 2	4
Political Science, 1	4	Elective	4
Total	16	Total	16
SENIOR.			
Mining, 1	4	Mining, 2	4
Geology, 5	4	Geology, 6 or 7	4
Metallurgy, 4	4	Geology, 8	4
Elective	4	Elective	4
Total	16	Total	16

Short Course for Prospectors.

SUBJECTS.

1.—**General Chemistry and Qualitative Analysis.**—Laboratory practice in the determination of the common elements. (Three lectures a week, and Saturday laboratory.)

2.—**Geology.**—Lectures on the elements of geology, the

common varieties of rocks, metalliferous vein and ore deposits, etc. (Three times a week.)

3.—**Mineralogy.**—Instruction and practice in blowpipe analysis, followed by lectures upon the common minerals, with practice in the identification of minerals by field tests. (Three times a week.)

4.—**Furnace Assaying.**—Lectures and laboratory work. Lectures on sampling, preparing ores for assay, furnaces, fuels and reagents. Ores of various metals are studied, with reference to the nature of fluxes required for their assay. The laboratory work includes the preparing and testing of reagents, and the assaying of ores, furnace and mill products. (One lecture and three afternoons a week.)

5.—**Mining.**—Lectures on excavating, blasting, tunneling and shaft sinking, timbering, mine transportation, pumping, ventilation and hydraulic mining. (Twice a week.)

6.—**Mining Law.**—A series of lectures on the mining laws of the United States. (Once a week.)

The following subjects are intended to supplement those given above and are offered for the benefit of those students who wish to acquaint themselves more fully with these subjects.

7.—**Advanced Mineralogy.**—A continuation of descriptive mineralogy with much practice in determinative work. (Prerequisite, 3.)

8.—**Quantitative Analysis.**—Gravimetric and volumetric analysis. Talbot's Quantitative Analysis. (Two afternoons a week. Prerequisite, 1.)

9.—**Wet Assaying.**—Assaying of bullion for fineness. Assaying of copper by various methods. Amalgamation assay. (Prerequisite, 1. To be taken with 7.)

10.—**Milling.**—Ore dressing. Lectures upon the treatment of ores underground and at surface. Hand picking, crushing, sizing, separating, vanning, jigging, etc. Stamp battery and amalgamation process. Receiving, sampling and purchasing of ores at smelters.

11.—**Economic Geology.**—A study of the origin and extent of metalliferous veins and ore deposits; varieties of coal and localities of coal fields; building stones and mineral products of commercial importance. Lectures, with Kemp, Tarr and Phillips as references. (Three times a week throughout the year. Prerequisite, 3. To be taken with 7.)

RHETORIC.

MR. DAVIS.

1.—**English Composition.**—Daily and fortnightly themes, together with the study of the principles of Rhetoric. Text: "Genung's The Working Principles of Rhetoric." Each student will meet the instructor for private consultation on his work at least once every two weeks. Required of freshmen in all courses. (Section A: M., T., Th., F., 10:20; section B: M., T., W., Th., Float. First semester.)

POLITICAL AND SOCIAL SCIENCE.

PROFESSOR SMITH.

1.—**Elements of Political Economy.** (M., W., Th., F., 9:25. First semester.)

CHEMISTRY.

PROFESSOR BYERS, ASSISTANT PROFESSOR KNIGHT, MR. LEWIS AND MR. HOPKINS.

SUBJECTS.

O.—To meet the needs of those students who come from schools in which chemistry is not required for graduation. It consists of one recitation and four laboratory hours per week throughout the year, but must be taken, if at all, in conjunction with chemistry 1, 2, which it is designed to supplement and make possible for the unprepared student. Where the student has admission clear it will be given two university credits per semester. Where offered for entrance requirement it will count as one credit. (M., 11:15. Laboratory work, 8:30-12:30, Saturday.)

1, 2.—**General Inorganic.**—Experimental lectures supplemented by quizzes. Laboratory work during first semester on

selected illustrative experiments. Second semester, quantitative analysis. Remsen's Advanced Course. Smith's Laboratory Manual. Notes on qualitative analysis. Prerequisite, a high school course in chemistry or simultaneous taking of Chemistry O. (Lectures T., W., F., 11:15. Laboratory work for engineering students, T., Th. afternoons. For other students, to be arranged on two days selected from M., W., F.)

PROFESSOR BYERS, ASSISTANT PROFESSOR KNIGHT AND MR. LEWIS.

6.—**Quantative Analysis.**—Gravimetric and volumetric analysis. Talbot's Quantitative Analysis. (Twelve laboratory hours per week, M., W., F., afternoons and S. morning. Credit, four semester hours. Prerequisite, 2.)

ASSISTANT PROFESSOR KNIGHT.

PHYSICS.

PROFESSOR OSBORN, MR. BRAKEL AND MR. RATHBUN.

1a.—**Mechanics, Sound and Heat.** (T., W., Th., F., 8:30; laboratory, M., W., 1:15-4. First semester.)

2a.—**Electricity and Light.** (T., W., Th., F., 8:30; laboratory, M. or W., 1:15-4. Second semester.)

ZOOLOGY

PROFESSOR KINCAID.

1, 2.—**Elements of Zoology.**—A general review of zoological science, involving a study of the structure, classification and habits of the types included in the great branches of the animal kingdom. This course includes a series of lectures upon the more important theories of biology, in order that the student may be able to pursue the work from an interpretative standpoint. Field work is also regarded as an essential feature and parties are frequently taken into the field during the season in order that the environment and habits of the local fauna may be studied as illustrating the principle of adaptation. Students entering this course who have had high school training in zoology will be excused from certain portions of the required laboratory exercises. (Lectures, T., F., 11:15. Six laboratory hours. Credit, four hours.)

GEOLOGY.

PROFESSOR LANDES.

1, 2.—**General Geology.**—A year's course treating of the principal facts and general principles of the science. (T., W., F., 11:15. Four laboratory hours a week, to be arranged on two days selected from M., T., W., Th. Occasional field trips on Saturdays. Credit, four hours.)

3.—**Mineralogy.**—Principles of crystallography; blowpipe methods in testing minerals; descriptive and determinative mineralogy. (M., W., F., 9:25. Four laboratory hours a week, to be arranged on two days selected from M., T., W., Th. Credit, four hours. First semester.)

4.—**Physiography.**—An advanced or college course in physical geography, recommended for those who are preparing to teach in the public schools. The course includes a study of the earth's features, considered in the light of their origin and history; the elements of meteorology; lectures upon the ocean, dealing with such subjects as composition, temperature, waves, currents, tides, life, etc. (M., T., W., Th., 9:25. Credit, four hours. Second semester.)

5.—**Economic Geology.**—A study of the origin and extent of metalliferous veins and ore deposits; varieties of coal, extent and locations of coal fields; gas and oil; origin, occurrence and uses of clays; building and ornamental stones; some consideration of other mineral products of use in the arts and of commercial importance. (T., W., Th., F., 8:30. Credit, four hours. First semester. Prerequisites, 1, 2, 3.)

6.—**Petrography**—A study of the distinguishing characteristics of the different groups and species of rocks, with the methods of classification employed. (T. W., Th., F., 8:30. Laboratory hours to be arranged. Credit, four hours. Second semester. Prerequisites, 1, 2 and 3.)

(Given in alternate years. Offered in 1905.)

7.—**Paleontology.**—The elements of invertebrate paleontology, consisting of a study of the hard parts of animals preserved as fossils, with their geologic and geographic distribution. (T., W., Th., F., 8:30. Laboratory hours to be arranged.

Occasional field trips on Saturdays. Credit, four hours. Second semester.)

(Given in alternate years. Not offered in 1905.)

8.—**Field Work and Research.**—Instruction and practice in the methods of geologic field work; investigation of special problems in geology. (To be taken only by special permission; either semester. Credit to be arranged.)

MATHEMATICS.

PROFESSOR RANUM AND ASSISTANT PROFESSOR GOULD.

1a, 2a.—**Higher Algebra and Trigonometry.**—For engineering students. (Section A: T., W., Th., F., 8:30; section B: M., T., Th., F., 10:20. Both semesters.)

5a.—**Analytic Geometry.**—For engineering students. (M., T., W., Th., Float; first semester. Prerequisites, 1a, 2a, 3, 4.)

6a.—**Calculus.**—For engineering students. (M., T., W., Th., Float, and F., 11:15. Prerequisite, 5a.)

CIVIL ENGINEERING.

PROFESSOR FULLER AND MR. BROWN.

SUBJECTS.

1.—**Mechanical Drawing.**—Instruction in the use of instruments and practice in linear drawing; construction from printed descriptions in isometric, cabinet and orthographic projections; plane sections and section lining; intersection of simple geometric forms; lettering, including the Roman and Gothic alphabets and a practical freehand alphabet for working drawing. (M., W., F., 1-4; T., 8:30-10:20. First semester. Four hours' credit.) MR. BROWN.

2a.—**Descriptive Geometry.**—Projections and rotations of points, lines, planes, curved and warped surfaces. (Lecture and recitations, M., Th., 9:25. Drawing period, F., 1:15-4. Second semester. Four hours' credit. Prerequisite, Drawing, 1, and Mathematics, 2a.) ASSISTANT PROFESSOR THORPE.

3a.—**Plane Surveying.**—Theory of chain, compass and transit surveying, and leveling; the adjustment and use of instru-

ments; computation of area, maps. (Lectures, M., 8:30; W., 10:20. Field work, M., W., 1:15-4. Alternate section, lectures T., 9:25; Th., 11:15. Field work, S., 8:30-3:00. Second semester. Credit, four hours. Prerequisite, Drawing 1, preceded or accompanied by Mathematics 2 or 2a.) MR. BROWN.

3b.—**City Surveying.**—Study of the precision necessary to be obtained; survey of a convenient portion of the city, and the field and office work of laying out a new addition. (Lecture, W., 9:25. Field work, T., Th., 1:15-4. First semester, until Christmas recess. Pen topography will be taken up for the remainder of the semester, T., Th., F., 1-4. Total credit, three hours. Prerequisite, 3a.) MR. BROWN.

