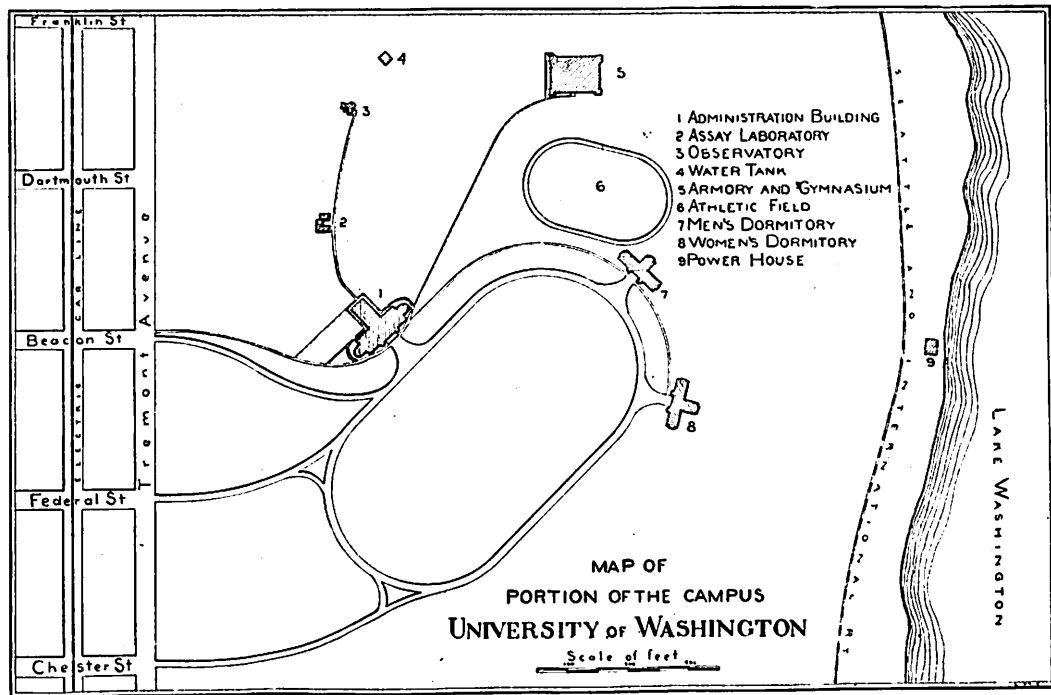
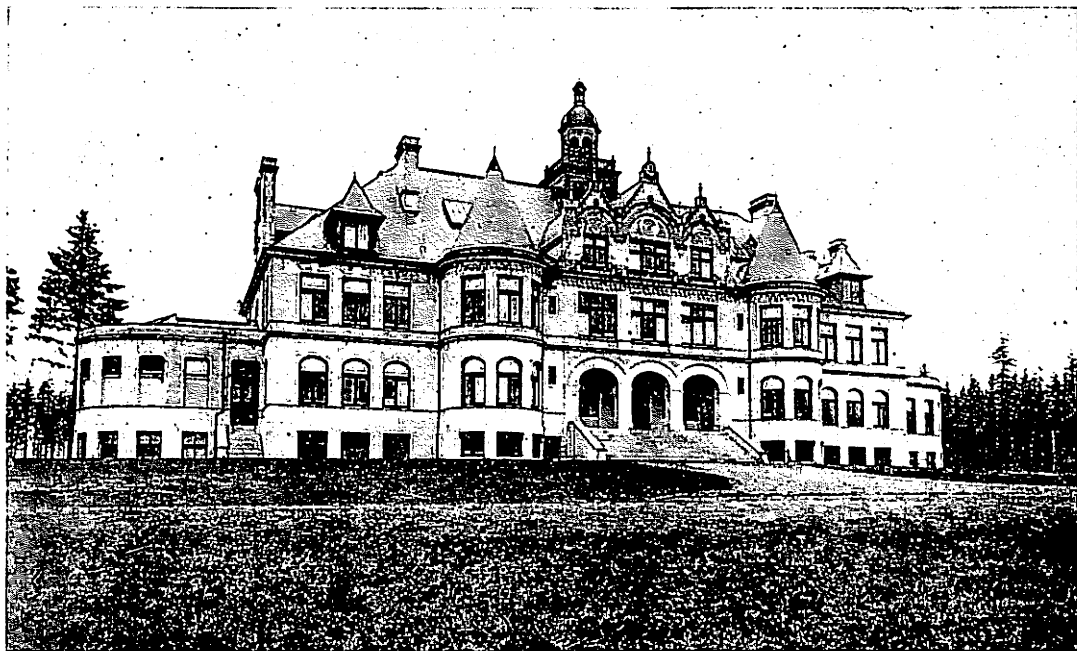


1899 - 1900





FRONT VIEW OF ADMINISTRATION BUILDING.

CATALOGUE FOR 1898-99

AND

ANNOUNCEMENTS FOR 1899-1900

OF THE

UNIVERSITY OF WASHINGTON.



SEATTLE, WASHINGTON.

OLYMPIA, WASH.:
GWIN HICKS, - - STATE PRINTER.
1899.

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CALENDAR FOR 1899-1900.

1899.

FALL TERM.

Examinations for admission begin.....Monday, Sept. 11.

(Between 9 A. M. and 12 M. on Monday and Tuesday will be held all examinations in the departments of sciences, mathematics, and drawing. Between 1 and 4 P. M. of the same days will be held all examinations in the departments of languages, English, history, and political science.)

Registration Day.....Tuesday, Sept. 12.

Recitations begin.....Wednesday, Sept. 13.

Term ends.....12 M., Wednesday, Nov. 29.

WINTER TERM.

Term begins.....9 A. M., Monday, Dec. 4.

Christmas Vacation begins.....12 M., Friday, Dec. 22.

1900.

Christmas Vacation ends.....9 A. M., Wednesday, Jan. 3.

Lincoln's Birthday.....Monday, Feb. 12.

Washington's Birthday.....Thursday, Feb. 22.

Term ends.....3:30 P. M., Wednesday,
[February 28.]

SPRING TERM.

Term begins.....9 A. M., Monday, March 5.

Baccalaureate Sermon.....11 A. M., Sunday, May 27.

Examinations for Admission begin.....Monday, May 28.

Alumni Day.....Tuesday, May 29.

Class Day.....Wednesday, May 30.

Commencement.....10:30 A. M., Thursday,
[May 31.]

THE BOARD OF REGENTS.

Hon. GEORGE H. KING, President...Seattle....Term expires, 1903.
Hon. ALDEN J. BLETHENSeattle....Term expires, 1902.
Hon. CHARLES M. EASTERDAY ...Tacoma...Term expires, 1902.
Hon. JAMES Z. MOORE.....Spokane...Term expires, 1904.
Hon. LINCOLN D. GODSHALL.....Everett...Term expires, 1904.
Hon. RICHARD WINSOR.....Seattle....Term expires, 1905.
Hon. JOHN P. HOYTSeattle....Term expires, 1905.

Rev. CLARK DAVIS, Secretary of the Board.

STANDING COMMITTEES OF THE BOARD OF REGENTS.

Executive.

GEORGE H. KING, CHAIRMAN.

JOHN P. HOYT.

RICHARD WINSOR.

Instruction.

RICHARD WINSOR CHAIRMAN.

ALDEN J. BLETHEN.

JOHN P. HOYT.

Library, Museum, and Apparatus.

JOHN P. HOYT, CHAIRMAN.

CHARLES M. EASTERDAY.

LINCOLN D. GODSHALL.

Buildings and Grounds.

ALDEN J. BLETHEN, CHAIRMAN.

RICHARD WINSOR.

JAMES Z. MOORE.

Reports and Publications.

LINCOLN D. GODSHALL, CHAIRMAN.

JAMES Z. MOORE.

CHARLES M. EASTERDAY.

FACULTY OF UNIVERSITY OF WASHINGTON FOR 1899-1900.

FRANK PIERREPONT GRAVES, PRESIDENT.

A. B., Columbia University, 1890; A. M., 1891; Ph. D., Boston University, 1892; Student at Harvard University, 1893-94; Litt. D., Heidelberg University, 1896; LL. D., Hanover College, 1897. Instructor in Greek, Drisler School, New York, 1889-90; Assistant in Greek, Columbia University, 1890-91; Assistant Professor of Greek, Tufts College, 1891-93; Professor of Classical Philology, 1893-96; President of the University of Wyoming and Director of the Wyoming Experiment Station, 1896-98; President of the University of Washington, 1898-.

Chester Street, Brooklyn Addition.

CHARLES FRANCIS REEVES, *Dean of College of Liberal Arts*,*

Professor of the German Language and Literature.

B. S., Pennsylvania State College, 1878; M. S., 1881; Student at the University of Chicago, 1897. Professor of Modern Languages and Librarian, Pennsylvania State College, 1879-90; Assistant to the President, in charge of the business office, 1884-90; Professor of Modern Languages, University of Washington, 1894-97; Professor of German since 1897; Acting President, 1897-98; Dean, 1899-.

Angeline Street, Columbia City.

ADOLPH FREDERICK BECHDOLT,

Professor of English Language and Literature.

A. B., Lafayette College, 1866; A. M., 1869; Ph. D., Franklin and Marshall College, 1890. Professor of Chemistry and German, Mercersburg College, 1869-76; Superintendent of City Schools, Mankato, Minnesota, 1876-80 and 1885-92; Professor of Chemistry, Minnesota State Normal School, Mankato, 1880-85; Professor of English Language and Literature, University of North Dakota, 1892-95; Professor of English Language and Literature, University of Washington, 1895-.

741 Bellevue Avenue.

* The Dean of the College of Liberal Arts is Acting President in the absence of the President.

HENRY LANDES,

Professor of Geology and Mining Engineering.

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 Mining Engineering, University of Washington, 1896-; State Geologist of Washington since 1896.

Summit Avenue, Brooklyn Addition.

EDMOND STEPHEN MEANY,

Professor of History and Instructor in Forestry.

B. S., University of Washington, 1885; M. S., 1899. Reporter and News Editor, Seattle Post-Intelligencer and Seattle Press, 1885-93; 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 and Instructor in Forestry, 1897-.

Summit Avenue, Brooklyn Addition.

J. ALLEN SMITH,

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-.

Franklin Street, Denny-Fuhrman Addition.

ARTHUR RANUM,

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-.

1108 Sixth Avenue.

ALMON HOMER FULLER, *Dean of College of Engineering,*

Professor of Civil and Mechanical Engineering.

C. E., Lafayette College, 1897; M. C. E., Cornell University, 1898. Fellow and Assistant in Civil Engineering, Cornell University, 1897-98; Professor of Civil and Mechanical Engineering, University of Washington, 1898-.

Summit Avenue, Brooklyn Addition.

THOMAS EATON DOUBT,

Professor of Physics and Electrical Engineering.

B. Sc., Nebraska Wesleyan University, 1892; A. M., University of Nebraska, 1896; Assistant in Chemistry, Nebraska Wesleyan University, 1889-92; Instructor in Physics, 1892-94; Fellow in Physics, University of Nebraska, 1894-97; Instructor in Physics, University of Washington, 1897-98; Professor of Physics, 1898-.

Broadway, Brooklyn Addition.

CARL RICHARD MOENCH,

Professor of the Latin Language and Literature and Instructor in Hebrew.

Testimonium maturitatis, Wittenberg Gymnasium, 1870; Ph. D., University of Leipzig, 1876. *Hilflehre*, Wittenberg Gymnasium, 1877-80; *Ordinarius*, Torgau Gymnasium, 1880-83; Professor of Ancient Languages, Union College, Nebraska, 1893-97; Professor of Modern Languages, Puget Sound University, 1897-98; Professor of Ancient Languages, University of Washington, 1898-.

Columbus Avenue, Brooklyn Addition.

ALEXANDER BRAINARD COFFEY, *Dean of School of Pedagogy,*

Professor of Education.

Student, Hastings College of Law, 1894-95; A. M., Missouri State Normal School, 1899; Teacher and Principal in Missouri Schools, 1876-82; Teacher, Principal, and County Superintendent in California Schools, 1882-94; Associate Editor of Pacific Educational Journal, Editor of Educational Department of Overland Monthly, and Associate Editor of Western Journal of Education, 1894-98; Professor of Education, University of Washington, 1898-.

Broadway, Brooklyn Addition.

HOMER REDFIELD FOSTER,

Professor of Biology.

Ph. B., University of Michigan, 1897; M. S., 1898. Teacher and Superintendent of Michigan Schools, 1887-93; Principal and Professor of Biology, Benton Harbor College, 1893-94; Superintendent of Schools, Hartford, Michigan, 1894-95; Professor of Biology, University of Washington, 1898-.

Broadway, Brooklyn Addition.

FREDERICK WELTON COLEGROVE,

Professor of Philosophy.

A. B., Colgate University, 1882; A. M., 1885; Student at Hamilton Theological Seminary, 1882-84; D. D., University of Rochester, 1893; Ph. D., Clark University, 1898; Student at Leipzig and Heidelberg Universities, 1898-99. Principal of Marion Collegiate Institute, New York, 1884-89; Professor of Latin, Colgate University, 1889-92; President of Ottawa University, Kansas, 1892-96; Professor of Philosophy, University of Washington, 1899-.

Brooklyn Addition.

ARTHUR RAGAN PRIEST,

Professor of Rhetoric and Oratory.

A. B., De Pauw University, 1891; A. M., 1892. Professor of English Language and Literature, McFerrin College, 1892-93; Professor of Rhetoric and Oratory, De Pauw University, 1893-98; Assistant Professor of Rhetoric and Oratory, University of Wisconsin, 1898-99; Professor of Rhetoric and Oratory, University of Washington, 1899-.

Brooklyn Addition.

....., *Commandant of Cadets*,
Professor of Military Science and Tactics.

JOHN THOMAS CONDON, *Dean of Law School*,

Professor of Law.

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

624 Burke Building, Seattle.

HORACE GREELEY BYERS,

Professor of Chemistry.

A. B. and B. S., Westminster College, 1895; A. M., 1898; Ph. D., Johns Hopkins University, 1899. Instructor in Chemistry, Tarkio College, 1893-94; Instructor in Chemistry, Westminster College, 1895-96; Professor of Chemistry, Maryland University, 1897-99; Professor of Chemistry, University of Washington, 1899-.

Seattle.

CHARLES WILCOX VANDER VEER, *Director of Gymnasium*,

Associate Professor of Physical Culture and Hygiene.

Student in 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; Associate Professor of Physical Culture and Hygiene, University of Washington, 1895-.

1220 Third Avenue, Seattle.

CAROLINE HAVEN OBER,

Associate Professor of Romance Languages.

Graduate of Massachusetts Normal School, Salem, 1884. Teacher in Wheaton Seminary, 1884-86; Teacher in Public School, Palisade, Nevada, 1886-88; Instructor in Modern Languages, Bozeman Academy, Montana, 1888-89; Regent and Vice Directress of Government Normal Schools, Argentine Republic, 1889-93; Instructor in Modern Languages, Trinidad High School, Colorado, 1894-95; Instructor in Spanish, San Diego High School, California, 1896-97; Associate Professor of Romance Languages, University of Washington, 1897-.

1108 Sixth Avenue.

MARTHA LOIS HANSEE, *Dean of Women,***Assistant Professor of Greek.**

A. M., Pacific University, 1890. Professor of Greek and Latin, University of Washington, 1881-84; Professor of Ancient Languages, and Dean of Women, Willamette University, 1888-95; Instructor in History, Latin, and Greek, University of Washington, 1895-99; Assistant Professor of Greek, and Dean of Women, 1899-.

Chester Street, Brooklyn Addition.