3c.—**Topographic Surveying.**—Colored topography until Easter recess (T., Th., F., 1:15-4). Thereafter, base-line measurements; transit triangulation; plane table and stadia work; maps. (Lecture, W., 9:25; field work, T., Th., 1:15-4. Second semester. Total credit, three hours.) MR. BROWN.

5a.—**Mechanics.—Statics and Dynamics.**—Lectures and recitations. Special attention is paid to practical applications. Original problems form a prominent feature. (M., T., W., Th., Float. First semester. Credit, four hours. Prerequisites, Mathematics 6a and Physics 3.) PROFESSOR FULLER.

5b.—**Mechanics.**—Continuation of 5a and Mechanics of Materials. Lectures, recitations ad seminary. (M., T., W., Th., Float. W., 1-4. Second semester. Five hours' credit.) PROFESSOR FULLER.

6a.—**Theoretic Hydraulics.**—Hydrostatic pressure; immersion and flotation; steady flow of water through pipes and orifices, over wires and in open channels. (Lectures and recitations four hours a week. First semester until Christmas recess, 8:30. Three hours' credit. Prerequisite, 5b.)

6b.—**Hydraulic Motors.**—Special attention is given to the theoretic treatment of wheels of the Pelton type and to turbines. Laboratory tests are made of small motors and meters. (Lectures and recitations three times a week, 8:30. Laboratory work, S., 9-12, from Christmas recess to Easter recess. Credit, two hours. Prerequisite, 6a.)

ELECTRICAL ENGINEERING.

PROFESSOR OSBORN AND ASSISTANT PROFESSOR HEINE.

3.—**Industrial Electricity.**—Outline of industrial application, Ohm's law, wiring, etc. (T. Th., 8:30. Second semester. Prerequisite, Physics, 1a, 2a. Two hours' credit.)

ASSISTANT PROFESSOR HEINE.

MECHANICAL ENGINEERING.

PROFESSOR THORPE.

7.—**Engines and Boilers.** (W., F., 9:25. Second semester.)

MINING ENGINEERING.

PROFESSOR ROBERTS. SPECIAL LECTURES BY HON. FRED RICE ROWELL AND OTHERS.

The mining and milling methods in use at the present time throughout the western states are studied in detail, and comparisons made between the practice in different localities. Students are expected to gain such familiarity with some branch of the subject by practical work during the summer months that they can derive benefit during the junior and senior years from laboratory tests of ores and from a study of textbooks, expert reports and professional papers.

SUBJECTS.

1.—**Mining.**—Prospecting, shaft-sinking, stoping, timbering, drills, explosives, hoisting, etc., also ventilation, safety lamps, pumping, lighting, mine book-keeping. (Lectures, M., T., Th., F., 11:15. First semester.)

2.—**Ore Dressing.**—Treatment of ores underground and at surface; crushing, concentration, sampling, coal washing. Required visits to coal and metal mines. (Lectures, M., T., W., F., 11:15. Second semester.)

3.—**Mining Law.**—A study of the mining laws of the United States and especially those of Washington and Alaska. (Lectures and required reading once a week. Second semester.)

HON. FRED RICE ROWELL.

4.—**Ventilation.**—A thorough study of such subjects as the structure of ventilating fans and formulae for their use, safety lamps, systems of coal mining, etc. (Two recitations. First semester.)

5.—**Summer Work.**—Required of all mining students. Continuous work in a mine, mill or smelter; geological field work, etc.

METALLURGY.

PROFESSOR ROBERTS AND MR. TEATS.

The classroom and laboratory work in metallurgy is supplemented by frequent visits to the assay offices, smelting and refining plants located in Seattle and neighboring cities.

SUBJECTS.

1.—**Fire Assaying.**—Testing of reagents, sampling and assaying of ores, furnace and mill products for lead, silver and gold. (Four laboratory periods. First semester.)

2.—**General Metallurgy.**—The properties of metals and alloys, the uses of various fuels, types of furnaces, and the blast-furnace treatment of ores (except iron). (Second semester. M., W., Th., F., 9:25.)

3.—**Wet Assaying.**—The determination of copper and other metals in ores and furnace products by electrolytic and volumetric methods. (Four afternoons, either semester.)

4.—**Metallurgical Analysis.**—Analysis of coal, slags, alloys, etc. (Four afternoons, either semester.)

8.—**Iron and Steel.** (Two lectures a week during second semester. See Chemistry 8, page 134.) PROFESSOR BYERS.

6.—**Gold and Silver.**—A detailed study of the processes of extraction, especially cyanidation, chlorination and amalgamation. (Lectures and laboratory work. Three hours' credit.)

PHYSICAL TRAINING.

PROFESSOR VANDER VEER AND MISS WOLD.

SUBJECTS.

1.—**Elementary Course.** (Two hours. First section: M., W., F., 2:00; second section: T., Th., 3:00.)

PROFESSOR VANDER VEER, MISS WOLD AND ASSISTANTS.

2.—**Elementary Course.** (Two hours. First section: M., W., F., 2:00; second section: T., Th., 3:00.)

PROFESSOR VANDER VEER, MISS WOLD AND ASSISTANTS.

3.—**Advanced Course.** (Two hours. M., W., F., 3:00. Open to students who have completed courses 1, 2.)

4.—**Advanced Course.** (Two hours. M., W., F., 3:00.)

PROFESSOR VANDER VEER, MISS WOLD AND ASSISTANTS.

A continuation of course 3.

THE SCHOOL OF PHARMACY.

THE FACULTY.

THOMAS FRANKLIN KANE, PH. D.,
President.

CHARLES WILLIS JOHNSON, PH. C., PH. D., DEAN,
Professor of Pharmacy.

HORACE G. BYERS, PH. D.,
Professor of Chemistry (Organic).

TREVOR C. D. KINCAID, A. M.,
Professor of Zoology (Physiology).

THEODORE CHRISTIAN FRYE, PH. D.,
Professor of Botany (Histology).

JOHN THOMAS CONDON, LL. M.,
Dean of School of Law, Professor of Law.

CHARLES WILCOX VANDER VEER,
Professor of Physical Culture.

FREDERICK A. OSBORN, PH. B.,
Professor of Physics and Director of Physical and Electrical Laboratories (Physics).

JAMES EDWIN GOULD, PH. B.,
Assistant Professor of Mathematics.

HERBERT D. CARRINGTON, PH. D.,
Professor of German.

PIERRE JOSEPH FREIN, PH. D.,
Professor of French.

HENRY G. KNIGHT, A. B.,
Assistant Professor of Chemistry.

HENRY C. DAVIS, A. B.,
Instructor in Rhetoric.

PAUL HOPKINS, A. M.,
Instructor in Quantitative Analysis.

PURPOSE.

There is a constant demand for young men and women who have technical training in pharmacy not only for prescription work and the general management of pharmacies but also for the manufacturing and assaying of drugs. There is likewise a demand for such a course of training as will enable the applicant to meet the requirements of the State Board of Pharmacy. A growing demand is also felt for such training as will enable the student to meet the necessary requirements for entrance to the best medical schools. It is the object of the School of Pharmacy to satisfy these various demands and to that end the following courses have been outlined. The short course of two years will enable young men and women to satisfy the requirements of the State Board of Pharmacy and will equip those who master it for occupying responsible positions in modern pharmacies and for entrance to many schools of medicine. The longer course leading to the degree of Bachelor of Science is designed to meet the requirements of higher schools of medicine and to equip the student for chemical and pharmaceutical work of an analytical nature.

ADMISSION.

Students will be admitted to the school upon the same conditions as to the College of Liberal Arts, viz., upon presentation of a diploma from an accredited high school or evidence of an equivalent training. Special students will be allowed to enter and take work which will enable them to pass the examinations of the State Board of Pharmacy. Such students will not be graduated from

the school until they have satisfied the entrance requirements.

ADVANCED STANDING.

Students who can show equivalent training in any other school of good standing may be admitted to advanced classification in either course.

FACILITIES.

One of the features of the course is the large amount of laboratory work required. The University is especially well provided with facilities for this work. For pharmacy work the student will find a large and well equipped laboratory and in connection with it a well fitted prescription counter. He will also have the advantage of several large collections of organic drugs and such growing plants of medicinal value as may be cultivated in this climate.

DEGREES.

The degree of Pharmaceutical Chemist (Ph. C.) will be granted to any student who has fulfilled the entrance requirements and has completed the two-year course as outlined.

The degree of Pharmaceutical Graduate (Ph. G.) will be granted to any student who has fulfilled all conditions of the two-year course and in addition can furnish a certificate of two years experience in practical pharmacy. This degree entitles the holder to a certificate from the State Board of Pharmacy without examination, entitling him to practice pharmacy in the State of Washington.

The degree of Bachelor of Science (B. S.) will be conferred upon those who comply with the entrance conditions and complete the four-year course. Graduates of the four-year course may continue work in the graduate school leading to the master's degree.

A degree with honors may be conferred upon a student of the School of Pharmacy if recommended by the Dean for this distinction.

CORRESPONDENCE.

Inquiries in regard to the School of Pharmacy may be addressed to the Dean of the school or to the registrar of the University. A special announcement of the courses offered and advantages of the school will be sent to anyone requesting it.

COURSES OF THE SCHOOL OF PHARMACY.

The subjects in each department are described under the departmental statements, page —— and following.

Two-Year Course.

FIRST YEAR.

First Semester—	Hours.	*Second Semester*—	Hours.
Physiology	3	Physiology	3
Botany and Histology	3	Botany and Histology	3
Pharmacy, 1	4	Pharmacy, 2	4
Chemistry, 1	4 or 6*	Chemistry, 2	4 or 6
Physical Culture	2	Physical Culture	2

SECOND YEAR.