TREVOR CHARLES DIGBY KINCAID,**Assistant Professor of Biology.**

B. S., University of Washington, 1899. Instructor in Biology, University of Washington, 1895-99; Acting Professor of Entomology, Oregon Agricultural College, 1897-98; Assistant Professor of Biology, University of Washington, 1899-.

Columbus Avenue, Brooklyn Addition.

DORSEY ALFRED LYON,**Assistant Professor of Mining Engineering and Instructor in Chemistry.**

A. B., Leland Stanford Junior University, 1898. Assistant in Mineralogy and Assaying, Leland Stanford Junior University, 1897-98; Instructor in Geology and Mining Engineering, University of Washington, 1898-99; Assistant Professor of Mining Engineering and Instructor in Chemistry, 1899-.

Broadway, Brooklyn Addition.

EDWIN CHAPIN STARKS, *Curator of Museum,***Assistant Professor of Biology.**

Student in Leland Stanford Junior University, 1894-97; Representative of Stanford University in Exploring Expeditions to Mexico and Puget Sound, 1894-96; Assistant in Bureau of Biological Survey, 1897-99; Curator of the Museum, University of Washington, 1899-.

Brooklyn Addition.

INSTRUCTORS AND OTHER OFFICERS.

CLARK DAVIS,
Registrar.

Student in Stewartville College, Missouri, 1876-80. Ordained Deacon, Methodist Episcopal Church, South, 1882; Assistant Secretary, Portland Y. M. C. A., Oregon, 1882-83; Secretary, Seattle Y. M. C. A., 1884-85; Pastor, First Methodist Protestant Church, Seattle, 1885-96; Registrar, University of Washington, 1897-.

Brooklyn Addition.

THOMAS WARNER LOUGH,
Instructor in Chemistry.

Ph. G., University of Washington, 1896. Assistant in Chemistry, University of Washington, 1895-99; Instructor, 1899-.

Fremont.

HARRY CANBY COFFMAN,
Librarian.

A. B., University of Washington, 1899. Assistant Librarian, 1897-99; Librarian, 1899-.

Brooklyn Addition.

FRANK DEAN FRAZER,
Tutor in Mathematics.

B. S., University of Washington, 1897; A. M., Princeton University, 1898; Graduate student, University of Washington, 1898-99. Tutor in Mathematics, 1899-.

Spring Street, Seattle.

HENRY LINDLEY REESE,
Tutor in Greek and Latin.

A. B., University of Washington, 1899. Tutor in Greek and Latin, 1899-.

Seattle.

DAVID KELLY,
Tutor in Physics.

B. S., University of Washington, 1899. Tutor in Physics, 1899-.

Brooklyn Addition.

JAMES MORAN, *University Engineer,*
Assistant in Electrical Engineering.

Master Mechanic, Seattle Consolidated Street Railway Company, 1889-94; Machinist, James Street Constructing Company, 1894-95; General Inspector of Electrical Equipment, Oakland Consolidated Street Railway, 1896-97; Engineer and Assistant in Electrical Engineering, University of Washington, 1897-.

Brooklyn Addition.

STANDING COMMITTEES OF THE FACULTY.

Admission.—Professor Bechdolt, Dean Reeves, and Professor Moench.

Credits.—Professors Foster, Colegrove, and Mr. Davis.

Athletics.—Professors Vander Veer, Landes, and Hansee.

Military Exercises.—The Commandant, Professors Lyon and Kincaid.

Unclassified Students.—Professors Landes, Byers, and Ober.

Conditioned Students.—Professor Smith, Dean Reeves, and Professor Coffey.

Freshman Advisers.—* Deans Reeves, Fuller, and Coffey.

Sophomore Advisers.—Professors Bechdolt, Landes, and Colegrove.

University Exercises.—Professors Coffey, Meany, and Priest.

Discipline.—Professors Doubt, Ranum, and Hansee.

Holidays.—Professors Meany, Ranum, and Lyon.

Student Organizations and Publications.—Professors Bechdolt, Priest, and Foster.

Courses.—Dean Reeves, Professors Landes and Fuller.

Library.—Mr. Davis, Professors Moench and Ober.

Museum.—Professors Starks, Landes, and Kincaid.

Accredited High Schools.—Professors Coffey, Fuller, and Foster.

Student Assistance.—Professors Meany and Coffey, and Mr. Davis.

* The adviser of a student in the junior or senior class is the head of the department in which he takes his major study.

GENERAL INFORMATION.

HISTORICAL SKETCH.

When the first legislature of Washington Territory assembled in 1854, Isaac Ingalls Stevens, the governor, spoke most forcibly in his initial 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 just 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 re-located 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 laid on May 21, 1861, and the building completed within the specified year. In the autumn of 1861 the other buildings were constructed, and during the winter the UNIVERSITY OF WASHINGTON was opened.

The legislature had made one other condition in re-locating 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; no one of the

first six presidents having 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 in 1880, and from that date classes have been graduated annually with all the essentials of a college training.

The total number of graduates up to June, 1898, was only 174, but the class of 1899 contains some fifty members. 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 about 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.

The new site comprises 355 acres of land between Lakes Union and Washington. The grounds have a water frontage on both lakes and command a beautiful prospect. They are adorned by a natural growth of forest trees, except where they have been removed to make way for buildings, campus, and athletic field. This new site is about four miles from the centre of Seattle, and can be reached by rail, street-car, road, or water.

The present year is the thirty-seventh of the University's activity. 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 in 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 University of Washington is free to all, 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 statistics used here are from reports of the Chamber of Commerce, the United States Weather Bureau, and other equally reliable sources.

The city of Seattle is the metropolis of the State of Washington, and has a population now estimated at 80,000. 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, wonderful forests, and the deep blue waters of the ocean, combine to furnish an environment of healthfulness and inspiration. This natural beauty is simply 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, but from actual statistics the total precipitation for the year 1898 was about the same as that of the city of Chicago. The highest temperature reached in 1898 was 92 degrees on August 1st, and the lowest was 27 degrees on January 24th. A sure indication of the healthfulness of the Puget Sound climate is a low death rate. In Seattle during the past year the rate was but seven in one thousand.

Numerous lines of railroads, of steamships, and sailing vessels furnish abundant facilities for transportation to and from the city, while within the city there are 100 miles of electric and cable street car lines. There are three public parks in the city, and five private parks open to the public.

Three branches of the superior court and the United States district court in Seattle, and the state supreme court within easy reach at Olympia, offer valuable advantages for the Law School. Two general 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 especial advantage 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 States government has recently established an assay office in Seattle.

Practical electrical engineering is amply illustrated by the extensive power and light plants in the city, and the large system now being completed at Snoqualmie Falls. The large iron works, saw mills, clay works and numerous other manufacturing enterprises will furnish useful object lessons to students of mechanical engineering. The United States government dry-dock and naval station 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 whose books are available for students of the University. The management of the public library seeks every means possible to supplement the library of the University.

There are sixty-four 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 1898 twenty-four buildings were occupied by the public schools, one hundred and eighty-eight teachers were employed and 8,655 pupils enrolled. Superintendent Frank J. Barnard has offered to make his best schools available as a training auxiliary for the students of the University who are preparing for the profession of teaching. This offer is based on the plan now in practice by the public

schools in the vicinity of Harvard and other old universities.

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 ensures 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 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 remain 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 ten acres in the central part of the city of Seattle. Both of

above paid 100
upward 400

these last named parcels of land are sure to become good revenue producing properties. In addition to the above mentioned property the University was further endowed by the state on March 14, 1893, by the segregation of certain 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."

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 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 materials. 1 m

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. 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, above which is the library. The basement in the main part of the building is devoted to laboratories. These are all well lighted and equipped for work. In the basement of the wing is the museum, which is the full size of Denny Hall, and is provided with ample cases for the growing collections. The building is heated and ventilated by the latest improved facilities, and is lighted by gas and electricity. Though the scientific departments are becoming greatly crowded, the administration building is sufficient to supply the needs of from 600 to 800 students in the other branches of work. It occupies the most commanding situation on the grounds. (3)

The Observatory, while 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 Gymnasium and Drill Hall is a frame building constructed of Puget Sound fir. The whole building is 165 feet long and 120 feet wide. The drill hall portion contains probably the largest floor space in the state. It is 120 by 80 feet, and the floor is made of selected fir. This provides an excellent place for the drill of the University cadets during inclement weather and for all indoor athletic games and meets. On either side of this hall are ample rooms for the use of the companies of cadets and their officers. The gymnasium portion of the building is 80 by 45 feet. Here are found apparatus and equipments of the latest designs. On one side are the dressing rooms and baths for the women, and on the other dressing rooms and baths for the men, and the office of the professor of physical culture and hygiene.

The Power House is a brick structure on the shore of Lake Washington, and close to the tracks of the Seattle and International Railway Company. This situation provides adequate supply of water and fuel. Here are installed two large boilers, a large pump with smaller auxiliary pump, an engine and a dynamo. Thus the University is supplied with its own heat, water, power, and light. As new buildings are now being added, this plant will necessarily be increased to furnish the needed additional heat and light, as well as a more adequate supply of spring water for drinking purposes.

Two Dormitories, one for women and the other for men, were amply provided for at the legislative session of 1899. A competition of plans, inaugurated by the board of regents, was entered by the best architects of the state. It is impossible at present to describe the buildings further than to say that they will conform in general design to the administration building. There will be 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 will command a beautiful view of Lake Washington and the distant Cascade range of mountains.

The Law Building is situated on the old site of the University near the business center of the city. It was formerly the administration building of the University, and was erected in 1862. At that time it was the finest educational structure in the Pacific Northwest. It is a commodious building and more conveniently located for law students than any building on the new site.

GROUNDS AND ARBORETUM.

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, as already stated, 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.

From the southern, or Lake Union side, the land slopes gently from the highest point in the northwestern corner, 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 beautified 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 furnishing ample room for an excellent arrangement of all the 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 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 thrive in this climate. There are now on the grounds large groves of the original forest trees, and many of them are being preserved. Many others have been planted and are now thriving. 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. These were planted, and not one of them perished. During

the last few months the park department presented to the University 2200 fine trees, embracing about thirty species new to the grounds. These were all carefully planted in groves at suitable places on the grounds. They are all thriving. At this rate of progress it will be but a few years before the University will have an arboretum as fine as any possessed by colleges and universities anywhere in the world. The educational value of such an arboretum is quite apparent to anyone who comprehends the progress being made in the science of botany and forestry.

LIBRARY.

On May 1, 1897, the library of the University of Washington had 6,061 bound volumes and 7,456 pamphlets. One year later the library had 7,636 bound volumes and 7,861 pamphlets, and on May 1, 1899, there were 10,360 bound volumes and 10,000 pamphlets. Formerly the growth of the library depended on gifts and consisted mainly of United States reports. During the last three years, however, the new books have been very largely the best selected books of reference. Every department is strengthened each year by the addition of some of the most valuable books on its subject. The leading papers and magazines, foreign and American, in addition to about thirty periodicals from various parts of the state, are to be found in the library and reading room. The University library is a depository for United States government publications. The library possesses a card catalogue, and is arranged according to the Dewey decimal system. The library occupies a room 91 feet long and 54 feet wide, and the students are allowed free access to the shelves. Students of the University also have all the privileges of the Seattle Public Library, which has now over 19,000 bound volumes and several thousand pamphlets.

DENNY HALL.

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.

THE SMALL AUDITORIUM.

On the first floor of the administration building is a room fitted with raised seats arranged after the manner of clinic lecture rooms. The seats are tablet arm chairs of the latest design and are about one hundred in number. For special lectures and for large classes this room has been found to be of admirable service. It is especially suited to the needs of such meetings as those of the Chemical Journal Club, class associations, and other student organizations.

MUSEUM.

The University Museum is destined to become one of the most important adjuncts of the institution. The legislature of 1899 created it into the State Museum, and provided that state, county, and other officers while in the discharge of their duties shall save all matters of a scientific or historical value, and deposit them in this museum. At present the museum occupies a room 91 by 54 feet, well lighted, and fitted with 300 feet of upright cases and 142 feet of wall cases, besides two glass partitioned rooms for the exhibition of groups of larger animals. The specimens


thus far accumulated represent a good beginning along the lines of geology, mineralogy, zoology, botany, and ethnology. Additions are being made to the museum collections each week. It is the aim to make it especially rich in specimens of the natural history of this state. This is an excellent field, for there is not another section of the Union whose natural history is so little known as that of the Northwest.

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 three laboratories devoted to chemistry alone were opened at the beginning of the University year 1895. All 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. There are none of the antiquated appliances found in old laboratories, and each student has an entire desk to himself. A large stock room is well supplied with a complete assortment of glassware, apparatus, and chemicals, mostly imported from Germany. This room is in charge of an assistant, and at certain hours during the day students may



supply themselves with such apparatus and chemicals as are needed for individual work.

Laboratory F accommodates twenty-eight students, and is devoted to a beginners' experimental course in inorganic chemistry leading up to qualitative analysis. Adjoining is a balance-room, where the finer balances and more delicate apparatus for advanced work are kept; also an acid room, where crude acids and chemicals in bulk are stored. In room F is also a large stationary copper still supplied with steam and cold water for condensing.

Laboratory D is directly across the hall, accommodates twenty-one students, and is devoted to qualitative analysis. A large "hood" extends across one end of the room and removes all fumes and obnoxious gases. A large supply of distilled water is obtained from steam condensation and is convenient to all three laboratories.

Laboratory E is at present used for quantitative and volumetric analysis, organic preparations, and organic analysis. This laboratory, being in the form of an amphitheater, is exceptionally well lighted and is an ideal room for the finer organic work. The desks, of which there are twenty-five, are very large and particularly adapted to research work.

All three laboratories are supplied with balances for rough weighing as well as finer ones for quantitative work.

Physical.

The rooms set apart for the use of the department consist of — (1) a general laboratory 70 x 30 feet, which is provided with 120 feet of wall tables and five brick piers with marble caps, apparatus, cases, sinks, gas taps and electric connections; (2) a work shop 30 x 25 feet; (3) a photometer room 28 x 7 feet; (4) a lecture room; and (5) an adjoining apparatus room.

The department is supplied with the most modern apparatus from American and European makers. Among the important pieces of apparatus may be mentioned — (1) an Atwood's machine with friction wheels and magnetic trip, Bertram's apparatus for the law of machines, two fine balances with suitable sets of weights, a centrifugal machine with numerous attachments, a Bianchi's air pump with accessories, a seconds mercury compensated pendulum clock with electrical connections to Morse sounder and chronograph, two standard barometers, a cathetometer, a straight line dividing engine, and a mercury air pump; (2) a Helmholtz double siren, two large electrically vibrated tuning forks with mirrors for producing Lissajous' curves, a set of organ pipes, a set of tuning forks, revolving mirror, and burners for studying sound by means of manometric flames; (3) Melloni's apparatus complete with thermopile, a Le Châlier electric pyrometer, three standard thermometers, Hoffman's vapor density apparatus complete, Victor Myers' vapor density apparatus, apparatus for the determination of the expansion of metals, Beckman's apparatus; (4) a spectro-goniometer, a polarimeter, a refractometer, a direct vision spectroscope with attachments, a Fresnel's optical bench with accessories for studying interference, diffraction, etc., a Lummer-Brodhem photometer with standard Amyl-acetate lamp, two spectrometers, a fine compound microscope with eyepiece and stage microscopes, a projection lantern with microscope, polariscope, and vertical attachment complete, reading telescopes, curved mirrors, etc.; (5) two 10,000 ohm standard resistance boxes, three Wheatstone bridges, a Kohlrausch bridge, postoffice box pattern, Thomson high resistance galvanometer, Hartman and Braun's apparatus for measuring electrolytic resistance, a Kohlrausch variometer, a standard

microfarad condenser, a Thomson-Mascart electrometer, two fine D'Arsonval galvanometers, absolute tangent galvanometer, a fine set of Crookes' tubes, a Wimshurst influence machine, two induction coils, some Geissler, Pluecker and X Ray tubes, a storage battery of 25 cells with a normal discharge rate of fifteen amperes, two ammeters, two voltmeters, a standard Carhart-Clark cell, an absolute condenser, a Westinghouse motor and generator. In addition to these, there is a generator at the power house with Whitney ammeter and voltmeter, and two General Electric Company motors in the fan-rooms, which may be used for experimental purposes.

The work shop contains an iron lathe, a scroll saw with wood-turning attachments, a tool grinder, a crystal cutting and polishing machine, a forge, two work benches with iron and wood working tools. Students are encouraged to construct accessory apparatus. The dark room is supplied with water, gas, and electricity, and is fitted with a large slate sink so that it is excellent for photographic work.

The laboratory is supplied with elevating tables and stands, and apparatus for measuring viscosity, movements of inertia, and elasticity.

The lecture room may be darkened, and it is equipped with projection screen, and supplied with gas, electricity, and water.

The laboratory is supplied with a number of standard reference works, among which may be mentioned Wenkelmann's Handbuch, Viole's Cours de Physique, Wullner's Experimental Physik, Grey's Absolute Measurements in Electricity and Magnetism. A number of the more prominent periodicals in physics are supplied and are constantly on file, such as Philosophical Magazine, Physical Review, Astro-physical Journal, Wiedemann's Annalen and Beiblätter, Journal de Physique, Nature, and Science.

Biological.

The biological laboratories are located in the north end of the building, one on the first floor and one in the basement room below. The commendable features of these rooms for laboratory work is a circular front in which are placed eighteen large windows, giving an abundance of light. The laboratory on the first floor has also a ten-foot skylight placed in a dome-shaped roof.

Before each window is placed a maple topped table specially designed for biological work and provided with accommodations for four students. The tops of these tables taper to allow an equal distribution of light and also to conform to the circular form of the rooms, the broad ends being placed against the wall in front of each window. Each laboratory will therefore seat comfortably seventy-two students at one time.

In the center of each laboratory stands a lead-lined aquarium with fixtures for maintaining sixteen small aquaria for the propagation and study of living forms.

The laboratory supplies at present include thirty-one compound microscopes with one-sixth and two-third inch objectives; ten dissecting microscopes with double lenses (Bausch and Lomb, series W). Several microscopes are provided with the Abbe condenser, the Abbe camera lucida, $\frac{1}{2}$ oil immersion lenses, polarizing apparatus, and micrometer eye-pieces and scales. Naples water bath, Minot's microtomes, incubator, stains, reagents, embedding material, and the glassware necessary for the study of microscopy, are provided for individual use. One of the best Zeiss microscopes is also provided for special use, fitted with mechanical stage, apochromatic objectives, 16^{mm}, 8^{mm}, 4^{mm}, and 2^{mm}, and compensating eye-pieces, 2, 4, 8 and 12, and with camera, polarizing apparatus, and other accessories.

Students in the more elementary courses have the constant supervision of the instructors in charge, while every facility within the means at command will be provided for those capable of doing work in research. The laboratory cases are rapidly being filled with marine animals from Puget Sound and fresh water forms from the neighboring lakes, about one hundred species of the group *vermes* alone being collected during the summer of 1895.

The herbarium at present consists of specimens representing about 3,000 genera, with species peculiar to this coast, in addition to others obtained by exchange from the east. This, together with the museum, furnishes facilities for the study of classification and comparative work. A collection of insects consisting of about 40,000 specimens has been made. This furnishes an excellent means for the study of entomology, containing, as it does, many species not described before and forms peculiar to the Pacific coast, and including a number of Alaskan forms.

A good working library is provided in connection with the laboratories, in addition to the general library of the University. New books and pamphlets are being added to this library as fast as possible, together with periodicals and the current biological literature.

The high schools of the state are invited to communicate with the department relative to biological material, identification of specimens, and the preparation of gross and microscopic structures for class demonstration.

Mineralogical and Petrographical.

This laboratory occupies one of the large basement rooms, and has accommodations for twenty-four students. It contains three tables with tile tops and with fixtures for gas; two cabinets filled with minerals for descriptive work in mineralogy; one cabinet of lithological and palæontological

specimens; one cabinet of ores, arranged for use in the study of economic geology; one cabinet containing a good collection of natural crystals and wood models for the study of crystallography; one cabinet filled with the proper chemicals and reagents for use in blowpipe analysis; and two racks to hold the blowpipe outfits, which are provided for all students.

For work in petrography there is provided a Bausch and Lomb petrographical microscope, and a lathe fitted with a diamond saw and grinding plate, run by an electric motor.

The laboratory is open at all times, and students are permitted to work whenever they please, a minimum number of hours being stated for every course. By this arrangement it is found that students perform more hours of work a week than when they are debarred from the laboratory, except at certain periods. The laboratory specimens are always at the command of the students, and in this way much is learned by constant observation and association.

In the University Museum, which is very near the laboratory, there are several choice collections of minerals, rocks, coals, ores of iron and the precious metals, and these specimens are freely drawn upon in the courses in mineralogy and petrography.

Assaying.

The assaying laboratory is now well equipped for that work. The furnace room will accommodate about eighteen students, and is provided with a large coal muffle furnace, built upon the same plan as those in use at the Puget Sound Reduction Company's assaying laboratories, Hoskin's gasoline crucible and muffle furnaces, and wind furnaces for coke and charcoal. The student in this way becomes familiar with the use of different fuels, as in some parts of the country one of these fuels must be used, while in another part another is found more desirable.

Connected with this laboratory are the weighing rooms with pulp and assay balances, and these are in turn connected with a well lighted and well ventilated laboratory for the wet analyses of ores and the performing of various tests. Each desk in this laboratory is supplied with water and gas, and is amply equipped in every way for the work undertaken.

EQUIPMENT FOR CIVIL ENGINEERING.

The instrumental equipment for surveying is complete for all plane and topographic work. It consists of one Heller & Brightly complete engineer's transit, with stadia ; one Gurley light mountain transit with solar attachment and Jones' patent latitude arc ; one Gurley railroad compass ; one 20-inch Gurley wye level ; one Buff & Birger inverting dumpey level ; one Gurley plane table with alidade containing stadia wires ; sextant ; hand levels ; chain ; 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 room for drawing is 24x55 feet and well lighted. It contains first-class drawing desks, lock drawers, stools, cabinet and models. Drawing boards are furnished to all students.

OBSERVATORY.

The University observatory is a substantial stone structure built in 1895. It consists of a dome for the equatorial telescope, fifteen feet in diameter, with running gear for rotary motion, manufactured by Warner & Swasey; a library and computing room, a transit room, a clock room, a closet for photography, etc. (25)

The present equipment consists of an equatorial telescope of six inch clear aperture, 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 and Swasey. Within the next year the equipment will be augmented by the addition of a transit instrument with zenith telescope attachment, a chronometer, and star catalogues.

GYMNASIUM AND ARMORY.

The gymnasium is 40 x 80 feet, well lighted and ventilated, and equipped with all the necessary apparatus. There is a dressing room on each side, one for men and one for women, each provided with booths and lockers, a small rental being charged for the latter. Connected with each dressing room are four shower baths, with hot and cold water.

The drill hall is 80 x 120 feet. From it open the commandant's office and three company rooms. The latter are furnished with rifle-racks, desks, etc. Rifles, swords, belts, ammunition, targets, and other supplies are furnished by the War Department of the United States. (25)

STUDENT ASSOCIATIONS.

The entire body of students is organized into a Student Assembly, which decides all questions arising among the

students and relating to them, and controls all matters of general interest to the student community. The executive body of the student assembly is the Representative Council, consisting of the President of the University, *ex officio*, and ten students, selected by vote from the several classes.

The Philomathean Literary Society is the oldest organization among the students. Weekly meetings give opportunities for the students to improve themselves in debate, oratory, criticism, and correct methods of conducting deliberative bodies.

The Oratorical Association is an organization of students for the cultivation of interest in elocution and oratory. This association encourages intercollegiate and inter-state contests in oratory, and has already achieved no small amount of success in the field it has sought to develop.

The King County Bar Association in the spring of 1896, offered a cash prize of \$100 to be competed for at the University of Washington by members of the senior class of certain institutions of learning of the highest grade in Washington, Oregon, and Idaho. The contest was held during commencement week, Idaho not being represented. Since then the offer has been limited to the University of Washington, and open to all students irrespective of classes; also the sum offered is now divided into a first and second prize of \$75 and \$25, respectively. 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.

The Stevens Debating Club is a students' organization for the improvement of its members in the art of public speaking. The club is named in honor of Isaac Ingalls Stevens, the first governor of Washington Territory. Membership in this club is confined to a limited number of men students.

The Culture Club is open to all the women of the University. Meetings are held every two weeks. The programmes consist of talks and papers on the writers of the day, interspersed with musical numbers. The aim of the club is to make its members familiar with contemporary authors and bring about social relations among the young women of the University. (25)

The Geological Society was organized with special reference to work in geology by students pursuing studies in the scientific departments. Regular meetings are held every Wednesday afternoon, at which original papers are read and discussed. Field work and exploration are an important part of the society's activity. 40

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

The Physico-Mathematical Club meets bi-weekly for the presentation of papers upon the progress of investigations being made by the members. It also discusses the most recent topics in physics, mathematics, engineering, and astronomy.

The Societas Classica is an organization of students of the ancient languages, the object being to cultivate an interest in philological, archeological, and linguistic subjects. (25)

Der Deutsche Verein is an organization of students of the German department and others who are interested in special work pertaining to the language and literature of Germany.

The English Club is an association in which the professors of English literature and rhetoric supervise the reading and discussion of the English classics. The meetings are

held at the residences of the professors on Saturday evenings. Shakespeare and his Contemporaries will be the subject for 1899-1900.

The Dramatic Club was organized during the past year by students for the purpose of encouraging the study of the drama, for the cultivation of dramatic talent among its members, and for the purpose of giving plays from time to time. On April 7, 1899, the club gave a successful presentation of Goldsmith's "She Stoops to Conquer."

The University Orchestra was organized during the past year. It began with seven members, but during the coming year it will be increased to at least ten. This organization is of great assistance, as it furnishes excellent music for the usual programmes during the University year. Other musical associations of the year included a male quartette, a ladies' quintette, a glee club, and a trio consisting of violin, mandolin, and piano.

The Young Men's Christian Association and the Young Women's Christian Association each have a branch organization among the students of the University. They give a reception at the beginning of each year, 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 is now planning to conduct a book exchange next year, and to try to establish a regular reading room and headquarters in the men's dormitory.

The Athletic Association is an organization of students having for its aim the encouragement of all healthful and legitimate sports. Besides the ordinary officers the association has four important committees, as follows: The executive committee; the auditing committee; the advisory

committee, consisting of three members of the faculty; and the committee on emblem awards, consisting of the executive committee, the advisory committee, and three alumni.

The Women's Athletic Association has for its object the encouragement of physical culture among the women students.

The Tennis Club is an organization among the young men of the faculty and students who are interested in the game. The club controls a very good cinder court on the campus, where the ordinary playing as well as the periodical tournaments are held. The membership is at present limited to twelve.

Thus far there are but two of the Greek letter fraternities which have established chapters at the University. These are the Sigma Nu and the Phi Gamma Delta. Both are flourishing, and the Sigma Nu chapter has already begun to plan for the erection of a chapter house on the campus.

EXPENSES OF STUDENTS.

Tuition is free to all residents of the State of Washington in all colleges of the University, except the Law School. In the Law School the tuition fee is \$10 a term, or \$25 for the year. Students taking but one subject pay \$5 a term.

The fees charged to graduates are \$5 for each one receiving a baccalaureate or higher degree, 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. These charges are specified under the general subject of Laboratory Fees.

The two dormitories, one for men and one for women, now in course of construction, will decrease materially the cost of living for students. It is expected that the cost to each student for board and room in the dormitories will

not exceed \$12 a month. The charge to each student will only be large enough to maintain the dormitories in a manner that will ensure comfortable rooms, wholesome food, and generally healthful surroundings. The University does not desire to make any profit from these dormitories.

There are always a large number of students who prefer to obtain homes with private families. There are many opportunities for this, and the Registrar is always ready to give information and assistance to students seeking such places. In the past the expenses of board and lodging with private families has ranged from \$17 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 of work which the Board of Regents has decided to give to 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 of 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. These fees in the several laboratories are as follows :

Chemical.—At the beginning of each term all students are required to make a deposit of three dollars before being

assigned to a desk in any of the chemical laboratories. From the deposits of students in preparatory subjects and subjects I, II, and III, one dollar will be deducted each term to defray the actual cost of chemicals, and from the remainder breakage at the actual cost of apparatus and glassware. In all the higher subjects the amounts deducted will vary according to the materials that are consumed.

Physical and Electrical.—Students are required to pay for materials used and apparatus injured by them. At the end of the year the amount of the deposit due the student, if any, is refunded to him by the department. The deposits are paid in advance and are five dollars a year for each laboratory course.

Biological.—Material for dissection, stains, alcohols and other reagents and type-written laboratory outlines will be furnished each student, for which a fee will be collected as follows: For the preparatory subjects, two dollars and a half; for other subjects having laboratory work, one dollar for each hour's credit carried through the year, except subjects VII, VIII and IX in zoology and research work, where the fees will be subject to the nature of the work done.

Each student will be furnished with a key to a drawer in his laboratory table and one for the case to his microscope, for which a deposit of fifty cents must be made. This will be refunded upon return of the keys.

Mineralogical.—In mineralogy a fee of two dollars 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 will be a laboratory fee of five dollars for each course. A deposit of ten dollars will also be required to cover cost of material furnished to

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students. If, at the end of the term, the student has not drawn out material to the amount of ten dollars, the balance will be refunded. If, however, he has exceeded this amount, he will be expected to pay the difference.

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, suspension, and when incorrigible, expulsion.

DIVISION OF THE YEAR.

The year is divided into three terms called respectively, the fall, winter, and spring terms. Admission will be granted at the beginning of any term for students properly prepared, but freshmen should always enter at the beginning of the fall term, if possible.

ADDRESSES AT ASSEMBLY.

Addresses by distinguished scholars and men of affairs are frequently given 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 delivered during 1898-99:
October 7.—“Work of the Y. M. C. A. throughout the World.” Charles K. Ober, Esq.
October 14.—“The Heredity of Genius.” Leslie R. Mutch, M. D.
October 19.—*Lafayette Day*—“The Boyhood of Lafayette,” Professor A. B. Coffey, “Lafayette and Washington.” Professor E. J. Hamilton. “Lafayette’s Later Visits.” Professor E. S. Meany.
November 10.—“India.” Mrs. E. W. Allen.
November 11.—“The Choice of a Profession.” Hon. W. D. Wood, Ex-Mayor of Seattle.