	Hours.		Hours.
Organic Chemistry	4	Organic Chemistry	4
Pharmacy, 3	4	Pharmacy, 4	4
Materia Medica	4	Pharmacognosy	4
Physiological Chemistry	4	Toxicology	4

*Students who have had a high school course in chemistry are required to take four hours; those who have not had such a course are required to take six hours of general chemistry.

Four-Year Course.

First Semester—	Hours.	*Second Semester—*	Hours.
FIRST YEAR.			
Chemistry, 1	4 or 6	Chemistry, 2	4 or 6
Physiology	3	Physiology	3
Mathematics, 1	4	Rhetoric	4
Language	4	Language	4
Physical Culture	2	Physical Culture	2
SECOND YEAR.			
Organic Chemistry	4	Organic Chemistry	4
Botany and Histology	3	Botany and Histology	3
Pharmacy, 1	4	Pharmacy, 2	4
Language	4	Language	4
Physical Culture	2	Physical Culture	2
THIRD YEAR.			
Physiological Chemistry	4	Toxicology	4
Physics, 1	4	Physics, 2	4
Pharmacy, 3	4	Pharmacy, 4	4
Elective	4	Elective	4
FOURTH YEAR.			
Physical Chemistry	4	Quantitative Chemistry	4
Materia Medica	4	Pharmacognosy	4
Dispensing	4	Elective	4
Elective	4	Elective	4

DEPARTMENTS OF INSTRUCTION.

GERMAN.

PROFESSOR CARRINGTON AND ASSISTANT PROFESSOR BOETZEKES.

1, 2.—**Elementary.**—Grammar and easy reading, with practice in speaking and writing. (Section A: T., W., Th., F., 8:30; section B: M., T., W., F., 11:15.)

FRENCH.

PROFESSOR FREIN AND ASSISTANT PROFESSOR BOETZEKES.

1, 2.—**Elementary.**—Frazer and Squair's Grammar, Part I; Super's French Reader; Halevy, L'Abbe Constantin; Daudet, Le Petit Chose. Emphasis is laid upon the acquirement of a

correct pronounciation, and a systematic drill in composition is given. (Section A: M., T., W., Th., Float; section B: T., W., Th., F., 8:30.)

RHETORIC.

MR. DAVIS.

1.—**English Composition.**—Daily and fortnightly themes, together with the study of the principles of Rhetoric. Text: "Genung's The Working Principles of Rhetoric." Each student will meet the instructor for private consultation on his work at least once every two weeks. Required of freshmen in all courses. (Section A: M., T., Th., F., 10:20; section B: M. T., W., Th., Float. First semester.)

CHEMISTRY.

PROFESSOR BYERS.

SUBJECTS.

O.—To meet the needs of those students who come from schools in which chemistry is not required for graduation. It consists of one recitation and four laboratory hours per week throughout the year, but must be taken, if at all, in conjunction with Chemistry 1, 2, which it is designed to supplement and make possible for the unprepared student. Where the student has admission clear it will be given two university credits per semester. Where offered for entrance requirement it will count as one credit. (M., 11:15. Laboratory work, 8:30-12:30, Saturday.)

1, 2.—**General Inorganic.**—Experimental lectures supplemented by quizzes. Laboratory work during first semester on selected illustrative experiments. Second semester, qualitative analysis. Remsen's Advanced Course. Smith's Laboratory Manual. Qualitative Analysis, Treadwell and Hall. Prerequisite, a high school course in chemistry or simultaneous taking of Chemistry O. (Lectures T., W., F., 11:15. Laboratory work for engineering students, T., Th. afternoons. For other students, to be arranged on two days selected from M., W., F.)

PROFESSOR BYERS, ASSISTANT PROFESSOR KNIGHT AND MR. LEWIS.

3, 4.—**Organic.**—A study of the typical compounds of carbon, special stress being laid upon the principles of their classification; organic preparation, and practical study of important compounds. Remsen's Briefer course as lecture syllabus. Orndorff's Manual. (Lectures T., Th., F., 10:20. Laboratory, T., Th. afternoons.) PROFESSOR BYERS AND PROFESSOR JOHNSON.

6.—**Quantitative Analysis.**—Gravimetric and volumetric analysis. Talbot's Quantitative Analysis. (Twelve laboratory hours per week, M., W., F. afternoons and S. morning. Credit, four semester hours. Prerequisite, 2.)

ASSISTANT PROFESSOR KNIGHT.

9.—**Physical Chemistry.**—An elementary course which will consist of lectures upon and laboratory demonstration of the fundamental principles of chemistry based on physical measurements. Freezing and boiling-point methods of molecular weight determination. Theory of ionization, degree of ionization and speed of ions, etc. (Lectures, T., Th., 11:15. Laboratory, M., W. First semester. Prerequisite, Chemistry 6 and College Physics.) ASSISTANT PROFESSOR KNIGHT.

PHYSICS.

PROFESSOR OSBORN, MR. BRAKEL AND MR. RATHBUN.

1.—**Mechanics and Sound.** (M., W., Th., 9:25; laboratory, F., 1-4. Four hours' credit. First semester.)

2.—**Heat, Electricity and Light.** (M., W., Th., 9:25; laboratory, F., 1-4. Four hours' credit. Second semester.)

BOTANY.

PROFESSOR FRYE.

7.—**Pharmaceutical Botany.**—Cryptogams and Gymnosperms. A general knowledge of the cell. (Lecture, M., 10:20; laboratory, T., Th., 8:30-11:15. Credit, three hours. First semester.)

8.—**Pharmaceutical Botany.**—Angiosperms. (Lecture, M., 10:20; laboratory, T., Th., 8:30-11:15. Credit, three hours. Second semester.)

PHYSIOLOGY.

PROFESSOR KINCAID.

Physiology.—A general course dealing with the physiological

activities of the human body. No prerequisite is demanded, but it should be preceded or accompanied by a course in general chemistry. (Lectures, W., F., 8:30; laboratory, M., 1-4. Credit, three hours. Both semesters.)

MATHEMATICS.

PROFESSOR RANUM AND ASSISTANT PROFESSOR GOULD.

1.—**Higher Algebra and Trigonometry.**—This course may be taken either the first semester or the second. (First semester: Section A, T., W., Th., F., 8:30; section B, M., Th., 9:25; laboratory, W., F., 1:15-3; section C, T., Th., Float. Second semester: Section D, T., W., Th., F., 8:30; section E, T., Th., Float.)

PHARMACY.

(First Year.)

1.—**Theory and Practice of Pharmacy.**—Lectures and recitations on the various processes employed in pharmacy. Laboratory work includes the manufacture of various typical preparations of Galenical pharmacy. (Lectures and recitations, W., F., 9:25; laboratory, W., F., 1-4. Credit, four hours. First semester.) PROFESSOR JOHNSON.

2.—**Continuation of Course 1.** Lectures and recitations on methods of manufacture of preparations, also a study of the various compounds, inorganic and organic, that are used in pharmacy. (Lectures and recitations, W., F., 9:25; laboratory, W., F., 1-4. Credit, four hours. Second semester.)

PROFESSOR JOHNSON.

PHARMACY.

(Second Year.)

3.—**U. S. Pharmacopoeia.**—A careful study of the pharmacopoeia and National Formulary, and the manufacture of such preparations as will illustrate the more difficult operations of pharmacy. The laboratory work also includes a short course in volumetric analysis, involving the standardization of pharmaceutical preparations. (Lectures and recitations, M., T., Float; laboratory, M., W., 1-4. Credit, four hours. First semester.) PROFESSOR JOHNSON.

4.—**Alkaloids and Valuation of Drugs.**—Lectures and laboratory work in drug assaying and methods of organic analysis, including the various alkaloids with reference to their incompatibilities in prescriptions. The compounding of prescriptions will receive special attention (Lectures and recitations, M., T., Float; laboratory, M., W., 1-4, Credit, four hours. Second semester.) PROFESSOR JOHNSON.

PHYSIOLOGICAL CHEMISTRY AND TOXICOLOGY.

(Second Year.)

5.—**Physiological Chemistry.**—Lectures and laboratory work on Carbohydrates, Fats, Proteids, Gastric Juice, Blood Tests and Analysis of Urine, including the microscopic examination of urinary sediments. Assigned reading. (Lectures and recitations, W., Th., Float; laboratory, F., 1-4; S., 9-12. Credit, four hours. First semester.) PROFESSOR JOHNSON.

6.—**Toxicology and Food Analysis.**—Laboratory work, lectures and reading on methods of separation from animal tissue of inorganic and organic poisons, also on special methods in food analysis. (Lectures and recitations, W., Th., Float; laboratory, F., 1-4; S., 9-12. Credit, four hours. Second semester.)

Note: Course 6 may be varied to meet the individual needs of the student, with credit to be arranged.

PROFESSOR JOHNSON.

MATERIA MEDICA AND PHARMACOGNOSY.

(Second Year.)

7.—**Materia Medica.**—Lectures and recitations on the properties, actions, uses, therapeutics and doses of drugs and their preparations, together with a discussion of poisons, their toxic effects and antidotes. (Lectures and recitations, M., T., W., F., 11:15. Credit, four hours. First semester.)

PROFESSOR JOHNSON.

8.—**Pharmacognosy.**—Lectures and recitations on animal and vegetable drugs with reference to source, preservation, active constituents, identification and adulteration. (Lectures and

recitations, M., T., W., F., 11:15. Credit, four hours. Second semester.) PROFESSOR JOHNSON.

PHYSICAL CULTURE.

Each student is expected to report for gymnasium practice on M., W., F., 4 p. m. PROFESSOR VANDER VEER.

PHYSICAL TRAINING.

PROFESSOR VANDER VEER AND MISS WOLD.

SUBJECTS.

1.—**Elementary Course.** (Two hours. First section: M., W., F., 2:00; second section: T., Th., 3:00.)
PROFESSOR VANDER VEER, MISS WOLD AND ASSISTANTS.

2.—**Elementary Course.** (Two hours. First section: M., W., F., 2:00; second section: T., Th., 3:00.
PROFESSOR VANDER VEER, MISS WOLD AND ASSISTANTS.

3.—**Advanced Course.** (Two hours. M., W., F., 3:00. Open to students who have completed courses 1, 2.)

4.—**Advanced Course.** (Two hours. M., W., F., 3:00.)
PROFESSOR VANDER VEER, MISS WOLD, AND ASSISTANTS.

A continuation of course 3.

THE SCHOOL OF LAW.

THE FACULTY.

THOMAS FRANKLIN KANE, PH. D.,
President.

JOHN T. CONDON, LL. M., DEAN,
Professor of Law.

J. ALLEN SMITH, PH. D.,
Professor of Political and Social Science.

EDMOND S. MEANY, M. S.,
Professor of Constitutional History.

ARTHUR R. PRIEST, A. M.,
Professor of Rhetoric and Oratory.

JOHN P. HOYT, LL. B.,
Professor of Law.

PURPOSE.

The design of the School of Law is, by a special course, to prepare students for practice in any state in the Union, and to give a thorough, practical and scientific education in the principles of the law.

ADMISSION.

The requirements for admission to the Law School are the same as the requirements for admission to the sophomore class in the College of Liberal Arts.

In 1905-6 the requirements for admission to the Law School will be the same as the requirements for admission to the junior class in the College of Liberal Arts.

DATE OF REGISTRATION.

The dates of examinations for entrance and registration for the first semester are announced in the University calendar as Monday and Tuesday, September 19th and 20th. The examinations on Monday and Tuesday will be on subjects required for entrance to the Law School, and on Wednesday the examinations will be on subjects presented by candidates for advanced standing in the Law School.

A candidate may call for an examination in any subject in which he thinks that he has done work that will satisfy the requirements of the Law School.

Candidates for advanced standing are required to be present at the beginning of the year, as the degree will not be conferred on anyone who has not spent at least one full college year in this School of Law.

FEES.

The tuition fee in the Law School is twenty dollars a semester, and, as all other fees, is to be paid at the beginning of each semester. A proportionate charge is made for special students who follow single courses.

The graduation fee is five dollars for each student receiving a degree.

COURSE OF STUDY.

The course of instruction is a graded one, and extends through two years of nine months each. The instruction is not confined to any one of the various systems of legal education. Believing that a thorough knowledge

of the jural relations arising and existing between men, and of the rights and their correlative obligations and duties springing therefrom lies at the basis of legal education, it is the aim of this school to employ the best in all systems of legal education, to the end that the student may gain a thorough knowledge of the fundamental rights, obligations and duties. To accomplish this end, if the subject in hand is one that requires historical research for a complete understanding of it, the historical method is employed, tracing the growth and development of the subject and giving its application to the body of the law as it exists at the present day. If the subject is one which can be thoroughly understood from a study of well written text-books, advantage is taken of the experience of years of work of the legal profession as crystallized in such works. If the subject is one, as many are, in which no safe generalization can be made, the inductive method is pursued by means of a study of the cases, in connection with some well written compendium or text-book upon the subject.

During the entire course the student has, in lecture and text-book work and in the study of cases, at least eighteen hours a week of class-room work.

The following is a statement of the subjects upon which instruction is given:

First Year.

Elementary Law.—Textbook: Robinson's Elementary Law. (Two hours per week; first semester.)

Contracts.—Textbook: Harriman on Contracts and Keener's Cases on Contracts. (Four hours per week; first semester. Two hours per week; second semester.)

Torts.—Textbook: Bigelow on Torts (enlarged edition) and Washington Cases on Torts. (Two hours per week for entire year.)

Quasi-Contracts.—Textbook: Keener on Quasi-Contracts and Cases on quasi-contracts selected by Dean Condon. (Two hours per week for second semester.)

Property.—Including Sales, Conditional Sales and Chattel Mortgages. Lectures and Washington Cases. (Two hours per week for entire year.)

Pleading.—Textbook: Phillips' Code Pleadings and Selection of Washington Cases. (Two hours per week for entire year.)

Domestic Relations.—Lectures and selections from Washington Cases. (Two hours per week for first semester.)

Criminal Law.—Selection of Washington Cases and Study of Washington Criminal Code. (Two hours per week for second semester.)

Agency.—Textbook: Huffcut on Agency and Washington Cases. (Two hours per week; first semester.)

Bailments and Carriers.—Textbook: Hale on Bailments and Washington Cases. (Two hours per week for second semester.)

Statutory Interpretation.—Textbook: Black on Statutory Interpretation and Washington Cases. (Two hours per week for second semester.)

Moot Court.—(Two hours per week for entire year.)

Office Practice.—Practical work in drawing up contracts, deeds and legal papers from given statements of fact. (One hour per week; entire year.)

Second Year.

Pleading.—Practical work in drawing pleading. (Two hours per week for first semester.)

Evidence.—Textbook: Thayer's Cases on Evidence, also selections from Washington Cases and Washington Statutes. (Two hours per week for entire year.)

Property.—Including Mortgages and the Community Property System of the State of Washington regulating the property rights of husbands and wives. (Two hours per week for entire year.)

Equity.—Textbook: Eaton on Equity and selection of Washington Cases. (Two hours per week for first semester.)

Negotiable Instruments.—Including the Law of Suretyship and Guaranty as applicable to negotiable instruments. Textbook: Selover's Negotiable Instruments Law and Washington Cases. (Two hours per week for entire year.)

Partnership.—Textbook: Burdick's Cases on Partnership and selection of Washington Cases. (Two hours per week for first semester.)

Private International Law.—Textbook: Minor's Conflict of Law and cases selected. (Two hours per week for first semester.)

Private Corporations.—Textbook: Clark on Corporations and Washington Constitution, Statute and Cases. (Two hours per week for first semester.)

Municipal Corporations.—Washington Constitution, Statutes and Cases. (Two hours per week for second semester.)

Constitutional Law.—Textbook: Cooley's Constitutional Limitations and Washington Cases. (Two hours per week for second semester.)

Wills.—Including Administration of Estates. Lectures and Washington Statutes and Cases. (Two hours per week for second semester.)

Attachment and Garnishment.—Washington Statutes and a selection of Washington Cases. (One hour per week for first semester.)

Federal Jurisdiction.—Textbook: Thayer's Federal Jurisdiction and selection of cases. (One hour per week for first semester.)

Mining Law.—Lectures. (One hour per week for second semester.)

Admiralty.—Textbook: Justice Brown's Cases on Admiralty Law. (One hour per week for second semester.)

Moot Court.—(Two hours per week for entire year.)

Office Practice.—Practical work in drawing legal papers, such as contracts, deeds, etc., from given states of facts. (One hour per week for entire year.)

THESIS.

It is the desire of the faculty to encourage original investigation and research by the students. Each candidate for a degree is required to prepare and deposit with the Dean of the School of Law, before the beginning of the spring term of his senior year, a thesis of not less than forty folios in length, upon some legal topic selected by the student and approved by the faculty. The student will be examined by the faculty upon his thesis. It must be printed or type written, and securely bound, and is to be kept permanently in the School of Law.

THE PRACTICE COURT.

The practice court is a part of the School of Law and is presided over by a competent instructor, while the other members of the faculty co-operate in conducting it. The court is provided with a full corps of officers, including the member of the faculty who shall sit from time to time as presiding judge, a clerk, a sheriff and the necessary deputies. It meets on Saturday.

ELOCUTION AND ORATORY.

It is important to those who study the law with the view of becoming advocates, that they should give atten-

tion to the subject of public speaking, in order to equip themselves for the performance of their duties as advocates.

The junior class may receive instruction in vocal culture, articulation and pronunciation; position and gesture; quality and force of voice. An advanced course in forensics and oratory is arranged for the senior class.

EXAMINATIONS.

The members of both classes are examined daily throughout the year in their studies. At the end of the first year the members of the junior class are subject to an oral and written examination on the lectures delivered during the year, and their promotion to the senior class is dependent on the manner in which they pass such examinations. The examinations of the junior class at the end of the first year are final on the subjects of that year.

At the end of the second year the members of the senior class are required to pass satisfactory oral and written examinations on the subjects of the lectures during the senior year. Satisfactory examinations must also be passed by the members of both classes on the text-books and cases used for the purpose of instruction.

It is provided by an act of the legislature of the State of Washington that the graduates of the Law School of the University who have taken the full two years course shall be admitted to the bar without examination and without payment of the usual admission fee of twenty dollars.

DEGREE.

The degree of Bachelor of Laws (LL. B.) will be conferred upon such students as pursue the full course of two years in the School of Law of the University of Washington and pass an approved oral and written examination. It will also be conferred upon those who, having attended another approved law school for a period equal to one year of the course of this School of Law, pursue one year's course in this school and pass like examinations.

REGISTER OF STUDENTS

FOR 1903-1904

GRADUATE STUDENTS.