- November 18.—“Teaching as a Profession.” Frank J. Barnard, A. M., Superintendent of Seattle Schools.
- November 25.—“The Ministry as a Vocation.” Rev. W. H. G. Temple, Pastor of Plymouth Church, Seattle.
- November 30.—*Inauguration Day*—“The University and the Common Man.” President David Starr Jordan. “The Individual Life.” Governor John R. Rogers.
- December 2.—“The Sacred Calling.” Rev. Herbert H. Gowen, Rector of Trinity Parish Church, Seattle.
- December 9.—“The Profession of Medicine.” J. W. Hickman, M. D., Tacoma.
- December 15.—“The Philosophy of Goethe.” Professor Carl R. Moench.
- December 16.—“What we did in Cuba.” Private George C. King, of Roosevelt’s Rough Riders.
- January 6, 1899.—“How to Teach Drawing.” Miss Lillian M. Godden, Instructor in Chicago Public Schools.
- January 13.—“The Unalaska Island.” Hon. R. H. Thomson, City Engineer of Seattle.
- January 20.—“Fair Washington.” Professor A. B. Coffey.
- February 3.—“Some Men I Have Seen.” Professor A. F. Bechdolt.
- February 10.—“Education from a Mother’s Point of View.” Mrs. C. C. Brown, of Everett.
- February 17.—“My Experience with the Wissmann Expedition.” Lieut. Hans Giese, German Imperial Consul.
- March 9.—“The Study of Shakespeare.” Frederic Warde, Shakespearian Actor.
- March 10.—“A Talk on Poetry.” Professor W. J. Meredith, Superintendent of Schools for King County.
- March 31.—“Questions of the Century.” Harr Wagner, Editor of the Western Journal of Education, San Francisco, Cal.
- March 31.—“The Last Legislature.” State Senator Paul Land.
- April 7.—“The Place of Athletics in College Life.” W. A. Peters, A. M., LL. B., Member of the Seattle Bar.
- April 14.—“Trip to the Yakima Valley in 1873.” Captain W. R. Ballard.
- April 14.—*Arbor Day*—“Planting Memorial Trees.” Professor E. S. Meany.

- April 21.—“Crime in Our Social System.” C. H. Churchill, A. M., Emeritus Professor in Oberlin College.
- April 25.—“The Teacher’s Methods.” Dr. S. G. Williams, Emeritus Professor in Cornell University.
- April 27.—“The Perfect Man.” Evangelists Holdrege and Dixon.
- May 1.—*Dewey Day*—Meeting of the Alaska Geographical Society. Addresses by W. A. Dickey, who discovered and named Mount McKinley in Alaska; E. H. Wells, editor of the *Seattle Star*, on explorations in Alaska; President Arthur C. Jackson, of the Society, on Dewey and his work, followed by President Frank Pierrepont Graves of the University, and Professor Edmond S. Meany and Registrar Clark Davis in brief addresses on the same subject.
- May 1.—“College Work of the Young Women’s Christian Association.” Miss Annie M. Reynolds, of London, World’s Secretary of Y. W. C. A.
- May 10.—“Travels Through Unknown Portions of Alaska.” E. H. Wells, Editor of the *Seattle Star*.
- May 12.—“The Reindeer Problems in Alaska.” Rev. Sheldon Jackson, D. D., Superintendent of Schools for Alaska.

LECTURES AT TEACHERS’ INSTITUTES.

The faculty of the University of Washington wishes as far as possible to assist in making the teachers’ institutes of the state the inspiration that they should be. Several of the instructors of the University who are men of experience in the lecture field and institute work, are ready to offer their services to county superintendents desirous of obtaining lecturers. None of these instructors desire to be known as “professional” institute men, but each is a specialist in his own line and desires to do all he can to help the teachers of the public schools and to increase the bond between them and the State University.

All that is asked by the professors in the way of remuneration is that their expenses be paid in full. There is no regular fund in the University to cover the traveling expenses of professors or these services would be given with-

out any charge. The University feels, however, that its instructors are worth just as much to the institutes as men called from another state at much greater expense. Its remuneration will come in the way of acquaintance with the teachers of the state with whom it wishes to keep in close contact.

The titles of the evening lectures offered at present are given below. A more complete list of all the day talks and evening lectures will be sent any county superintendent upon application.

FRANK P. GRAVES, LL. D., President of the University.

1. The Meaning of a University Education.
2. The Inspiring Power of Poetry.
3. Demosthenes.

ADOLPH F. BECHDOLT, Ph. D., Professor of English Literature.

1. Remnants.
2. Foreign Influence on the Growth of English Literature.
3. Two of Shakespeare's Plays.

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

1. The Geology of Washington.
2. Some Prominent Features of the Earth's Surface.

(These two lectures are illustrated with lantern slides.)

EDMOND S. MEANY, M. S., Professor of History and Forestry.

1. History of Education in Washington.
2. Isaac I. Stevens, First Governor of Washington.
3. Russia's Discovery of Alaska.
4. Spain's Greatest Explorer on the Pacific Coast.
5. Fur Hunters and Missionaries.
6. Indian Contact with Our History.
7. Home Life of the Pioneer.
8. Oregon Won for Americans.
9. Progress of Forestry in the United States.
10. Trees Famous in History and Literature.

J. ALLEN SMITH, Ph. D., Professor of Political Science.

1. The Duties and Responsibilities of Citizenship.
2. The Democratic Movement of Modern Times.

THOMAS E. DOUBT, A. M., Professor of Physics and Electrical Engineering.

1. The Energy of a Sunbeam.
2. Heat.
3. Color.
4. Electricity.

HOMER R. FOSTER, M. S., Professor of Biology.

1. Evidences and Factors in Organic Evolution.
2. Heredity and the Cell.

ALEXANDER B. COFFEY, A. M., Professor of Pedagogy.

1. Fruits of the Press.
2. Young America.
3. The Dynamics of a Purpose.
4. The Politics of a Century.
5. The Dish-cloth and the Piano.

TREVOR C. D. KINCAID, B. S., Assistant Professor of Biology.

1. The Fur Seal and the Seal Islands.
2. The Social Evolution of Insects.

UNIVERSITY EXTENSION.

The University of Washington has not undertaken any systematic work along the lines of university extension, but members of the faculty have responded freely to calls for this kind of work by various organizations throughout the state. During the past year the president and nine professors have delivered lectures and addresses, aggregating more than one hundred in number, before teachers' institutes, high schools, and various societies, clubs, and assemblies. This shows something of the intellectual activity of the faculty outside of the class-room.

Courses of instruction have been offered to the teachers of King and other counties within easy reach of the University on Saturday mornings. One hundred and twenty-four teachers of the public schools and various academies availed themselves of this opportunity during the past year. Classes were formed in psychology, pedagogy, political

economy, English literature, Greek, French, German, physics, and biology.

ORGANIZATION OF THE UNIVERSITY.

The UNIVERSITY OF WASHINGTON embraces :—

The College of Liberal Arts.

The College of Engineering.

The School of Pedagogy.

The Graduate School.

The Preparatory School.

The Law School.

The courses leading to baccalaureate degrees in the College of Liberal Arts and the College of Engineering are arranged to cover a period of four years. The courses in the School of Pedagogy and the Law School are for a period of two years. In the Graduate School those leading to master's degrees are not less than one year, and to the doctorate not less than three.

In the College of Liberal Arts are given the degrees of Bachelor of Arts (A. B.) and Bachelor of Science (B. S.); in the College of Engineering, Bachelor of Science; in the School of Pedagogy, Bachelor of Pedagogy (Ped. B.); in the Graduate School, Master of Arts (A. M.), Master of Science (M. S.), Civil Engineer (C. E.), Electrical Engineer (E. E.), Engineer of Mines (E. M.), Doctor of Philosophy (Ph. D.), and Doctor of Pedagogy (Ped. D.); and in the Law School, Bachelor of Laws (LL. B.)

The School of Medicine is not yet organized.

Work in military science and tactics is required of all able-bodied male students of the various colleges during their freshman and sophomore years. The young women of the colleges are required to take work in physical culture and hygiene during the same period.

All male students in the Preparatory School and School of Pedagogy are required to take military drill and all young women of these schools to take physical culture throughout the course.

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THE COLLEGE OF LIBERAL ARTS.

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THE COLLEGE OF LIBERAL ARTS.

THE FACULTY.

FRANK P. GRAVES, PH. D., LL. D.,
PRESIDENT.

CHARLES F. REEVES, M. S., DEAN,
Professor of German.

ADOLPH F. BECHDOLT, PH. D.,
Professor of English Literature.

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

EDMOND S. MEANY, M. S.,
Professor of History and Instructor in Forestry.

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 Mechanics.

THOMAS E. DOUBT, A. M.,
Professor of Physics and Electrical Engineering.

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CARL R. MOENCH, PH. D.,
Professor of Latin and Instructor in Hebrew.

ALEXANDER B. COFFEY, A. M.,
Professor of Education.

HOMER R. FOSTER, M. S.,
Professor of Biology.

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

ARTHUR R. PRIEST, A. M.,
Professor of Rhetoric and Oratory.

FREDERICK W. COLEGROVE, D. D., PH. D.,
Professor of Philosophy.

CHARLES W. VANDER VEER,
Associate Professor of Physical Culture.

CAROLINE H. OBER,
Associate Professor of Romance Languages.

MARTHA L. HANSEE, A. M.,
Assistant Professor of Greek.

TREVOR C. D. KINCAID, B. S.,
Assistant Professor of Biology.

DORSEY A. LYON, A. B., E. M.,
Assistant Professor of Geology and Mining Engineering.

EDWIN C. STARKS,
Assistant Professor of Biology.

OTHER INSTRUCTORS.

THOMAS W. LOUGH, PH. G.,
Instructor in Chemistry.

FRANK D. FRAZER, A. M.,
Tutor in Mathematics.

HENRY L. REESE, A. B.,
Tutor in Greek and Latin.

DAVID KELLY, B. S.,
Tutor in Physics.

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 choosing his subjects, but through the advice of some member of faculty, he is guided in everything after the general direction of his work has been once determined.

ADMISSION.

I. REGULAR ADMISSION.

Admission to the freshman class of the College of Liberal Arts may be secured in three ways —

1. Admission by examination.
2. Admission from an accredited school.
3. Admission from the Preparatory School of the University of Washington.

1. Admission by Examination.

To be admitted in this way, students must pass an examination * in one of the four groups of subjects mentioned below. These groups correspond respectively to the Classical, Latin, Scientific, and English Courses of the high schools of the state. Full details of the ground each subject covers is found below under the head of Suggestions for Preparation.

<i>Classical Course, or Group I.</i>	<i>Latin Course, or Group II.</i>	<i>Scientific Course, or Group III.</i>	<i>English Course, or Group IV.</i>
English.	English.	English.	English.
Mathematics.	Mathematics.	Mathematics.	Mathematics.
American History.	American History.	American History.	American Hist.
Civics.	Civics.	Civics.	Civics.
Botany.	Botany.	Botany.	Botany.
Physics.	Physics.	Physics.	Physics.
Elementary Latin.	Elementary Latin.	German or French.	
Advanced Latin.	Advanced Latin.		
Greek.	German or French.		
One other subject selected from the <i>List for Election</i> , which appears be- low.	One other subject selected from the <i>List for Election</i> , which appears below.	Four other sub- jects selected from the <i>List for Election</i> , which appears below.	Five other sub- jects selected from the <i>List for Election</i> , which appears below.

LIST FOR ELECTION.—Chemistry, General History, English History, Greek and Roman History, Solid Geometry and Plane Trigonometry, Physical Geography, Zoology, Mechanical Drawing, Physiology.

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.

* For date of examinations, see Calendar on page 8.

I—ENGLISH.

NOTE.—No candidate will be accepted in English whose work is notably defective in spelling, punctuation, idiom, or division into paragraphs.

1. The candidate must be prepared in the essentials of grammar, as shown by his ability to parse each word and to analyze each sentence in a given exercise.

2. He must have a knowledge of the elements of rhetoric and composition, and will be required to write a short essay, correct in spelling, punctuation, grammar, division into paragraphs, and in expression, on a subject announced at the time of the examination.

3. He will be expected also to show a general knowledge of certain works and a thorough study of certain others. The books set for this part of the examination for each of the next two years are stated below :

For 1900.—*A general knowledge* of the following books and their authors will be required: Dryden's Palamon and Arcite; Pope's Homer's Iliad, books I, VI, XXII, and XXIV; The Sir Roger de Coverly Papers in the Spectator; Goldsmith's Vicar of Wakefield; Scott's Ivanhoe; De Quincey's Flight of a Tartar Tribe; Cooper's Last of the Mohicans; Tennyson's Princess; Lowell's Vision of Sir Launfal.

A thorough study of the subject matter, form, and structure of the following works will also be required: Shakespeare's Macbeth; Burke's Speech on Conciliation with America; Milton's Paradise Lost, books I and II; Macaulay's Essays on Milton and Addison.

For 1901.—*A general knowledge* of the following works and their authors is required: George Eliot's Silas Marner; Pope's Homer's Iliad, books I, VI, XXII, and XXIV; The Sir Roger de Coverly Papers in the Spectator; Goldsmith's Vicar of Wakefield; Scott's Ivanhoe; Shakespeare's

Merchant of Venice ; Cooper's Last of the Mohicans ; Ten-nyson's Princess; Coleridge's Rime of the Ancient Mariner.

A thorough study of the subject matter, form, and structure of the following : Shakespeare's Macbeth ; Milton's L'Allegro, Il Penseroso and Comus ; Burke's Speech on the Conciliation with America ; Macaulay's Essays on Milton and Addison.

II — MATHEMATICS.

1. *Algebra*. — Acquire a thorough knowledge of the elements of algebra through quadratic equations, including simultaneous equations of the first degree, factoring, ratio and proportion, the theory of exponents (positive, negative, fractional), and radicals. McLellan's Algebra, and the Elementary Algebra of Charles Smith as revised by Professor Stringham, are good works to use in preparation for examination in this subject.

2. *Plane Geometry*. — Master five books of plane geometry. Beman and Smith's Plane Geometry is recommended. In examination the student's ability to work original exercises is carefully tested.

III — AMERICAN HISTORY.

Study the history of the United States and the general facts of physical, political, and descriptive geography. John Bach McMaster's School History of the United States (New York, 1897) and John Fiske's United States History are recommended as good works for preparation.

IV — 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 these to be assigned at the time of the examination.

V — BOTANY.

As recommended by the "Committee of Ten" of the National Educational Association, the work in Botany should begin with a study of the simplest forms (unicellular plants), and, by a wise selection of typical plants, proceed gradually to a study of the more complex forms, in such a way as to gain a comprehensive knowledge of the relation of all plant life. If Gray's Lessons are to be used as a text, they should be supplemented by laboratory work from Bergen's, Getchel's, or Spaulding's Introduction to Botany (Revised Edition). Applicants for credit in this subject should present their note books or other evidence of laboratory work.

VI — PHYSICS.

An amount represented by Stewart's Lessons in Elementary Physics, or Carhart and Chute's Physics. This study should be preceded by algebra to quadratic equations, and plane geometry, and each should continue through one school year (at least one hundred and fifty periods) in the secondary schools. Laboratory practice is advised.

VII — ELEMENTARY LATIN.

1. *Latin Lessons*.—The student must be thoroughly versed in the inflection of nouns, adjectives, and verbs, in the case-endings and stems of each declension, and in the stems, tense-signs, and personal endings of the verbs. The main rules of syntax should be fully mastered, as also perfect accuracy in pronunciation and in the ability to read easily without faltering. To obtain uniformity in the state, teachers are urged to use Allen and Greenough's Latin Grammar.

2. *Cæsar*.—Four books of Cæsar's Gallic War, or an equivalent in another author of equal grade. Constructions must be explained by the application of the rules of syntax.

3. *Sight-Work*.—The student should be drilled in the ability to translate at sight any piece of simple Latin prose on the style of Cæsar or Nepos, and to do so with ease and facility.

VIII—ADVANCED LATIN.

1. *Cicero*.—Four of Cicero's orations. Besides the ability to translate and construe, the student should have some knowledge of Roman oratory and the law courts.

2. *Vergil*.—Six books of the Æneid and familiarity with Latin prosody, as also a knowledge of the syntax of poetry.

3. *Latin Composition*.—By the ability to translate into Latin a simple passage of connected English, the student must show his vocabulary and his knowledge of Latin syntax and modes of expression.