Name.	Home Address.
Adams, Florence M., A. B., Washington	Seattle
Agino, Mannosuko, University of Japan	Japan
Akiyama, Letternoluka, University of Japan	Japan
Bailey, Roy D., A. B., Oberlin	West Seattle
Barton, Arthur W., A. B., University of Washington	Seattle
Blodgett, Charla A., A. B., University of Washington	Seattle
Boardman, Vinson E., A. B., Pacific University	Seattle
Boetzkes, Elizabeth, A. B., University of Washington	Seattle
Bovington, Sidney J., A. B., Syracuse University	Ballard
Bradford, Mary, A. B., Stanford University	Palo Alto, Calif.
Brakel, Henry L., A. B., Olivet College	Seattle
Clark, Bohumila, A. B., Adelbert College	Seattle
De Hart, Louise, A. B., Columbia University	Seattle
Gee, Mrs. Mona F., B. L., University of Ohio	Seattle
Green, Mary R., A. B., University of Washington	Seattle
Hill, Sterling B., B. S., University of Washington	Seattle
Hubert, Anna, A. B., University of Washington	Seattle
Hughes, Mrs. Maude, A. B., University of Kansas	Seattle
Knight, Henry G., A. B., Univ. of Wash	Laramie, Wyo.
Lewis, John M., A. B., Marietta College	Seattle
Lewis, Wm. Lee, A. B., Stanford University	Gridly, Calif.
McDonnell, Emma Pearl, A. B., Univ. of Wash	Seattle
McElruth, B. R., A. B., University of Washington	Seattle
Miller, Lillian R., A. B., University of Washington	Seattle
Millican, Laura E., A. B., University of Washington	Seattle
Murray, Herbert, A. B., Stanford University	Everett
Nichols, A. Francis, A. B., University of Washington	Seattle
Orr, James B., B. D., University of Chicago	West Seattle
Orr, Edna Clayton, A. B., University of Idaho	West Seattle
Pollock, Adelaide L., A. B., Stanford University	Seattle
Rathbun, John Charles, A. B., University of Wash	Seattle

Name.	Home Address.
Roberts, Milnora D., A. B., Stanford University	Seattle
Savery, Mrs. Isabella B., A. M., College of Emporia	Seattle
Whidden, Alberta M., A. B., University of Chicago	Seattle
Wolfle, David H., A. B., University of Oregon	Seattle
Woodcock, Gertrude M.	Seattle

SENIORS.

Name.	Course.	Home Address.
Baptie, Florence	A. B	Seattle
Blodgett, Eleanor B	A. B	Seattle
Brown, Mabel L.	A. B	Seattle
Brown, Mildred M.	A. B	Seattle
Buland, Mabel E.	A. B	Castle Rock
Burgess, Edith L.	A. B	Seattle
Carpenter, L. Ross	A. B	Seattle
Coffman, Marion	A. B	Chehalis
Cook, Jennie	A. B	Seattle
Crouch, Katherine	A. B	Kirkwood
Crosno, Mary F.	A. B	Castle Rock
Cutting, Forest B.	A. B	Walla Walla
Douglas, Julia G.	A. B	Auburn
Dunbar, Glendower	E. E	Seattle
Engstrom, Mrs. John	A. B	Taku Harbor, Alaska
Eshelman, Carl D.	A. B	Tacoma
Evans, Robert H.	A. B	Blaine
Fallis, Lewis D.	A. B	Centralia
Foglesong, William A.	A. B	Rochester
Frisbee, Leroy W.	A. B	Ellensburg
Glass, Rose	A. B	Seattle
Giles, Gertrude M.	A. B	Seattle
Green, Elmer C.	A. B	Centralia
Hancock, Elizabeth B.	A. B	Seattle
Hastings, Frederick W.	A. B	Seattle
Heffner, Bertha L.	A. B	Everett
Johanson, Joel M.	A. B	Tacoma
Johnson, Aylette N.	A. B	Whatcom
Knisell, Juanita	A. B	Seattle

Name.	Course.	Home Address.
Lantz, Clinton	E. E	Centralia
Lawson, Norman P	A. B	Seattle
Ludden, Jessie L	A. B	Spokane
Mann, Viola	A. B	Everett
McIntosh, Vera E	A. B	Seattle
Mehner, Albert	A. B	Bremerton
Miles, W. L	Min. E	Seattle
Nakamura, Yoshitaro	A. B	Japan
O'Meara, Mary G	A. B	Seattle
Parker, Isaac C	A. B	Seattle
Parmelee, Egbert N	A. B	Seattle
Pearson, Robert G	A. B	Starbuck
Pielow, Myra S	A. B	Seattle
Richardson, Samuel H	Min. E	Seattle
Randell, George C	A. B	Seattle
Sherrick, Florence L	A. B	Seattle
Slattery, John R	A. B	Bellingham
Shoudy, Loyal E. A	A. B	Seattle
Smith, Ethan S	A. B	Lead Hill, Ark.
Smith, Phene Louise	A. B	Lowell
Speidell, William C	A. B	Seattle
Taylor, Frank V	A. B	Seattle
Taylor, Marvin W	A. B	Seattle
Teats, Roscoe	Min. E	Tacoma
Terpening, Art Roy	A. B	Seattle
Tucker, Edith A	A. B	Seattle
Tucker, Lena S	A. B	Seattle
Van Kuran, Karl E	E. E	Seattle
Wald, Rosa E. A	A. B	Seattle
Waller, J. Frank	Min. E	Seattle

JUNIORS.

Name.	Course.	Home Address.
Annis, Bessie	A. B	Spokane
Beyer, Hebe G	A. B	Whatcom
Biggs, Statira	A. B	Whatcom
Brinker, Wm. H	A. B	Seattle

Name.	Course.	Home Address.
Brown, Janet Ethel	A. B	Juneau, Alaska
Boetzkes, Harry W	C. E	Seattle
Coleman, John	A. B	Chehalis
Corey, Anna E	A. B	Seattle
Douglass, Wm. F	A. B	Seattle
Edwards, Katherine L	A. B	Everett
Franklin, Wm. C	Min. E	Vancouver
Hastings, Albert C	Min. E	Seattle
Hill, Ellen K	A. B	Seattle
Hill, Wm. R	C. E	Seattle
Hunt, Ethel L	A. B	Whatcom
Huntoon, Grace C	A. B	Seattle
Iffland, Jennie E	A. B	Pt. Townsend
Illingsworth, Mrs. Jennie E	A. B	Seattle
Jackson, Henry C	A. B	Enterprise
Jones, L. A	A. B	Sumas
Jones, Anna Coffin	A. B	Seattle
Kuniyasu, Uichi	E. E	Japan
Macdonald, Donald F	Min. E	Green Lake
Marlow, Mamie G	A. B	Seattle
McElmon, Fred	C. E	Whatcom
McFadden, Claude H	Pharm	Seattle
McFarland, K. C	C. E	Sumner
McGlinn, Robert E	A. B	La Conner
McIntyre, Lucile	A. B	Seattle
McLean, Walter G	A. B	Georgetown
Oakes, Geo. C	A. B	Seattle
Quevli, Martha	A. B	Windom, Minn.
Reasoner, Frank M	A. B	Whatcom
Rogers, Roy C	A. B	Whatcom
Scatcherd, Eleanor	A. B	Seattle
Schmidt, Alex. S	A. B	Seattle
Scroggs, Maurice D	A. B	Eureka, Kan.
Smalley, Albert D	A. B	Seattle
Strohm, J. Herbert	A. B	Seattle
Thedinga, Henry H	E. E	Seattle
Twitchell, Adelbert E	A. B	Spokane

Name.	Course.	Home Address.
Wetzell, Helen	A. B	Spokane
Wetzell, Louise A	A. B	Spokane
Woodcock, Harold A	A. B	Oakland, Cal.
Ziebarth, Herbert W	Min. E	Seattle

SOPHOMORES

Name.	Course.	Home Address.
Armstrong, Ottie E	A. B	Seattle
Bash, Clementine	A. B	Port Townsend
Beigert, Hanna E	A. B	Seattle
Bell, Mary D	A. B	Spokane
Bennett, Manchie O	C. E	Ellensburg
Blethen, Florence A	A. B	Seattle
Blethen, Marion R	A. B	Seattle
Botten, Henry H	E. E	Linden, Minn.
Boyd, Mildred M	A. B	Sumner
Bragdon, Hazel L	A. B	West Seattle
Brewer, Nettie G	Phar	Satsop
Brooks, Edward M	E. E	Seattle
Brown, Margaret B	A. B	Everett
Burch, Warren B	Min. E	St. Peter, Minn.
Carle, Arthur B	E. E	Seattle
Clark, Dee	A. B	Hayes
Cordes, Henry G	E. E	Spokane
Cunningham, Ardys B	A. B	Waterville
Dalby, David H	A. B	Seattle
Dam, Oscar W	A. B	N. Yakima
Denton, Arthur P	C. E	Seattle
De Voe, Ralph G	A. B	Seattle
Dootson, James W	A. B	Everett
Dudley, Florence E	A. B	Puyallup
Eisenbeis, Lillian K	A. B	Port Townsend
Fischer, Arthur H	Min. E	Seattle
Freyd, Bertha I	A. B	Seattle
Gartner, Wilhelm A	A. B	Port Townsend
Gloster, Richard I	C. E	Whatcom
Gullixon, Edna T	A. B	Seattle

Name.	Course.	Home Address.
Haberer, Emanuel J.	A. B.	Germany
Hagy, Myrtle M.	Pharm.	Seattle
Hall, Chas. W.	A. B.	Vancouver
Hamlin, Milton.	Mech. E.	Grand Rapids, Mich.
Harris, Helen R.	A. B.	Seattle
Hilton, Merle M.	A. B.	Seattle
Hoover, Arthur A.	A. B.	Seattle
Hopkins, Thomas A.	C. E.	Ballard
Hubert, Elsie.	A. B.	Seattle
Hubert, Karl.	Min. E.	Seattle
Hughes, Ingraham.	A. B.	Seattle
Iffland, Frieda A.	A. B.	Port Townsend
Irwin, Robert B.	A. B.	Seattle
Johnson, Carl E.	Phar.	Vancouver
Joyce, Mabel A.	A. B.	Seattle
*Jungst, David H.	E. E.	N. Yakima
Kahan, Sarah E.	A. B.	Seattle
Kellogg, Jessie.	A. B.	Seattle
King, John R.	E. E.	Seattle
Kirkman, Wilbur D.	A. B.	Spokane
Laube, Fred E.	Min. E.	Bellingham
Lieser, Herbert C.	Pharm.	Vancouver
Lieser, Miles U.	Pharm.	Vancouver
McCrory, Thos. G.	C. E.	Ballard
McMicken, Maud.	A. B.	Seattle
Millett, Gardner W.	A. B.	Chehalis
Mitchell, Darwin Du Boise.	A. B.	Seattle
Mitchell, James B.	A. B.	Fairfax
Mitchell, Sumner.	Pharm.	Chelan
Morrison, Robert A.	A. B.	Seattle
Mylorie, M. Ruth.	A. B.	Kent
Nelson, Chas. A.	A. B.	Mt. Vernon
Nelson, Roy W.	Pharm.	Marysville
Norton, Grace C.	A. B.	Seattle
Ormond, Alex. M.	Mech. E.	Rochester, Minn.
Parmelee, Charles B.	A. B.	Seattle

*Deceased.

Name.	Course.	Home Address.
Parrish, Edward E.	Pharm	Chelan
Peterson, Paul W.	A. B.	Seattle
Powers, Bertha.	A. B.	Everett
Purdy, George F.	A. B.	Minneapolis, Minn.
Ranum, Mrs. Arthur.	A. B.	Seattle
Rushton, Mabel G.	A. B.	Seattle
Sater, Julia M.	A. B.	Seattle
Scherer, Lewis D.	A. B.	Chehalis
Scheufler, Lydia L.	A. B.	Seattle
Schooley, Wm. M., Jr.	Pharm.	Seattle
Shelton, Celia D.	A. B.	Seattle
Sherman, Hermie.	A. B.	Seattle
Sigworth, James H.	Min. E.	Utica, Pa.
Sieler, George.	A. B.	Odessa
Stead, A. T.	C. E.	Seattle
Stenger, Edward L.	Min. E.	Whatcom
Strausse, Alfred A.	Pharm	Colville
Sullivan, Allan C.	Mech. E.	Fremont
Sweet, Lester.	A. B.	Blaine
Talbot, Nellie M.	A. B.	Seattle
Tibbals, Maurice L.	C. E.	Port Townsend
Trout, Frank V.	C. E.	Garfield
Underwood, Julia.	A. B.	Seattle
Van Allen, Janet.	A. B.	Seattle
Vaupell, Helen K.	A. B.	Seattle
Walker, Raymond D.	E. E.	Tacoma
Warner, Blanche.	A. B.	Tacoma
Wayland, Russell G.	Min. E.	Seattle
Weedin, W. W.	C. E.	Seattle
Wernecke, Livingston.	Min. E.	Seattle
White, Coral B.	A. B.	Whatcom
Whittlesey, Walter B.	A. B.	Seattle
Wilkinson, Bernard W.	E. E.	N. Yakima
Wilt, Frank T.	Pharm.	Edmonds
Zook, Carl S.	A. B.	Harrisonville, Mo.

FRESHMEN.

Name.	Course.	Home Address.
Adams, David C.	A. B.	Ritzville
Alexander, Edward D.	C. E.	Seattle
Allmond, Mary H.	A. B.	Seattle
Allyn, Frank M.	A. B.	Spokane
Anderson, Alice J.	A. B.	Seattle
Anthon, Sister	A. B.	Seattle
Babcock, Frank E.	C. E.	Everett
Bagshaw, Enoch W.	Min. E.	Seattle
Baldwin, Geo. B., Jr.	Pharm.	Nome
Ball, Elsie M.	A. B.	The Dalles, Ore.
Barton, Alta	A. B.	Olympia
Bateman, Ralph L.	A. B.	Vancouver
Berg, Roscoe E.	E. E.	Marshall, Minn.
Blackburn, Richard L.	A. B.	Fredonia, Kan.
Blue, Wayne	Min. E.	Grafton, W. Va.
Borie, Fanchon	A. B.	Pendleton, Ore.
Brawley, Lee J.	Min. E.	Seattle
Briggs, Benjamin W.	C. E.	Seattle
Bronson, Fred M.	E. E.	Brighton Beach
Bryan, Clara	A. B.	Seattle
Burke, Harold M.	E. E.	Tacoma
Byers, Mrs. Horace G.	A. B.	Seattle
Cain, John R.	A. B.	Urbania, O.
Cales, Tony F.	E. E.	Bucoda
Calkins, Donald J.	C. E.	N. Yakima
Callow, Edward J.	A. B.	Kamilchie
Camehl, Jesse A.	Min. E.	Seattle
Carlisle, P. Bascom	A. B.	Clarksville, Tenn.
Child, Elsie	A. B.	Spokane
Churchill, Elsa T.	A. B.	Seattle
Clark, Lois	A. B.	Seattle
Clark, Miles E.	Min. E.	Seattle
Coffman, Ethelin M.	A. B.	Chehalis
Coffman, Florence A.	A. B.	Chehalis

Name.	Course.	Home Address.
Comeaux, Isaac	C. E.	Green Lake
Cook, Catherine	A. B.	Iron Mt., Mich.
Copestick, Maude	A. B.	Seattle
Cordes, Edward G.	E. E.	Spokane
Cosgrove, Elliot E.	C. E.	Pomeroy
Cosgrove, Myrn	A. B.	Pomeroy
Courtwright, Abram	A. B.	Olympia
Cox, Henry C.	E. E.	Cosmopolis
Crahan, May	A. B.	Seattle
Crueger, Martha	A. B.	Everett
Cumbo, Geo. S.	A. B.	Seattle
Cunningham, Imogene	A. B.	Seattle
Dakin, Elsie M.	A. B.	Custer
Dalby, Edwin J.	Min. E.	Seattle
Dalgity, Annie D.	A. B.	Seattle
Davis, Lela Fannie	A. B.	Van Asselt
Davis, Lloyd	Pharm.	Vancouver
Dean, Arthur B.	E. E.	Everett
Dearle, Percy	A. B.	Everett
DeLand, Robert W.	E. E.	Olympia
DeLine, Horace C.	Pharm.	Lowell
Deming, Horace G.	E. E.	Tacoma
Dickinson, Albert B.	A. B.	Seattle
Dittemore, Lulu E.	A. B.	Seattle
Dodson, Harley A.	E. E.	Fairhaven
Douglas, Maud A.	A. B.	Auburn
Duffy, Gilbert L.	Mech. E.	Seattle
Dutcher, Emmett C.	C. E.	Seattle
Eason, Frederick D.	C. E.	Tacoma
Eastlick, Mary E.	A. B.	Issaquah
Ellis, Edward B.	Min. E.	Willapa
Emerson, Albert	E. E.	Olympia
Fahnstock, John	C. E.	Seattle
Fenton, Zilpha E.	A. B.	Seattle
Finch, Florence M.	A. B.	Seattle
Fletcher, James G.	A. B.	Seattle
Forbes, Ethel	A. B.	Seattle

Name.	Course.	Home Address.
Fowler, Herman M.	E. E.	Centralia
Frailey, Oscar A.	C. E.	Everett
Garrett, Jessie	A. B.	Seattle
Gaston, Herbert E.	A. B.	Tacoma
Gaston, Mary	A. B.	Tacoma
Georgeson, Dagmar	A. B.	Sitka, Alaska
Gibbons, C. B.	E. E.	Seattle
Gilkey, Pearl	A. B.	Seattle
Gilson, Chris	A. B.	Green Lake
Gray, Ruth	A. B.	Seattle
Green, Wm. M.	C. E.	Seattle
Griffiths, Stanley A.	A. B.	Seattle
Gustafson, Frederick C.	E. E.	Everett
Hafer, Wilhelmina S.	A. B.	Olivet, Mich.
Hanbloom, Bert	Pharm.	Tacoma
Hanna, Bess	A. B.	Whatcom
Harlan, Stetson	Min. E.	Seattle
Harrington, Alma B.	A. B.	Seattle
Hatfield, Floyd A.	A. B.	N. Yakima
Hathorn, Irma	A. B.	Seattle
Hausman, Jeanne P.	A. B.	Seattle
Hawkins, Lela	A. B.	N. Yakima
Hewson, Myra G.	A. B.	Green Lake
Heyes, Margaret Louise	A. B.	Seattle
Hinckley, Grace F.	A. B.	Seattle
Honeywell, Valen H.	Pharm	Seattle
Hoover, J. Webster	C. E.	Everett
Houlahan, Kathleen	A. B.	Seattle
Howell, Everett S.	A. B.	Fall City
Hubbard, Mellie	A. B.	Puyallup
Hull, Herbert F.	A. B.	Seattle
Hull, John S.	Min. E.	Seattle
Isbell, Harry R.	Min. E.	Seattle
Jacobson, Etta	A. B.	Seattle
Jaxtheimer, Bessie	A. B.	Everett
Johnson, Hilma C.	A. B.	Vancouver
Johnstone, Harriett	A. B.	Green Lake

Name.	Course.	Home Address.
Jorgensen, Anna	A. B	Kent
Karr, Arthur S	A. B	Hoquaim
Kaufman, Clara B	A. B	Spokane
Kennedy, Harry P	E. E	Everett
Kinney, Ivan	A. B	Olympia
Kirkhope, William A	A. B	Brighton Beach
Kittrege, Frank A	C. E	Seattle
Knapp, Laila R	A. B	Columbia
Kobayaski, Zitsuya	Pharm	Japan
Krohn, Albert	A. B	Washougal
Kunke, Minna	A. B	Seattle
Kyes, Donna	A. B	Kent
Lane, Roy B	Pharm	Seattle
Larrabee, Rex W	Pharm	Seattle
Lichty, Roy C	E. E	Sunnyside
Lindsay, Brent A	A. B	Wenatchee
Link, Claude A	A. B	Auburn, Ind.
Livesley, Esther E	A. B	Olympia
Loomis, Ralph	Mech. E	Olympia
Lucas, Mayme E	Min. E	Seattle
Maggs, John M	Mech. E	Seattle
Mahone, Ernest M	A. B	Fredonia, Kan.
Marlow, Junia E	A. B	Seattle
McArdle, Joe F	A. B	Seattle
McCarney, Margaret	A. B	Seattle
McCarty, Ethel G	A. B	Spokane
McCarthy, Harriett	A. B	Carthage, Mo.
McEvers, Hugh A	A. B	Kirkland
Myer, Anna S	A. B	Snohomish
Miller, Claud A	A. B	Gallatin, Mo.
Miller, Elizabeth R	A. B	Kent
Moore, Gertrude C	A. B	New Westminster
Moorehouse, La Velle	A. B	Pendleton, Ore.
Morrison, Elmer H	Pharm	Fairhaven
Mosgrove, Jessie	A. B	Walla Walla
Mowrey, Claudia	A. B	Seattle
Murchison, Alice	A. B	Seattle