4. *Sight Work*.—The student must be so drilled in this line that he can, with ease and facility, translate at sight portions of Cicero's orations and Vergil's Æneid.

IX—GREEK.

1. *Greek Lessons*.—A thorough knowledge of the inflection of nouns, adjectives, and verbs, such as the case-endings and stems of each declension, and the stems, tense-signs, thematic vowels and personal endings of the verbs. Accuracy in pronunciation, facility in reading and translation, and familiarity with the main rules of syntax.

Teachers are urged to use Goodwin's Greek Grammar.

2. *Anabasis*.—Books I, II, and III of Xenophon's *Anabasis*, or an equivalent, with a proper explanation of construction by the rules of syntax.

3. *Sight work*.—Facility in translating at sight a simple passage of Greek prose.

4. *Greek Composition*.—Ability to render an ordinary passage of English into idiomatic Greek, correct in expression and syntax.

5. *Iliad*.—Books I and II of Homer's *Iliad*. Prosody of Greek hexameters.

X—GERMAN.

An outline of German grammar as given in Otis' German Grammar, or an equivalent, including translations from German into English and English into German; the reading of about 150 pages of easy prose and a classic such as Schiller's *Wilhelm Tell*.

XI—FRENCH.

French grammar as outlined in Edgren's French Grammar, or an equivalent, including translations from French into English, and *vice versa*; and the reading of about 150 pages of standard French prose.

XII—CHEMISTRY.

The equivalent of one year's work in the high school. Remsen's Briefer Course or an equivalent. Laboratory work.

XIII—GENERAL HISTORY.

Myers's Ancient, and Mediæval and Modern Histories are suggested as text-books in general history. Special attention should be given to European history, and the period of the middle ages should be thoroughly mastered.

XIV—ENGLISH HISTORY.

Ransome's Short 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 Macaulay and Green, and one year should be spent in preparation.

XV—GREEK AND ROMAN HISTORY.

Prepare thoroughly in Greek history through the period of Alexander the Great, with the geography connected

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therewith; and in ancient Roman history and development of the Roman constitution. Myers' and Allen's text-books are recommended.

XVI—SOLID GEOMETRY AND PLANE TRIGONOMETRY.

Books VI, VII, and VIII of Beman and Smith's Geometry, or equivalent, should be carefully read. 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.

XVII — 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, Tarr's Elementary Text-book of Physical Geography, and Thornton's Elementary Physiography are types of proper texts.

XVIII — ZOOLOGY.

A study of the structure and relationship of animals according to Packard's Zoology, accompanied by practical dissection under the direction of a competent teacher. Laboratory work is an essential part of this preparation.

XIX — DRAWING.

The equivalent of one year's work in mechanical drawing. Geometric and orthographic drawing.

XX — PHYSIOLOGY.

Study 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 given. If the report is favorable, any graduate of that school will be admitted without examination.

The faculty reserves the right, however, to examine the candidate in any subject, if for any reason the work in that subject is deemed insufficient or otherwise unsatisfactory.

List of Accredited Schools.

Until a complete report on the high schools and academies of the state can be made, the schools mentioned below will be considered "accredited" and their graduates admitted to the freshman class of the College of Liberal Arts without examination:

HIGH SCHOOLS.

Everett.	Port Townsend.	Tacoma.
Fairhaven.	Seattle.	Vancouver.
New Whatcom.	Spokane.	Walla Walla.

STATE NORMAL SCHOOLS.

ELEMENTARY COURSE.

Cheney.	Ellensburg.	New Whatcom.
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A list of the accredited academies will be reported during the year.

Schools that cannot yet offer the amount of work required for entrance to the freshman class, may be accredited to the various classes of the Preparatory School, if their courses and methods are reported as satisfactory. A list of these schools will be found under the head of the Preparatory School.

3. Admission from the Preparatory School.

Students completing the course of the Preparatory School of the University are admitted to the freshman class of the College of Liberal Arts. The course of the Preparatory School is detailed below under the statement concerning that department of the University.

II. ADMISSION AS SPECIAL STUDENTS.

Persons who are at least eighteen years of age and who can give satisfactory evidence of their fitness to pursue the particular courses of study which they desire to elect, will be admitted to the College of Liberal Arts without examination, but cannot be candidates for a degree. All such persons must show that they have a good working knowledge of English.

Should a student pursuing special work desire to become a candidate for a degree, he must pass the examinations for admission corresponding to some one of the groups required of students who enter regularly, and complete all the required courses, at least one year before taking the degree.

III. ADMISSION TO ADVANCED STANDING.

Students from classes above the freshman in other colleges of recognized rank, who present letters of honorable dismissal, may be admitted to such advanced standing as their training seems to fit them. No advanced credit will be given for work done in institutions of inferior standing, except upon examination.

REGISTRATION.

All students intending to enter the College of Liberal Arts should present their credentials to the President of the University at his business office. Here, if their credentials are satisfactory, they will receive written per-

mission to take the examinations or to enter by one of the other methods detailed above.

Every student entering from an accredited school should bring a statement signed by the principal, naming the subjects pursued, time given to each subject, text books used, and the standing of the student in each subject.

Students desiring advanced credit must apply for it at the President's office upon entrance. All such credit must be adjusted and reported to the Registrar within sixty days.

After receiving written permission to enter from the President, each student must register in person at the office of the Registrar. No student will be registered for a shorter period than one term; and after registration, no student should absent himself from the University, except on written permission from the President.

ELECTION OF STUDIES.

Blanks will be provided for the election of studies. Students must fill these blanks and hand them to the Registrar within ten days after the beginning of each term. No credit will be allowed for any course not named in the blank.

The maximum number of hours a week that a student may elect without special permission of the faculty is eighteen. Students are advised to limit the election to fifteen hours a week, which number it is necessary to complete in order to graduate in four years. Students having passed any examination conditionally may not be allowed to take the maximum number of hours until the condition is removed.

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 eighty hours exclusive of the twelve

credits in military drill or physical culture required of every student.

The general plan given below shows how the one hundred and eighty hours are to be divided. The Roman numerals indicate various subjects in each department, which are described in full under the departmental statements page 95 and following.

Plan of the Course.

Freshman Year.

Latin I, II, III; German I, II, III, or VII, VIII, IX; or French I, II, III, or VII, VIII, IX.....	9 hours.
Zoology I, II, III; Botany I, II, III; or Chemistry I, II, III.....	9 "
Greek I, II, III, or X, XI, XII; Geology I, II, III; or History I, II, III.	9 "
Rhetoric I, II, III.....	9 "
Mathematics I, II, III.....	9 "
	45 hours.

Sophomore Year.

Latin IV, V, VI; or Physics I, II, III.....	9 hours.
Rhetoric IV and English Literature I, II.....	9 "
Political Science I, II, III, or I, V, VI; or Philosophy I, II, III.....	9 "
Elective	18 "
	45 hours.

Junior Year.

Philosophy I, II, III; or Political Science I, II, III or I, IV, V.....	9 hours
Major Study.....	9 "
Collateral Study or Studies.....	9 "
Elective.....	18 "
	45 hours.

Senior Year.

Major Study.....	18 hours.
Collateral Study or Studies.....	18 "
Elective	9 "
	45 hours.

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.

The course may be described as follows :

Prescribed.....	27 hours.
Elective within limits.....	54 "
Free Elective.....	45 "
Major Study.....	27 "
Collateral Study or Studies.....	27 "
	180 hours.

MAJOR AND COLLATERAL STUDIES.

At the beginning of his junior year the student is required to choose a major study, in which he must before graduation complete twenty-seven hours. He may count some of the hours already performed as a part of the twenty-seven hours in the major study, but he must in that case add the amount of time transferred to what is required to be given to free elective.

As soon as the student selects his major study, the head of that department is constituted his adviser, and the student must consult him with regard to every step in his course. With the guidance of his adviser thus chosen, the student selects during the rest of his course twenty-seven hours in a collateral study or studies; that is, in subjects related to his major work and calculated to strengthen it.

DEGREES.

Students who complete the course of the College of Liberal Arts will receive the degree of Bachelor of Arts (A. B.), except those who have selected a science as their major study and prefer the degree of Bachelor of Science (B. S.). The corresponding advanced degrees, Master of Arts (A. M.), Master of Science (M. S.), and Doctor of Philosophy (Ph. D.) are granted by the faculty of the Graduate School according to regulations stated under that head.

Degree with Honors.

A degree with honors in his major study will be conferred upon any student who shall have attained a grade of A (87

to 100 per cent.) in his major department, a grade of B (75 to 87 per cent.) in his collateral department or departments, and shall have maintained an average of B in his other studies. Application for a degree with honors must be made to the President in writing at least one month before Commencement.

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 that by giving instruction in the theory and art of teaching these schools may be brought into closer relations with the University, and that to teaching may be secured the rights and prerogatives of a profession.

To this end a normal diploma will be granted to students taking a baccalaureate or higher degree in the College of Liberal Arts; provided that sometime during their study they shall have taken subjects I, II, and III in philosophy and from I to XV inclusive, in pedagogy, and otherwise satisfy the faculty of their fitness to take charge of the work of high schools or academies. Those who intend to make teaching their profession will be required to select Education as their major subject in the junior year, thus giving them two years in which to complete the work of that department.

Teachers' Certificates.

Under the school laws of the State of Washington (section 186 of Chapter I of Title IV) this diploma entitles the holder to teach in any public school in this state during life, when he shall have filed with the State Board of Edu-

cation satisfactory evidence that he has taught successfully for ninety months, not less than fifteen of which shall have been in the public schools of this state. State certificates, which are valid for five years, will be granted one who holds the normal diploma of the University, when he shall file satisfactory evidence of having taught successfully twenty-seven months, at least nine of which were in the public schools of this state.

~~48~~
45

10


THE COLLEGE OF ENGINEERING.

1642

THE COLLEGE OF ENGINEERING.

THE FACULTY.

FRANK P. GRAVES, PH. D., LL. D.,
PRESIDENT.

ALMON H. FULLER, C. E., DEAN,
Professor of Civil Engineering.

CHARLES F. REEVES, M. S.,
Professor of German.

HENRY LANDES, A. M.,
Professor of Geology and Mining Engineering.

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

THOMAS E. DOUBT, A. M.,
Professor of Physics and Electrical Engineering.

ARTHUR R. PRIEST, A. M.,
Professor of Rhetoric.

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

CHARLES W. VANDER VEER,
Associate Professor of Physical Training.

CAROLINE H. OBER,
Associate Professor of French and Spanish.

DORSEY A. LYON, A. B., E. M.,
Assistant Professor of Mining Engineering.

OTHER INSTRUCTORS.

THOMAS W. LOUGH, PH. G.,

Instructor in Chemistry.

FRANK D. FRAZER, A. M.,

Tutor in Mathematics.

DAVID KELLY, B. S.,

Tutor in Electrical Engineering.

JAMES MORAN,

Assistant in Electrical Engineering.

The following members of the University faculty also offer courses in the College of Engineering:

ADOLPH F. BECHDOLT, PH. D., in English Literature.

EDMOND S. MEANY, B. S., in History.

J. ALLEN SMITH, PH. D., in Political Economy.

HOMER R. FOSTER, M. S., in Botany.

FREDERICK W. COLEGROVE, PH. D., in Psychology.

ALEXANDER B. COFFEY, A. M., in Pedagogy.

TREVOR C. D. KINCAID, B. S., in Zoology.

PURPOSE.

The College of Engineering offers at present three complete courses; civil, electrical, and mining engineering. Mechanical engineering will be added as soon as circumstances permit.

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, modern languages, and drawing. Field work in surveying is required, in addition, of students in civil engineering. The last two years are devoted to work more purely professional. Particular care is taken throughout the courses to enforce the practical application of the principles taught.

ADMISSION.

Students at least sixteen years of age may be admitted to the freshman class of the College of Engineering in three ways:

(1.) By passing a satisfactory examination in English, algebra, plane and solid geometry, American history, civics, botany, physics, German or French, drawing, general or English history, and chemistry, as detailed on page 59 and following.

(2.) By completing the course of the Preparatory School of the University of Washington.

(3.) By presenting a certificate of graduation from the English course, or any other that includes drawing and solid geometry, of an accredited high school, of four years. (For list of accredited high schools, see page 65.)

Admission of Special Students and Admission to Advanced Standing.

Special students are admitted to the College of Engineering on the same terms as to the College of Liberal Arts (see page 66). Advanced standing may also be secured in the same way as to the College of Liberal Arts (see page 66).

REGISTRATION.

All students desiring to enter the College of Engineering must observe the method of registration described under the College of Liberal Arts (see page 66).

COURSES OF THE COLLEGE OF ENGINEERING.

The Roman numerals indicate various subjects in each department which are described in full under the departmental statements, page 95 and following. The Arabic numerals indicate the number of hours a week a subject is given. Where no Arabic numerals appear, 3 is understood.

Course in Civil Engineering.

*Fall Term.**Winter Term.**Spring Term.*

FRESHMAN YEAR.

Mathematics I.
Chemistry I.
Drawing I.
 { German IV,
 { French IV,
 { or
 { Spanish IV.
Rhetoric I.

Mathematics II.
Chemistry II.
Drawing II.
 { German V,
 { French V,
 { or
 { Spanish V.
Rhetoric II.

Mathematics III.
Chemistry III.
Surveying I, 4.
 { German VI,
 { French VI,
 { or
 { Spanish VI.
Rhetoric III.

SOPHOMORE YEAR.

Mathematics IV, 5.
Chemistry IV.
Physics I.
Surveying II.
Descriptive Geom. I, 2.

Mathematics V, 5.
Chemistry V.
Physics II.
Drawing IV.
Descriptive Geometry II, 2.

Mathematics VI, 5.
Chemistry VI.
Physics III.
Surveying III.
Descriptive Geom. III, 2.

JUNIOR YEAR.

Mechanics I, 4.
Physics IV.
Railroads I, 4.
Geology I.
Rhetoric IV.

Mechanics II, 4.
Physics V.
Railroads II.
Geology II.
Rhetoric V.

Mechanics III, 4.
Physics VI.
Railroads III.
Geology III.
Rhetoric VI.

SENIOR YEAR.

Hydraulics I, 4.
Roofs and Bridges, I.
Masonry Construct'n I, 5.
Political Economy I.
Electrical Engineering I.

Hydraulics II, 4.
Roofs and Bridges II.
Astronomy I.
Metallurgy II.
Electrical Engineering II.
Thesis.

Hydraulics III, 4.
Roofs and Bridges III.
Astronomy II.
Surveying IV.
Electrical Eng. III.
Thesis.

Course in Mechanical Engineering.

[Not to be given in 1899-1900.]

Fall Term.

Winter Term.

Spring Term.

FRESHMAN YEAR.

Mathematics I.
Chemistry I.
Drawing I.
{ German IV,
 French IV,
 or
 Spanish IV.
Rhetoric I.
Shopwork I.

Mathematics II.
Chemistry II.
Drawing II.
{ German V.
 French V.
 or
 Spanish V.
Rhetoric II.
Shopwork II.

Mathematics III.
Chemistry III.
Drawing VI.
{ German VI,
 French VI,
 or
 Spanish VI.
Rhetoric III.
Shopwork III.

SOPHOMORE YEAR.

Mathematics IV.
Chemistry IV.
Physics I.
Descriptive Geometry I.
Machine Design I.
Shopwork IV.

Mathematics V.
Chemistry V.
Physics II.
Descriptive Geometry II.
Machine Design II.
Shopwork V.

Mathematics VI.
Chemistry VI.
Physics III.
Descriptive Geometry III.
Machine Design III.
Shopwork VI.

JUNIOR YEAR.