Name.	Course.	Home Address.
Myers, Grant B.	A. B.	Seattle
Newton, Earl B.	A. B.	Seattle
Niedergesaess, Gertrude.	A. B.	Seattle
Norton, Charles.	A. B.	Tacoma
Noyes, Glen T.	Min. E.	San Francisco
O'Brien, John J.	A. B.	Seattle
Ohno, Hayas.	A. B.	Japan
Olney, Pansey.	A. B.	Spokane
O'Neil, Edna Ione.	A. B.	Seattle
Ovitt, Gillia.	A. B.	Seattle
Packard, Augustus H.	Min. E.	Seattle
Palmer, John R., Jr.	Mech. E.	Everett
Parker, William E.	A. B.	Seattle
Patterson, Frank.	A. B.	Wenatchee
Pendleton, Catherine.	A. B.	Tacoma
Perry, Percy J.	C. E.	Aberdeen
Peterson, Henry E.	E. E.	Fremont
Pierce, Emily B.	A. B.	Seattle
Proffitt, Rozetta.	A. B.	Stayton, Ore.
Pugsley, Hariot.	A. B.	Seattle
Railsback, Llewellyn G.	A. B.	Harton
Richardson, Hayden J.	A. B.	Seattle
Roberts, Alice A.	A. B.	Fremont
Roberts, G. B.	C. E.	Kalama
Robinson, Josephine Marion.	A. B.	Seattle
Roller, Floyd H.	Mech. E.	Whatcom
Rosaaen, Archie G.	A. B.	Fisher, Minn.
Russell, Helen R.	A. B.	Spokane
Scatcherd, Raue.	E. E.	Seattle
Scholes, Emma D.	A. B.	Tacoma
Secrest, Thomas W.	C. E.	Oakesdale
Shaw, Herbert A.	E. E.	N. Yakima
Shay, Zacharia B.	Min. E.	Willapa
Shorthill, Terresa.	A. B.	Colville
Siemond, Geo. A.	Mech. E.	Whatcom
Simmons, Vera E.	A. B.	Seattle
Simpkins, Bessie E.	A. B.	Seattle

Name.	Course.	Home Address.
Simpson, Bessie A.	A. B.	Kalama
Sinclair, A. Marguerita	A. B.	Seattle
Slusher, Alvah W.	Min. E.	Pendleton, Ore.
Smith, Myra G.	A. B.	Seattle
Snyder, Henry M.	A. B.	Snohomish
Sohns, George	E. E.	Seattle
Squire, Marjorie	A. B.	Seattle
Staeger, David A.	A. B.	Dryad
Steele, Harry	C. E.	Seattle
Stewart, Elizabeth	A. B.	Kent
Sutherland, Catherine B.	A. B.	Seattle
Sutherland, John H.	A. B.	Seattle
Sutherland, Margaret	A. B.	Seattle
Swesey, Esther E.	Pharm	Seattle
Taylor, Maurice	Min. E	Omaha, Neb.
Thompson, Amos W.	E. E.	Utslady
Thompson, Chester L.	A. B.	Seattle
Thompson, Edward B.	Pharm	Seattle
Tomilson, Grace	A. B.	Seattle
Tozeland, James A.	C. E.	Killarney, Kan.
Tremper, Arnold	A. B.	Seattle
Tripple, J. H.	A. B.	Seattle
Trumbull, Harlan Leo	A. B.	Seattle
Uyehara, George E.	A. B.	Seattle
Vaughan, Kathleen	A. B.	Seattle
Wadingham, Elsie K.	A. B.	Seattle
Wagner, Charles	Mech. E	Vancouver
Wagner, Walter C.	E. E.	Seattle
Wall, Florence J.	A. B.	Hammelton, Pa.
Ward, William	A. B.	Seattle
Welch, Daniel Peter	Mech. E	Ballard
Wells, Clyde E.	Min. E.	Seattle
Wernecke, Chauncy	A. B.	Seattle
Wheeler, Amy D.	A. B.	Green Lake
Whidden, J. B.	A. B.	Wardner, Idaho
Whitfield, Jay A.	A. B.	Covington
Wilbur, Bess R.	A. B.	Seattle

Name.	Course.	Home Address.
Willis, Agnes L.	A. B.	Chehalis
Willimann, Magdalene	A. B.	Seattle
Wimmler, Norman	A. B.	Seattle
Wintler, John J.	A. B.	Vancouver
Zednick, Victor H.	C. E.	Seattle

UNCLASSIFIED STUDENTS.

Name.	Work Elected.	Home Address.
Allen, Eva D.	Rhet., Hist., Geol.	Seattle
Anderson, Oliver	Eng. Lit. History	Seattle
Anthony, Robert I.	Elect. Eng.	Seattle
Bell, Annie V.	Hist., Zool., Bot.	Seattle
Bell, R. W.	Mining Eng.	Seattle
Bogle, L.	Civ. Eng.	Seattle
Bollong, J. W. A.	Elect. Eng.	Ballard
Brackett, George G.	Mining Eng.	Seattle
Brand, Charles	Mining Eng.	Silverton, B. C.
Brayton, Annie	History	Ballard
Bridges, Sadie	Lat., Eng. Lit., Math.	Vancouver, B. C.
Brinker, Nella	Zool., Bot.	South Park
Bryant, Ernest L.	Rhet., Bot., Math., Forestry.	Seattle
Burch, John E.	Ger., Rhet., Hist.	Pomeroy
Burgess, Charlotte	Eng. Lit., Hist., Bot.	Tacoma
Cain, Katherine	Phil., Pol. Sci.	Seattle
Cameron, Alan D.	Mining Eng.	Seattle
Carlotta, Sister Mary.	Phys., Lat.	Seattle
Carter, Cora B.	Ger., Bot., Phar., Zool.	Seattle
Charlton, Arlene	Span., Hist.	Seattle
Child, Eugene A.	Rhet., Eng. Lit.	Seattle
Christopher, A. L.	Mining Eng.	Monte Cristo, Wn.
Chopson, Estelle	Zool., Bot.	Seattle
Clarahan, Elizabeth	Hist., Lat.	Seattle
Clark, Thomas K.	Mining Eng.	Seattle
Coey, Marie D.	Ger., Eng. Lit., Hist.	Spokane
Coburn, Virginia	Fr., Hist., Zool.	Seattle
Cole, Clarence M.	Elect. Eng.	Clear Lake

Name.	Work Elected.	Home Address.
Cooke, Elizabeth	Rhet., Eng. Lit.	Seattle
Corbet, Lucy E	Fr., Rhet., Hist.	Seattle
Corskie, J. M	Chem., Phys.	Ballard
Covey, Alma	Phil., Pol. Sci., Zool.	Seattle
Covey, Leo W	Mining Eng.	Seattle
Crim, Edward O	Elect Eng.	Seattle
Crim, Lemuel P	Elect. Eng.	Seattle
Croke, Elizabeth	Hist., Eng. Lit.	Seattle
Crow, S. E	Mining Eng.	Spokane
Dana, Lee	Civ. Eng.	Seattle
Day, Elmer C	Mech. Eng.	Baird
Dobbins, Eva E	Chem.	Seattle
Dohm, Edward C	Mech. Eng.	Seattle
Douglas, Edwin S	Fr., Sp., Hist., Math.	Seattle
Drummond, Herbert L.	Mining Eng.	Seattle
Edson, Caroline M	German	Seattle
Elder, Sidney S	Mining Eng.	Seattle
Engle, Alicenia	Fr., Hist.	Seattle
Ensel, Harry R	Mining Eng.	Seattle
Farrar, Grace	Eng. Lit., History	Ballard
Ford, Guy	Civ Eng.	Arlington
Fowler, Ella M	Phys.	Seattle
Garner, Etta	Rhetoric	Ballard
Gilkey, Myrtle R	Hist., Eng. Lit.	Seattle
Graven, J. A	Mining Eng.	Dawson
Grabill, Mrs. Cora W.	Pharmacy	Seattle
Green, H. C	Mining Eng.	
Glass, Mrs. D. H	Hist.	Seattle
Gordon, Oliver M	Chem., Phys.	Seattle
Gormley, James C	Chem., Zool., Math.	Portland, Ore.
Graff, Walter B	Rhet., Eng. Lit., Hist.	Harrington
Hancock, Floyd M	Lat., Rhet., Eng. Lit., Hist.	Winlock
Hansen, Anne	Fr., Ger., Eng. Lit., Hist.	Seattle
Hansen, Agnes	Fr., Ger., Hist.	Seattle
Harrington, Walter L.	Rhet., Chem., Phys., Math.	Goldendale
Helena, Sister Mary	Phys., Lat.	Seattle

Name.	Work Elected.	Home Address.
Henry, Anne	Ger., Eng. Lit.	Seattle
Herrin, Lee J	Fr., Rhet., Hist	Seattle
Hill, B. B	Mining Eng	Republic
Hogg, George	Mining Eng	Seattle
Holtz, Charles A	Lat., Rhet., Eng. Lit., Hist.	Seattle
Hopp, Kathryn	Hist., Chem	Seattle
Hotelling, May M	History	Seattle
Houlahan, Mary A	Fr., Eng. Lit., Hist	Seattle
Howard, Annie	Greek, Lat., Hist	Seattle
Ivey, Olive F	Rhet., Eng. Lit., Hist	Ballard
Jacobs, Jessie B	Fr., Eng. Lit., Rhet	Seattle
Jacobs, Edna	Fr., Eng. Lit.	Seattle
Jacobson, Clara	Phil., Hist., Pol. Sci	Woodinville
James, Sidney T	Greek, Lat., Eng. Lit., Phys	Seattle
Jennings, Madge	Fr., Rhet., Hist., Phys	LaConner
Johnson, Carrie	Ger., Rhet., Eng. Lit., Hist.	Seattle
Johnson, Geo. W	Elect. Eng	Seattle
Johanson, Winnifred	Phys	Seattle
Jones, Myrtle E	History	Seattle
Kane, Annie B	French	Seattle
Kangley, Helen A	Lat., Fr., Eng. Lit., Math.	Aberdeen
Kaps, Clara E	History	Seattle
Kilbourne, Edna	Math., History	Seattle
Kilgour, Bertha F	Am. Hist., Eur. Hist.	Auburn
Kingsbury, Geo. F	Pedagogy	Georgetown
Korstad, Fred	Eng. Lit., Phil., Pol. and Soci., Zool	Watsonville, Cal.
Kuhnke, Maud	Eng. Lit., Hist	Seattle
Lambert, Cecil P	Elect. Eng	Seattle
Lane, Nellie W	Zool	Seattle
Lloyd, Bessie J	History	Seattle
Longfellow, Charles	Ger., Eng. Lit., Draw	W. Seattle
McCarty, W. W	Mining Eng	Dawson
Mann, Eugene L	Rhet	Seattle
McCarthy, Wm. G	Greek, Lat., Hist	Seattle
McClure, Cora	Hist., Zool., Bot	South Park

Name.	Work Elected.	Home Address.
McCormick, M. E.	History	Georgetown
McDonald, H. L.	Mining Eng.	Seattle
McDonald, Thomas G.	Eng. Lit., Hist., For., Zool.	Seattle
McDonald, William J.	Eng. Lit., Hist.	Seattle
McIntosh, Belle	History	Ballard
McIntyre, Marie	Lat., Hist.	Seattle
McLean, Vera	Fr., Eng. Lit., Hist.	Seattle
McMillan, Ida	History	Ballard
Mead, Bess L.	Ger., Eng. Lit., Hist.	Seattle
Metsker, Glen R.	Greek, Rhet., Hist., Chem.	Tacoma
Mills, Henrietta E.	Hist., Zool.	Seattle
Moen, Daisy	Rhet., Eng. Lit., Hist.	New Westminster
Moen, Maude	Rhet., Eng. Lit.	New Westminster
Montgomery, Anna	French	Seattle
Morris, Jared D.	Rhet., History	Seattle
Mumm, Margaret	History	Auburn
Murray, Elizabeth	History	Seattle
Nakaki, Kyo Nide	Pharmacy	Japan
Oakley, Mary	History	Ballard
Olds, Alla M.	Hist., Polit. Science	Mercer Island
Osborn, Cora M.	French, Rhetoric	Seattle
Osborn, Olive	French, German	Seattle
Page, C. R.	Hist., Phys.	South Park
Parker, Lena M.	Hist., Zool., Bot., Phys.	Seattle
Partridge, Bella	Math., Phys.	Seattle
Patricia, Sister Mary	Physics	Seattle
Patterson, Elvira	Zool., Bot.	Seattle
Pearson, Joe U.	Rhet., Eng. Lit., Hist., Zool.	Starbuck
Peck, Manford E.	Span., Rhet., Phys, Math.	Seattle
Penches, Capitola	Hist., Bot.	Seattle
Peters, Marie	Polit. Science	Seattle
Pettijohn, Leroy K.	Bot., Rhet.	Seattle
Petrovitsky, Sylvia	Ger., Eng. Lit., Hist.	Seattle
Place, L. H.	Mining Eng.	Kent
Plumb, F. H.	Zool., Pol. Science	Ballard
Poduska, F. J.	Mining Eng.	Wallula

Name.	Work Elected.	Home Address.
Porter, Della	Zool., Bot., Phys	Seattle
Pullen, Daniel D.	Elect. Eng	Skagway, Alaska
Quackenbush, Ella	Physics	Ballard
Raichardt, Margaret	Phil., Zool., Bot., Hist	Seattle
Ray, Dora B.	Lit., Hist., Zool., Math	Van Asselt
Reynolds, Grace D.	Rhet., Eng. Lit., Hist	Seattle
Riley, K. E.	Elect. Eng	Spaulding, Neb.
Rustad, Otelia G.	History	Seattle
Sanders, Fred	Ger., Eng. Lit., Pol. and S. S., Hist	Ellensburg
Schermerhorn, Lucien V.	Eng. Lit.	St. Paul, Minn.
Seagrave, Mabel	Zool	Seattle
Sheridan, Maud	Fr., Ger., Rhet., Hist	Pendleton, Ore.
Sherrill, Elmer	Chemistry	Ballard
Sherrill, E. L.	Mining Eng	Ballard
Shuff, Mrs. L. C.	Mining Eng	Seattle
Sigrist, Charles F.	Ger., Pol. and S. S	Seattle
Simmons, Edith	Physics	Seattle
Sims, Dora V.	Fr., Ger., Rhet., Eng. Lit	Kalama
Sinclair, Mark	Fr., Rhet., Phys	Ritzville
Smith, E. Rex	Chemistry	Seattle
Smith, Leonard P.	Phys., Hist., Eng. Lit	West Seattle
Soper, Anna	Hist., Zool., Bot	Yesler
Spencer, J. H.	Mining Eng	
Springer, Georgina	Physics	Seattle
Steininger, S. D.	History	Kirkland
Stevenson, Lillian G.	Pharmacy	Ellensburg
Streator, Gertrude I.	History	Seattle
Stuff, Josephine E.	Hist., Pol. Science	Seattle
Sullivan, Humphrey J.	Mining Eng	Boston, Mass.
Swartwood, C. H.	Mining Eng	Deertrail
Tanner, H. H.	Mining Eng	Seattle
Techow, W.	Mining Eng	
Thacker, G. L.	Lat., Hist	Winlock
Thompson, H. L.	Elect. Eng	Kehona, B. C.
Tracy, Roger S.	Fr., Ger., Eng. Lit	Tacoma

Name.	Work Elected.	Home Address.
Thompson, Helen		Dayton
Trager, Metta	History	Auburn
Tracy, Mary H		Seattle
Trumbull, Anna E	Eng. Lit., Hist., Zool	Seattle
Ursula, Sister Mary	Physics, Bot	Seattle
Van Dorn, R. M	Mining Eng	Seattle
Wakefield, Blanche	Lat., Eng. Lit., Fr. Geol	Elmer
Waymon, Jas. D	Law	Seattle
West, H. W	Mining Eng	Seattle
Whitfield, Wilmot G	Rhet., Draw., Math	Skagway, Alaska
Wilkinson, Madge W	Fr., Eng. Lit	Issaquah
Withycomb, John R	Civ. Eng	Portland, Ore.
Wolfe, Calvin C	Elect. Eng	Seattle

LAW SCHOOL.

Senior Class.

Name.	Home Address.
Aylmore, Reeves, Jr	Seattle
Bonnar, Hector A. M	Bolton, Ont.
Burrows, Charles F	Aberdeen
Cosgrove, Howard T	Pomeroy
Eshelman, Carl D	Tacoma
Griffin, Joseph H	Seattle
Guernsey, Samuel D	Seattle
Hanson, Howard A	Seattle
Hays, Perry C	Seattle
Johnston, William T	Washington, Pa.
Kuen, Harry J	Seattle
Laube, William T	Whatcom
McGee, E. H	Cincinnati, O.
Marsh, E. B	Berkeley, Cal.
Nesbitt, D. M	Iowa City, Iowa
Packer, Ray	Whatcom
Perry, John H	Owenton, Ky.
Phillips, William W	Bremerton
Pierce, Ralph	Seattle

Name.	Home Address.
Roberts, Charles V.	Elberton
Stevens, Edwin B.	Olympia
Thornton, Eric L.	Benson, Minn.
Twitchell, D. E.	Spokane
Waldron, Frederick J.	Manese, Ok.

Junior Class.

Anderson, L. Bliss	Seattle
Brunn, Clinton A.	Seattle
Campbell, W. T.	Mankato, Minn.
Carey, Stephen V.	Seattle
Clarendon, A. T.	Seattle
Crane, T. B.	Seattle
Cross, A. Emerson	Aberdeen
Doyle, Edward J.	Clarkston
Ewing, Edwin C.	Seattle
Gillis, William D.	Seattle
Glass, Stephen A.	Seattle
Graham, Arthur E.	Aberdeen
Grant, Davis J.	Seattle
Grinstead, Loren D.	Spokane
Gunn, L. B.	Everett
Harder, Benjamin E.	Milton, Ore.
Kennedy, Thomas J. L.	Puyallup
Kent, Carl A.	Seattle
Lanning, Wm. G.	Aberdeen
Lee, William E.	Asheville, N. C.
Lum, Burton O.	N. Yakima
McDonald, Donald	Seattle
Mathes, Oscar C.	Humboldt, Tenn.
Marsh, O. G.	Buchanan, Mich.
Nevins, William M.	Toledo, Ia.
Rowell, Ralph R.	Seattle
Sanders, Fred	Ellensburg
Smith, Fred A.	Goldendale
Sumner, Samuel R.	Sturgiss, Mich.
Tanaka, Sonosuki	Japan

Name.	Home Address.
Thacker, Gus L.	Winlock
Thompson, E. E.	Seattle
Thompson, Richard E.	Vancouver
Trumbull, Allan	Seattle
Warner, Harry E.	New York City
Webb, O. T.	Lowell

SUMMARY OF ENROLLMENT.

Graduate School	36
College of Liberal Arts	431
College of Engineering	96
School of Mines	61
School of Pharmacy	25
School of Law	61
Counted twice	3
Net total	707

SUMMARY BY CLASSES.

Graduate Students	36
Seniors	59
Juniors	45
Sophomores	101
Freshmen	225
Unclassified, Liberal Arts	134
Unclassified, Engineering	49
Senior Law	24
Junior Law	37
Counted twice	3
Net total	707

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