Mechanics I.
Physics IV.
Machine Design IV.
Electrical Engineering I.
Electrical Eng. VII.
Rhetoric IV.
Shopwork VII.

Mechanics II.
Physics V.
Machine Design V.
Electrical Engineering II.
Electrical Engineering VIII.
Rhetoric V.
Shopwork VIII.

Mechanics III.
Physics VI.
Machine Design VI.
Electrical Eng. III.
Electrical Eng. IX.
Rhetoric VI.
Shopwork IX.

SENIOR YEAR.

Political Science I.
Mechanical Laboratory I.
Electrical Eng. X.
Electrical Eng. XVI.
Electrical Eng. XXII.
Hydraulics I.

Machine Design VII.
Mechanical Laboratory II.
Electrical Eng. XI.
Electrical Eng. XVII.
Electrical Eng. XXIII.
Hydraulics II.
Thesis.

Machine Design VIII.
Mech. Laboratory III.
Electrical Eng. XII.
Electrical Eng. XVIII.
Machine Design IX.
Thesis.

Course in Electrical Engineering.

Fall Term.

Winter Term.

Spring Term.

FRESHMAN YEAR.

Mathematics I.

Chemistry I.

{ German IV,
 { French IV,
 or
 { Spanish IV.

Rhetoric I.

Drawing I.

Shopwork I.

Mathematics II.

Chemistry II.

{ German V,
 { French V,
 or
 { Spanish V.

Rhetoric II.

Drawing II.

Shopwork II.

Mathematics III.

Chemistry III.

{ German VI,
 { French VI,
 or
 { Spanish VI.

Rhetoric III.

Drawing III.

Shopwork III.

SOPHOMORE YEAR.

Mathematics IV.

Chemistry IV.

Physics I.

Descriptive Geometry I.

Machine Design I.

Shopwork IV.

Mathematics V.

Chemistry V.

Physics II.

Descriptive Geometry II.

Machine Design II.

Shopwork V.

Mathematics VI.

Chemistry VI.

Physics III.

Descriptive Geom. III.

Machine Design III.

Shopwork VI.

JUNIOR YEAR.

Physics IV.

Mechanics I.

Electrical Engineering I.

Electrical Eng. IV.

Electrical Eng. VII.

Rhetoric IV.

Physics V.

Mechanics II.

Electrical Engineering II.

Electrical Engineering V.

Electrical Engineering VIII.

Rhetoric V.

Physics VI.

Mechanics III.

Electrical Eng. III.

Electrical Eng. VI.

Electrical Eng. IX.

Rhetoric VI.

SENIOR YEAR.

Electrical Eng. X.

Political Science I.

Electrical Eng. XIII.

Hydraulics I.

Electrical Eng. XVI.

Electrical Eng. XIX.

Electrical Eng. XXII.

Electrical Engineering XI.

Electrical Engineering XIV.

Hydraulics II.

Electrical Eng. XVII.

Electrical Eng. XX.

Electrical Eng. XXIII.

Thesis.

Electrical Eng. XII.

Electrical Eng. XV.

Electrical Eng. XXII.

Electrical Eng. XVIII.

Electrical Eng. XXI.

Electrical Eng. XXIV.

Thesis.

Course in Mining Engineering.

Fall Term.

Winter Term.

Spring Term.

FRESHMAN YEAR.

Mathematics I.
Chemistry I.
{ German IV,
French IV,
or
Spanish IV.
Rhetoric I.
Geology I.

Mathematics II.
Chemistry II.
{ German V,
French V,
or
Spanish V.
Rhetoric II.
Geology II.

Mathematics III.
Chemistry III.
{ German VI,
French VI,
or
Spanish VI.
Rhetoric III.
Geology III.

SOPHOMORE YEAR.

Mathematics IV.
Geology IV.
Chemistry IV.
Drawing I.

Mathematics V.
Geology V.
Chemistry V.
Drawing II.

Mathematics VI.
Geology VI.
Chemistry VI.
Surveying I.

JUNIOR YEAR.

Mining I.
Geology IX.
Mechanics I.
Descriptive Geometry I.
Surveying II.

Mining II.
Assaying I.
Mechanics II.
Descriptive Geometry II.
Drawing IV.

Mining III.
Assaying II.
Mechanics III.
Descriptive Geometry III.
Surveying III.

SENIOR YEAR.

Physics I.
Metallurgy I.
Geology XII.
Hydraulics I.
Elective.

Physics II.
Metallurgy II.
Geology X.
Hydraulics II.
Mining IV.
Thesis.

Physics III.
Metallurgy III.
Geology XI.
Hydraulics III.
Elective.
Thesis.

Thesis.

A thesis will, as shown in the outline above, be 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 February in the senior year.

DEGREES.

The courses of the College of Engineering lead to the degrees of Bachelor of Science (B. S.), in civil, electrical, and mining engineering respectively. The corresponding master's degrees, Civil Engineer (C. E.), Electrical Engineer (E. E.), and Engineer of Mines (E. M.), are conferred by the faculty of the Graduate School according to regulations stated under that head.

Degree With Honors.

A degree with honors in engineering will be conferred upon any student of the College of Engineering who shall have attained a grade of A (87 to 100 per cent.) in some branch of engineering and shall have maintained an average of B (75 to 87 per cent.) in his other studies. Application for a degree with honors must be made to the President in writing at least one month before Commencement.

Course in Mining Engineering for Prospectors.

During the winter term, from December 1st to March 1st, the instructors in mining engineering offer certain subjects for the benefit of mature persons who are interested in prospecting and mining. Admission to these subjects is without examination. The subjects are seven in number, and are designed for those who wish sufficient information along the lines of mineralogy, geology, chemistry, and related subjects to take up practical work in the field. The instruction is given partly by lectures, but in the main consists of laboratory exercises. All of the work is made as practical and helpful as possible, and students in these subjects have all the advantages of the University laboratories and libraries.

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 I a fee of five dollars is charged, and a deposit of five dollars required to cover the cost of apparatus which may be broken; in subject II a fee of five dollars is charged, and a deposit of five dollars required as surety for the return of the blowpipe outfits and other apparatus loaned; in subject IV a fee of ten dollars is charged, and a deposit of ten dollars required to cover breakage of apparatus. All fees must be paid, and all deposits made, at the beginning of each subject.

REFERENCE BOOKS.

Beringer's Text-Book of Assaying.
Le Conte's Elements of Geology.
Dana's Manual of Geology.
Moses and Parsons' Mineralogy.
Dana's Text-book of Mineralogy.
Kemp's Ore Deposits.
Tarr's Economic Geology.
Kemp's Hand-Book of Rocks.

SUBJECTS.

I. *Qualitative Analysis*.—Laboratory practice in the determination of the common elements. [Three times a week.]

II. *Geology*.—Lectures on the elements of geology, the common varieties of rocks, metalliferous vein and ore deposits, prospecting, etc. [Three times a week.]

III. *Mineralogy*.—Instruction and practice in blow-pipe analysis, followed by lectures upon the common minerals, with practice in the identification of minerals by field tests. [Three times a week.]

IV. *Furnace Assaying*.—Lectures and laboratory work. Lectures on sampling, preparing ores for assay, reagents, furnaces, etc. A collection of ores of various metals will be shown and instruction given as to the nature and quantity of fluxes. The laboratory work has to do with the

preparing and testing of reagents, etc., and assaying samples of ore, furnace and mill products. The different charges will be tried and practical conclusions drawn. Special attention will be paid to the assay of gold and silver ores. Assaying of bullions for fineness. [Two afternoons a week.]

V. *General Methods of Mining*.—This course will treat in a brief manner the following subjects: Excavating, blasting, tunneling and shaft sinking, supporting excavations, mine transportation, pumping, ventilation, and hydraulic mining. [Two times a week.]

VI. *Metallurgy*.—Lectures upon the various metallurgical processes for the extraction of gold and silver from their ores, as conducted upon a commercial scale. [Two times a week.]

VII. *Mining Law*.—A series of lectures on the mining laws of the United States. [Two times a week.]

STATE ASSAYING.

Owing to the constant demand which is made upon the department of assaying for ascertaining the value of various minerals, it has been thought well to adopt the following scale of prices, which will govern all future work. The fees are intended to cover only the cost of materials used in making the assays and are expended in purchasing new supplies.

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

THE SCHOOL OF PEDAGOGY.

THE SCHOOL OF PEDAGOGY.

THE FACULTY.

FRANK P. GRAVES, PH. D., LL. D.,
PRESIDENT.

ALEXANDER B. COFFEY, A. M., DEAN,
Professor of Education.

ADOLPH F. BECHDOLT, PH. D.,
Professor of English Literature.

HENRY LANDES, A. M.,
Professor of Geology and Physical Geography.

J. ALLEN SMITH, PH. D.,
Professor of Political Economy.

HOMER R. FOSTER, M. S.,
Professor of Biology.

FREDERICK W. COLEGROVE, PH. D., D. D.,
Professor of Physiological Psychology.

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

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

MARTHA LOIS HANSEE, A. M.,
Dean of Women.

TREVOR C. D. KINCAID, B. S.,

Assistant Professor of Biology.

DORSEY A. LYON, A. B., E. M.,

Assistant Professor of Geology and Physical Geography.

THOMAS W. LOUGH, PH. G.,

Instructor in Chemistry.

FRANK D. FRAZER, A. M.,

Tutor in Mathematics.

HENRY L. REESE, A. B.,

Tutor in Latin.

The following members of the University faculty offer elective courses in the School of Pedagogy:

CHARLES F. REEVES, M. S., in German.

EDMOND S. MEANY, M. S., in History.

ARTHUR RANUM, A. B., in Mathematics.

ALMON H. FULLER, C. E., in Mechanics.

THOMAS E. DOUBT, A. M., in Physics.

CARL R. MOENCH, PH. D., in Latin.

ARTHUR R. PRIEST, A. M., in Rhetoric and Oratory.

CAROLINE H. OBER, in French and Spanish.

EDWIN C. STARKS, in Biology.

PURPOSE.

The purpose of the School of Pedagogy is to meet the needs of students intending to become teachers in the public schools and the academies of Washington. Higher work, under the faculty of the Graduate School of the University, is also provided for students who desire to teach in colleges and universities.

ADMISSION.**Admission on Certificate.**

Students will be admitted to the junior year of the School of Pedagogy without examination upon the presentation of a diploma or other evidence of graduation from (1) an accredited high school of four years, or (2) the "elementary course" of a normal school whose standard is equal to that established in 1899 for the State Normal Schools of Washington.

Graduates of recognized colleges will be admitted to the senior year without examination.

Admission by Examination.

Students may also be admitted to the junior year by passing a satisfactory examination in the following subjects: arithmetic, algebra, plane geometry, reading, English, elementary Latin, botany, physiology, physical geography, zoology, physics, school economy and school law, theory and observation of teaching, methods of teaching, practice teaching, elementary psychology and logic, American and English history, music, and drawing. The amount included in each of these subjects is, with the exception of music, stated under Suggestions for Preparation (page 59 and following). In music an ability to sing easy compositions and to read music at sight is required.

Admission of Special Students.

Special students are admitted to the School of Pedagogy on the same terms as to the College of Liberal Arts (page 66), except that the candidate for such admission must show evidence of having taught at least one successful term of school.

REGISTRATION.

A student who desires to enter the School of Pedagogy should present his credentials to the President at his busi-

ness office. If his credentials are satisfactory, he is given written permission by the President either to enter on certificate or to take the examinations for entrance.

As soon as permission to enter is granted, each student should register in person at the office of the Registrar.

COURSES OF THE SCHOOL OF PEDAGOGY.

There are three courses, intended for graduates of four-year high schools, the "elementary course" of high-grade normal schools, and recognized colleges respectively. The first two courses are planned for two years, and the third for one year.

Plan of the Courses.

The Roman numerals indicate various subjects in each department which are described in full under the departmental statements, page 95 and following. Where no Roman numeral occurs, the subject usually comes in the course of the Preparatory School. The Arabic numerals show the number of hours a week a subject is given. Where no Arabic numeral is expressed, 3 is understood.

I. For High School Graduates.

Fall Term.

Education I.
Education IV.
Education VII.
Philosophy I.
Political Science I.
Geology I.

Winter Term.

JUNIOR YEAR.

Education II.
Education V.
Education VIII.
Philosophy II.
Political Science II.
Geology II.

Spring Term.

Education III.
Education VI.
Education IX.
Philosophy III.
Political Science III.
Geology III.

SENIOR YEAR.

Education X.
Education XIII.
✓ Education XVI.
Philosophy IV.
Practice Teaching.

Education XI.
Education XIV.
Education XVII.
Philosophy V.
Practice Teaching.

Education XII.
Education XV.
Education XVIII.
Philosophy VI.
Practice Teaching.

II. For Graduates of the "Elementary Course" of Normal Schools.

Fall Term.

Education VII.
Political Science, I.
Geology I.
Cæsar and Cicero.

Winter Term.

JUNIOR YEAR.

Education VIII.
Solid Geometry.
Chemistry.
Cæsar and Cicero.

Spring Term.

Education IX.
Chemistry.
Chemical Laboratory.
Cæsar and Cicero.

29th Feb.
to be used
3rd Feb.
to be used

SENIOR YEAR.

Education XIII.
Practice Teaching.
Botany and Zoology.
English Literature.

Education XIV.
Mathematics II.
Botany and Zoology.
English Literature.

Education XV.
Practice Teaching.
Botany and Zoology.
American Literature.

III. For College Graduates.

Fall Term.

Winter Term.

Spring Term.

SENIOR YEAR.

Education IV.
Education VII.
Education XIII.
Philosophy VII.
Practice Teaching.

Education V.
Education VIII.
Education XIV.
Education XIX.
Practice Teaching.

Education VI.
Education IX.
Education XV.
Education XX.
Practice Teaching.

Training School.

Until a regular training school can be provided, the Latona school, through the kindness of the Seattle Board of Education, will be used for this purpose. The best teachers in the city will be available as instructors for the students of the School of Pedagogy.

GRADUATION.

Inasmuch as the demand for first class teachers is becoming more and more peremptory and the professional standard is constantly being raised, only those who show an evident fitness for teaching will be graduated. The Dean of the School of Pedagogy will, independently of class standing, be in each case the judge of this fitness.

DEGREES.

Graduates of any one of the three courses will receive a diploma with the degree of Bachelor of Pedagogy (Ped. B.). The advanced degree of Doctor of Pedagogy (Ped. D.) is also conferred by the University under the faculty of the Graduate School.

Degree with Honors.

The baccalaureate in pedagogy with honors is conferred upon students of the School of Pedagogy who maintain an average of A (87 to 100 per cent.) in all their studies, if recommended by the Dean for this distinction.

THE COURSES OF INSTRUCTION
IN THE
COLLEGE OF LIBERAL ARTS, COLLEGE OF EN-
GINEERING, AND SCHOOL OF
PEDAGOGY,
ARRANGED ACCORDING TO DEPARTMENTS.

DEPARTMENTS OF INSTRUCTION.

I.—DIVISION OF LANGUAGE AND LITERATURE.

HEBREW.

DR. MOENCH.

It is the purpose of this department to give the student a working knowledge of the language of the Old Testament, such as will enable him to study sympathetically the life of the Jewish people. The first two terms are devoted to grammatical work and to the acquisition of a vocabulary. Some easy prose is read. During the third term selections from Genesis and Psalms are critically translated.

SUBJECTS.

I, II, III. Elementary. Harper's Inductive Hebrew Method; Vocabulary and word studies; Translation of Easy Prose; Selections from Genesis and Psalms: Toy's History of the Religion of Israel. [Three times a week throughout the year.]

GREEK.

PROFESSOR MOENCH, ASSISTANT PROFESSOR HANSEE, AND MR. REESE.

The department aims to treat the Greek language as an invaluable discipline of the mind and as an indispensable foundation for a scholarly knowledge of the languages and literatures, not only of the ancient, but of the modern European world.

In the freshman year special attention is given to a mastery of the rudiments of the language, to etymology, syntax, the composition of words, and the structure of sentences. The grammar is carefully reviewed throughout the year and is accompanied by weekly exercises in translating English into Greek.

As the student advances, more attention is given to style and thought and to the life and literature of the Hellenic people. An extensive reading of Greek authors is undertaken. It is the aim of the department, however, to secure not only facility in reading,

but also, as far as possible, a true appreciation of the style and spirit of the Greek writers, and acquaintance with the wisdom and knowledge embodied in their works.

SUBJECTS.

I, II, III. **Elementary.** Graves and Hawes's *A First Book in Greek*. Drill in Greek inflections and constructions. Exercises in translating English into Greek. [Three times a week throughout the year. No credit allowed, if presented for entrance.]

PROFESSOR MOENCH AND MR. REESE.

IV, V, VI. **Xenophon, Homer.** Goodwin's Revised Edition of *Anabasis of Xenophon*, books I-III; Seymour's *Iliad of Homer*, books I-II. [Three times a week throughout the year. No credit allowed, if presented for entrance. Prerequisite, III.]

PROFESSOR MOENCH AND MR. REESE.

VII, VIII, IX. **Composition, Sight Reading.** Woodruff's *Greek Prose Composition*; *Sight Reading from Xenophon's Anabasis*, IV-VII, and from *Homer's Iliad*, III-VI. [Three times a week throughout the year. No credit allowed, if presented for entrance. Prerequisite, III.]

ASSISTANT PROFESSOR HANSEE.

X, XI, XII. **Xenophon, Lysias, Homer.** *Memorabilia* or *Cyropaedia* of Xenophon; Morgan's *Orations of Lysias*; *Homer's Odyssey*, VI-VIII; *Greek Prose Composition*. [Three times a week throughout the year. Prerequisite, VI and IX.]

ASSISTANT PROFESSOR HANSEE.

XIII, XIV, XV. **Dramatists.** *Alcestis* of Euripides; Graves's *Philoctetes* of Sophocles; Allen's *Seven Against Thebes* of Aeschylus or Humphreys's *Clouds* of Aristophanes; *Lectures on the origin of the drama, the Greek theatre, the Greek lyric poets, and the dramatists*. [Three times a week throughout the year. Prerequisite, XII.]

ASSISTANT PROFESSOR HANSEE.

XVI, XVII, XVIII. **Orators.** Antiphon (*Herodes and Choroetes*); Andocides (*Mysteries*); Isocrates (*Panegyric*); Aeschines (*Against Ctesiphon*); Demosthenes (*On the Crown*). [Three times a week throughout the year. Prerequisite, XII.]

ASSISTANT PROFESSOR HANSEE.

LATIN.

PROFESSOR MOENCH, ASSISTANT PROFESSOR HANSEE, AND MR. REESE.

In the department of Latin special attention is given during the freshman year to the structure of the Latin sentence as illustrated in select portions of the writings of Cicero, Livy, and Horace. Frequent written and oral exercises in Latin prose composition and sight reading of Latin prose form part of the course.

From the beginning of the sophomore year the chief object is the study of Roman life and literature by a critical reading of selections from the best authors. This reading is accompanied in the sophomore year by the study of Roman archæology.

In the junior year the study of the language is continued by an examination of the structure of words and an analysis of the oldest forms with the changes into those of classic Latin.

During the senior year a study is made of Roman philosophical writings or of Roman jurisprudence. Topics on the origin and formation of the late Latin dialect are assigned to the class.

SUBJECTS.

I, II, III. **Augustan Prose and Poetry.** Kelsey's Cicero de Senectute et de Amicitia; Lord's Livy XXI; Smith's Odes of Horace. Composition based upon the text of Cicero and Livy. Sight reading of Cicero. Lectures on the Augustan Age and on lyric poetry. [Three times a week throughout the year.]

PROFESSOR MOENCH AND MR. REESE.

IV, V, VI. **Roman Life.** Horace's Satires; Selections from Juvenal; Peck and Arrowsmith's Roman Life in Prose and Verse; Miller's New Latin Composition. Lectures on the development of the Roman satire and on Roman life and literature. [Three times a week throughout the year. Prerequisite, III.]

ASSISTANT PROFESSOR HANSEE AND MR. REESE.

VII, VIII, IX. **Roman Comedy.** Andria and Phormio of Terence; Morris's Mostellaria and Trinummus of Plautus; Allen's Remnants of Old Latin. Lectures on the Roman theatre and comedy and on Latin etymology and prosody. [Three times a week throughout the year. Prerequisite, VI.]

PROFESSOR MOENCH.

X, XI, XII. Roman Philosophy. Kelsey's *De Rerum Natura*, I-III, of Lucretius; Cicero, *de Natura Deorum*, II-III. Selections from Cicero, *de Divinatione* and *de Fato*. Lectures on the development of Roman philosophy. [Three times a week throughout the year. Prerequisite, VI.]

PROFESSOR MOENCH.

[XIII, XIV, XV. **Roman Law.** Huschke's *Justitiani Institutiones*; Sohm's *Institutes of Roman Law*. Lectures on Roman jurisprudence, with reference to titles of the Digest and the commentaries of Gaius; also on the history of the Latin language.

PROFESSOR MOENCH.]

Subjects X, XI, XII and XIII, XIV, XV are given alternate years. Subjects X, XI, XII will be offered in 1899-1900.

GERMAN.

PROFESSOR REEVES.

The courses in German are designed primarily to give the student an introduction to the literature, as most students will take up this language with a view to using it in connection with professional work, or for the purpose of original investigation in graduate work.

The mind, the eye, the ear, and the tongue are so trained that a student who takes the courses offered in German should gain facility in reading and writing the language, and some experience in speaking. A general knowledge of the literature is also obtained.

SUBJECTS.

I, II, III. Elementary. Outline of grammar, practice in pronunciation, composition, 150 pages of easy prose, Schiller's *Wilhelm Tell*. [Three times a week throughout the year. No credit, if presented for entrance.]

IV, V, VI. Supplementary. [Two times a week throughout the year. No credit, if presented for entrance.]

VII, VIII, IX. General Literature. Historical selections; history of German literature and standard comedy; selections from representative authors. [Three times a week throughout the year. Prerequisite, III. No credit, if presented for entrance.]

X, XI, XII. Selected Work. Comedy; Scientific selections; Schiller's *Jungfrau von Orleans*. [Two times a week throughout the year. Prerequisite, IX.]

XIII, XIV, XV. German Classics. Lessing's *Nathan der Weise*; Goethe's *Hermann und Dorothea*; modern German ballads and lyrics; *Faust*, Part I. [Three times a week throughout the year, in the order indicated. Prerequisite, IX.]

[XVI, XVII, XVIII. Goethe. *Faust*, Part II; selections from Goethe's prose.]

Subjects XIII, XIV, XV and XVI, XVII, XVIII are given alternate years. Subjects XIII, XIV, XV will be offered in 1899-1900.

ROMANCE LANGUAGES.

PROFESSOR REEVES AND ASSOCIATE PROFESSOR OBER.

FRENCH.

The aim of this department is to give a knowledge of the history of the French language, and of the literature of different periods, as embodied in the works of the greatest authors. An effort is made also to drill the student of science in such a way that a more immediate acquaintance with the results of scientific investigation abroad shall be brought within his reach.

SUBJECTS.

I, II, III. Elementary. Outline of essentials in French grammar; exercises in pronunciation; translations from French into English and English into French; reading of easy prose selections, and later of moderately difficult selections from representative writers. [Three times a week throughout the year. No credit, if presented for entrance.]

ASSOCIATE PROFESSOR OBER.

IV, V, VI. Supplementary. Dictation and composition; reading at sight; practice in pronunciation. [Two times a week throughout the year. No credit, if presented for entrance.]

ASSOCIATE PROFESSOR OBER.

VII, VIII, IX. Nineteenth Century Authors. Literature of the nineteenth century, based on Fortier's *Sept Grands Auteurs*; study of style and diction. [Two times a week throughout the year. No credit, if presented for entrance. Prerequisite, III.]

ASSOCIATE PROFESSOR OBER.

X, XI, XII. **History of the Literature. Scientific.** Duval's *Histoire de la Litterature Francaise*, used as a text for the history of French literature. The scientific work consists of selections on scientific subjects and in modern magazines. [Three times a week throughout the year. Prerequisite, IX.]

PROFESSOR REEVES.

XIII, XIV, XV. **Advanced Study of the Literature.** Continuation of the study of French literature; copious readings from various authors, especially from the plays of Corneille, Racine, and Moliere. [Two times a week throughout the year. Prerequisite, XII.]

ASSOCIATE PROFESSOR OBER.

[XVI, XVII, XVIII. **Romantic Movement. Lyrics.** The history of the Romantic movement; selections from Victor Hugo and other writers; French lyrics. [Two times a week throughout the year. Prerequisite, XII.]

ASSOCIATE PROFESSOR OBER.]

Subjects XIII, XIV, XV and XVI, XVII, XVIII are given alternate years. Subjects XIII, XIV, XV will be offered in 1899-1900.

SPANISH.

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 islands 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 offered to acquire a knowledge of practical and commercial Spanish.

SUBJECTS.

I, II, III. **Elementary.** Lessons in Spanish on everyday topics; training of the ear and tongue. Essentials of Spanish grammar; reading of *El Pajaro Verde* by Juan Valera. [Three times a week throughout the year.]

ASSOCIATE PROFESSOR OBER.

IV, V, VI. **Practical.** Business correspondence, commercial terms and conversation; readings selected from Spanish newspaper and magazine articles of the day. [Three times a week throughout the year. Prerequisite, III.]

ASSOCIATE PROFESSOR OBER.

[VII, VIII, IX. **Literary.** Knapp's Spanish Readings. Spanish is made as far as possible the medium of instruction. Lectures on Spanish literature. [Three times a week throughout the year. Prerequisite, III.]

ASSOCIATE PROFESSOR OBER.]

Subjects IV, V, VI and VII, VIII, IX are given alternate years. IV, V, VI will be offered in 1899-1900.

X, XI, XII. **Advanced.** Literature of the sixteenth and seventeenth centuries; Lope de Vega; Calderon; the "Auto Sacramental." Early Spanish; poem of the Cid; Spanish literature of the fifteenth century. [Two times a week throughout the year. Prerequisite, VI or IX.]

ASSOCIATE PROFESSOR OBER.

ENGLISH LANGUAGE AND LITERATURE.

PROFESSOR BECHDOLT.

Three objects are contemplated in the arrangement of the courses in English language and literature: (1) a critical knowledge of and proficiency in the use of English as obtained from a careful study of classic authors; (2) a general acquaintance with English literature; and (3) a study of the elements of English and of comparative philology.

SUBJECTS.

I, II. **Bunyan and Milton.** Bunyan's Pilgrim's Progress, and Milton's Minor Poems. A study of the literary and linguistic value of these English classics. [Three times a week; winter and spring terms. Prerequisite, Rhetoric IV.]

III, IV, V. **Old English.** Cook's First Book in Old English, Harrison and Sharp's Beowulf. [Three times a week throughout the year. Prerequisite, I, II.]

VI. **Chaucer.** Corson's Selections from Chaucer's Canterbury Tales. A critical study of the times, style, and language of the author. [Three times a week; fall term. Prerequisite, II.]

VII, VIII. **History of English Literature.** Lectures on the growth and historic environment of our literature, frequent reports and theses. [Three times a week; winter and spring terms. Prerequisite, II.]

IX. Shakespeare. The dramas of Hamlet and Macbeth are made the basis of a close study of the language and dramatic skill of the poet. [Three times a week; fall term. Prerequisite, VIII.]

X. History of English Language. Lounsbury's History of the English Language. Consideration of the elements, dialectic changes, and inflectional forms. [Three times a week; fall term. Prerequisite, II.]

XI. English Etymology. Morris's Historical Outlines of English Accidence. Lectures on the phonology, stems, affixes, and changes in the meaning of English words. [Three times a week; winter term. Prerequisites, VI, VIII, and X; French III; and German III.]

XII. Elements of Comparative Philology. Brugmann's Comparative Grammar of the Indo-Germanic Languages; Giles's Manual of Comparative Philology. Lectures on the phonology, and inflections and grammar of the Aryan languages. [Three times a week; spring term. Prerequisites, XI; Latin III; and Greek III.]

XIII. Literature of Elizabethan Age. Saintsbury's History of English Literature. [Two times a week; fall term. Prerequisite, VIII.]

XIV. English Essayists. A study of extracts from Bacon, Lamb, Macaulay, Ruskin. Two times a week; fall term. Prerequisite, VIII.]

XV, XVI. Poets of the Nineteenth Century. Stedman's Victorian Poets. [Two times a week; winter and spring terms. Prerequisite, VIII.]

RHETORIC AND ORATORY.

PROFESSOR PRIEST.

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. With this end in view there will be much writing and constant practice in prepared and impromptu speaking.

SUBJECTS.

I, II, III. Rhetoric. Genung's Practical Elements of Rhetoric. Style and Invention, as applied to description, narration, exposition, argumentation and persuasion. [Three times a week throughout the year.]

IV. Rhetorical Analysis. Genung's Handbook of Rhetorical Analysis. A critical study of selected masterpieces. [Three times a week; fall term. Prerequisite, III.]

V, VI. Principles of Vocal Expression and Literary Interpretation. [Three times a week; winter and spring terms. Prerequisite, IV.]

VII, VIII, IX. Oratory. Study of British and American orators. Each member of the class will be required to present an original oration each term. [Three times a week throughout the year.]

X, XI, XII. Forensics. Practice in argumentation and formal debating. [Three times a week throughout the year. Prerequisite, VI.]

XIII. Oratorical Seminary. [Once a week throughout the year. Prerequisite, XII.]

II.—DIVISION OF PHILOSOPHICAL SCIENCES.

PHILOSOPHY.

PROFESSOR COLEGROVE.

The department of philosophy aims to acquaint the student with the latest methods of investigating philosophic phenomena and to furnish a knowledge of philosophic thought.

Attention is given to experimental psychology and the results of the latest investigation in this line are carefully studied. The work in logic consists of a thorough drill in deductive and inductive reasoning. In deductive logic examples of deductive argument are frequently discussed by the students, while much of the study of inductive reasoning is made to illustrate the latest methods of scientific investigation. In ethics a study is made of the

moral experience and of the development of a correct moral theory. The history of philosophy is taught both by text-book and by lectures. As this subject is the real starting point for the specialist in philosophy, the work is extended throughout the year and an effort made to ground the class thoroughly in the development of philosophic thought from the time of the earliest Greek school to that of the present day.

SUBJECTS.

I, II, III. **Elementary.** James's *Briefer Psychology*; outside reading and lectures; and elementary exercises in testing the mental processes. Jevons-Hill's *Elements of Logic*; practical exercises on the proposition, inference, hypothesis, arguments, and fallacies; methods of induction; Bowne's *Principles of Ethics*; discussions; theses; selected readings. [Three times a week throughout the year.]

IV, V, VI. **History of Philosophy.** Lectures; discussions; theses. Pre-Socratic philosophers; Socrates; Plato; Aristotle. The Renaissance and the Enlightenment. Descartes to Kant, with selected readings from various masterpieces. Kant to Hegel. Modern evolution theories. [Three times a week throughout the year. Prerequisite, III.]

VII. **Advanced Logic.** Lectures and theses. Discussion of fallacies, analysis of arguments, and ethics of belief. [Three times a week; fall term. Prerequisite, III.]

VIII, IX. **Advanced Ethics.** Theory of morals considered constructively. Practical ethics; pauperism; charities; the family; temperance; labor problems from an ethical standpoint; socialism. [Three times a week; winter and spring terms. Prerequisite, III.]

X, XI, XII. **Advanced Psychology.** Psychological measurements; detailed study of mental life from a scientific point of view. Study of childhood and adolescence. Original research, with theses. [Three times a week throughout the year. Prerequisite, VI.]

EDUCATION.

PROFESSOR COFFEY.

The aim of this department is an analytical and comprehensive view of those forces which have wrought the intellectual, ethical,

and social evolution of the race, the basic principles underlying each radical or slow-wrought change, and the application of those principles and the husbanding of those forces in the daily work of the class-room.

The fact that the standard by which teachers are estimated is being continually raised everywhere, the increasing demand for professional teachers, and the widespread activity along all lines of educational thought, have made it imperative that the universities should establish educational departments upon the broadest possible plane. The ultimate purpose, therefore, of the department is to give to our graduates and specialists a well-grounded and specific preparation for their work as teachers.

SUBJECTS.

I, II, III. **Applied Psychology.** A discussion of heredity as demonstrated by transmitted features, deformities, physical habits, intellectual aptitudes, tendencies, and traits of character, from the standpoint of observation and investigation, to show the possibilities and probabilities which, independent of other forces, must go far toward determining the destiny of the individual; a study of the mental faculties of the individual from the standpoint of the teacher; and of the data to be collected from such institutions as represent the different phases of human life—churches, schools, asylums, and prisons. Lectures and assigned readings. [Three times a week throughout the year.]

IV, V, VI. **Child-Study.** Original investigation upon a scientific and systematic basis, and a careful study of such data as may be collected from correspondence with teachers, such facts being sought as shall reveal the real content of the child-mind, and the reason for such being true; also of the change wrought by youth and varying environment, by school and street, and by change of teacher and parent. Lectures and assigned readings. [Three times a week throughout the year. Prerequisite, III.]

VII, VIII, IX. **History of Education.** A study of the methods by which different peoples, tribes, and nations, have sought to instruct their children in what has been thought essential or desirable; the evolution of education and educational methods; a survey of the educational systems of Europe, and of the several states of the United States, especially during the growth of 19th

century ideas, in all of which the comparative merits shall be determined by the study of such original documents as may possibly be secured; a study of the systems in vogue today as represented by various institutions, courses of study, with their scope and ultimate purpose, technical schools, specialization, and liberal education. Lectures and assigned reading. [Three times a week throughout the year.]

X, XI, XII. **History of Civilization.** A study of the interdependence of society, church, and state, and educational progress; of such writings of Socrates, Plato, Luther, Fenelon, Comenius, Pestalozzi, Rousseau, and others as shall give a comprehensive knowledge of the doctrines advanced by leaders of thought prior to our own time; and of current educational thought as found in standard journals, and magazines. Lectures and assigned reading. [Two times a week throughout the year. Prerequisite, IX.]

XIII, XIV, XV. **Art of Teaching.** A study of the trends and predisposed thought-impulses which give either voluntary or involuntary direction to the intellectual development of the individual and of the possibilities or probabilities which should go far toward determining the subjects to be studied; of the principles underlying correct instruction, and of the application of those principles to the work of the class-room; the adoption and adaptation of methods as nearly identical with natural processes as possible in the teaching of children; the value of inductive and deductive methods at the proper times in the life of the child, the youth, and the adult, the reason for each and the end to be obtained; and the application of these principles in the teaching of the subjects required in the common schools. Lectures. [Three times a week throughout the year. Prerequisites, VI and IX.]

XVI, XVII, XVIII. **Moral Education.** A careful analysis of the motives, purposes, and hopes which result in the ethical development of the individual, and of the possibilities which should control him in his responsibility to self, to others, and to the world — motives which prompt to avarice or philanthropy, degradation, or righteousness, treason, or patriotism. Lectures, biography, autobiography, and current reading. [Two times a week throughout the year.]

XIX. **School Management.** The proper organization of the school, beginning with the entrance of the teacher into the dis-

strict, and followed by his meeting the children on the first day, classification or grading of the school, the arrangement of the program, and control and discipline, whether within the class-room, upon the grounds, or upon the road to and from school. Lectures. [Two times a week; winter term.]

XX. School Management. A continuation of XIX. For those who may anticipate the work of principals and superintendents; especial stress being placed upon the value of the teacher's bearing in all his work before the school and with individual students; visitation of schools and suggestions to and control of subordinate teachers. Lectures. [Two times a week; spring term.]

POLITICAL AND SOCIAL SCIENCE.

PROFESSOR SMITH.

The work in this department emphasizes the duties and responsibilities of citizenship. Its object is to inculcate worthy social ideals and lay the basis for sound and independent thinking on political and economic questions.

SUBJECTS.

I. Elements of Political Economy. Text-book and lectures. [Three times a week; fall term.]

II, III. Economic Theory. A study of recent economic literature. Marshall's *Principles of Economics* will be used as a text-book. [Three times a week; winter and spring terms. Prerequisite, I.]

IV. Industrial Revolution. Text-book and lectures. [Two times a week; fall term. Prerequisite, I.]

V, VI. The Elements of Sociology. A study of the origin, development and functions of the family, church, state, and other social institutions. Lectures. [Two times a week; winter and spring terms.]

VII. Industrial Problems. A study of the evils of unrestricted competition. An investigation of the meaning of "survival of the fittest," as applied to modern business. Lectures. [Three times a week; fall term. Prerequisite, IV.]

VIII. Monopoly Problem. Lectures. [Three times a week; winter term. Prerequisite, I.]

IX. **Socialism.** Text-book and lectures. [Three times a week; spring term. Prerequisite, I.]

X, XI. **Public Finance.** Text-book, Adams' "Science of Finance." [Two times a week; fall and winter terms. Prerequisite, I.]

XII. **Labor Question.** Lectures. [Two times a week; spring term. Prerequisite, I.]

XIII. **Political Institutions.** This course has especial reference to the United States and deals with the origin, development, spirit, and tendencies of our government. Lectures. [Three times a week; fall term.]

XIV. **Money.** Lectures. [Three times a week; winter term; Prerequisite, I.]

XV. **Problems of Municipal Government.** Lectures and text-book. [Three times a week; spring term. Prerequisite, I.]

XVI. **Seminary in Industrial Problems.** [Two times a week; fall term. Prerequisites, I and VII.]

XVII. **Seminary in Public Finance.** [Two times a week; winter term. Prerequisites, I and XI.]

XVIII. **Seminary in Money.** [Two times a week; spring term. Prerequisites, I and XIV.]

HISTORY.

PROFESSOR MEANY.

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 added. Students will also be 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 on the broader subjects.

SUBJECTS.

I, II, III. **American History.** Frequent papers required on the principal epochs, as the subject is developed. [Three times a week throughout the year.]

IV, V, VI. **English People.** Ransome's *History of England* will be used, aided by collateral readings. [Three times a week throughout the year.]

VII, VIII. **Europe in the Middle Age.** The recent work by Thatcher and Schwill will be used as a basis. [Three times a week; fall and winter terms.]

IX. **Modern Europe.** The basis for this study will be the recent work by Ferdinand Schwill. [Three times a week; spring term.]

X, XI. **English Constitution.** Macy will be used as a text, but collateral readings and reports will be required from other works. [Three times a week; fall and winter terms. Prerequisite, VI.]

XII. **French Revolution.** [Three times a week; spring term. Prerequisite, IX.]

XIII, XIV, XV. **Northwestern History.** Lectures. Theses will be required on assigned topics. [Two times a week throughout the year. Prerequisite, III.]

XVI. **Methods in History.** Lectures and theses. Students will be trained in the handling of sources. [Three times a week; spring term. Prerequisites, III, VIII, and IX.]

III.—DIVISION OF PURE SCIENCE.

CHEMISTRY.

PROFESSOR BYERS, ASSISTANT PROFESSOR LYON, AND MR. LOUGH.

The main object of this department is to guide students in the acquisition of knowledge resulting from their own laboratory investigations. The instructors are always present in the laboratory, but each student must use his own eyes and mind, and express in his own words what each experiment has taught him. Note books containing each experiment are examined carefully at the end of the week. This laboratory work with the experimental lecture course lasting through the first year covers largely the fundamental laws of chemistry. During this period a careful

study of the chemistry of water, air, the common gases, elementary substances, and the more common minerals is the course outlined. The student soon ceases to rely upon what he may have memorized from text-books. During the second year courses are open which lead eventually into analytical chemistry, assaying, and professional work.

SUBJECTS.

I, II, III. **Inorganic.** Experimental lectures; monthly examinations; simple laboratory work, leading into qualitative analysis during the third term. Freer's *Inorganic Chemistry*; Remsen and Randall's *Chemical Experiments*; Stoddard's *Qualitative Analysis*. [Two lectures and four laboratory hours a week throughout the year. Credit, three hours.]

PROFESSOR BYERS AND MR. LOUGH.

IV, V, VI. **Organic.** Typical compounds of carbon; methods of organic analysis; organic preparations; Remsen's *Organic Chemistry*; Orndorff's *Laboratory Manual*. [Two lectures and four laboratory hours a week throughout the year. Credit, three hours.]

PROFESSOR BYERS AND MR. LOUGH.

VII, VIII, IX. **Quantitative Analysis.** Gravimetric and volumetric; Talbot's and Hartley's *Quantitative Analysis*. [Six hours a week of laboratory work throughout the year. Credit, two hours.]

PROFESSOR BYERS AND MR. LOUGH.

X, XI, XII. **Industrial.** Lectures with recitations on the processes of chemical arts and industries. Fuels, fire clays, refrigeration, iron ores, blast furnace and cast iron. Cementation process; Bessemer process and cast steel. Cane and beet sugar industries. Destructive distillation; glass; pottery; porcelain. [One hour a week throughout the year. Prerequisite, III.]

ASSISTANT PROFESSOR LYON.

XIII. **Spectroscopic Analysis.** Use of spectroscope in the detection of common and rare elements. [Three times a week, spring term. Credit, one hour. Prerequisite, III. Open by special permission to students taking III.]

PROFESSOR BYERS.

XIV, XV, XVI. **Advanced Quantitative Analysis.** Complete analysis of the ores of silver, copper, iron, manganese, lead, zinc,

etc., as well as ammonia, sulphuric acid, coal, sugar, the nitrates, etc. [Three hours a week throughout the year. Prerequisite, IX.]

PROFESSOR BYERS AND ASSISTANT PROFESSOR LYON.

XVII, XVIII, XIX. **Advanced Organic.** Combustions; nitrogen and halogen determinations. Gattermann's Practical Methods of Organic Chemistry. [Three hours a week throughout the year. Prerequisite, VI.]

PROFESSOR BYERS.

PHYSICS.

PROFESSOR DOUBT AND MR. KELLY.

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; second, those who wish to pursue it as a preparation for the engineering professions; and, lastly, those who intend, for the purposes of teaching or investigation, to make the study of physics their life work.

The method will be largely experimental. The student is expected to devote about half of his time to obtaining experimental results in the laboratory. Experimental demonstration lectures and lectures upon the theory of the subject will be given and the remainder of the student's time will be devoted to the mastery of principles in text book and lecture.

SUBJECTS.

I, II, III. **Elementary.** Mechanics, acoustics, heat, electricity, and light. Two lectures and two laboratory exercises a week throughout the year. This course is fundamental and is designed to meet the needs of students preparing for the applications of physics as well as those students who desire a general training in the subject. [Two lectures and four laboratory hours a week throughout the year. Credit, three hours. Open to all students who have taken preparatory physics and who have a working knowledge of algebra and trigonometry.]

IV, V, VI. **General.** Supplementing I, II, III by greater detail in experimental study. [Two lectures or recitations and four laboratory hours a week throughout the year. Three hours credit.]

VII, VIII, IX. **Theoretical.** Lectures upon mechanics, hydrodynamics, elasticity, capillarity, kinetic theory, heat, conduction, wave motion, sound, light, electricity, and magnetism. [Three times a week throughout the year. Prerequisites, VI; and Mathematics IX.]

X, XI, XII. **Physical Measurements.** Advanced experimental work. Exact determination of some of the physical constants. Problems involving accurate measurements and mathematical analysis. [Credit to be determined in each case.]

BIOLOGY.

PROFESSORS FOSTER AND MEANY, AND ASSISTANT PROFESSORS KINCAID AND STARKS.

As introductory to the other subjects in botany and zoology, all students are advised to take subjects I, II, and III in botany, and I, II, and III in zoology. These may conveniently be taken at the same time, so that at the end of a year the student will have completed sufficient work to enable him to take up more special work in either line; or, if the student desires, he may finish the subjects in zoology (or botany) the first year, taking the subjects in botany (or zoology) the second year.

Students desiring to make a specialty of biology should plan to take these subjects in their freshman or sophomore year. They may be taken, however, to good advantage at any time by the student who wants only a general course in biology.

Students in the elementary subjects will have the constant personal attention of the instructors, but as far as practicable will be expected to use for themselves the means at hand in biological investigations. In the advanced subjects each student will be required to do more independent work, though all necessary assistance will be given.

GENERAL BIOLOGY.

SUBJECT.

I. **Evidences and Factors of Organic Evolution.** Illustrated lectures dealing with the subject from the standpoints of paleontology, comparative anatomy, classification and distribution. No technical knowledge of biology will be required and the purpose of the course will be to set forth a few of the simple yet

forcible evidences on which a belief in the laws of organic evolution is founded. [Once a week; winter term.]

PROFESSORS FOSTER AND LANDES, ASSISTANT PROFESSORS KINCAID AND STARKS, AND OTHERS.

BOTANY.

SUBJECTS.

I, II, and III. **Elements of Botany.** Lectures and laboratory work. I. An elementary study of protoplasm. Types of algæ; structure, developmental history, relation to environment, and classification. II. Types of fungi; classification, life history, and distribution. Liverworts. III. Mosses, ferns, club-mosses, and gymnosperms; alternations of generations and the problem of genetic relationship as indicated by similarity of structure and parallel development. [Two lectures and four laboratory hours throughout the year. Credit, three hours.]

PROFESSOR FOSTER.

IV, V. **Cell Morphology and Physiology.** Cell structure, the organization of protoplasm, and general physiology of the plant cell. Instructions in technique and problems in mitosis and heredity. The reserve foods of plants stored in and by the cell. Lectures and laboratory work. [Fall and winter terms. Credit, five hours.]

PROFESSOR FOSTER.

IVa, Va. Subjects IV and V may be taken as three hour subjects, or as six hour subjects by special permission.

VI. **Plant Physiology.** General physiology of the plant in its relation to environment. Problems in nutrition, growth, and irritability. Lectures and laboratory work. [Spring term. Credit, five hours.]

PROFESSOR FOSTER.

VIa. Subject VI may be taken as a three hour subject by special permission.

VII, VIII. **Experimental Physiology.** Special problems in plant physiology; research work. [To be taken only by permission; fall and winter terms; credit to be arranged.]

PROFESSOR FOSTER.

IX. **Investigation in Cell Structure and Physiology.** Research work. [To be taken only by permission; spring term; credit to be arranged.]

PROFESSOR FOSTER.

X. Reproduction and Embryology of Spermatophytes. (Not given in 1899-1900.)

XI, XII. Morphology of Spermatophytes. A study of the life history of a spermatophyte. (Not given in 1899-1900.)

XIII. History of Botany. Biography; lectures on the development of theories and problems in the science of botany. [Once a week; spring term.]

PROFESSOR FOSTER.

XIV. Field Club. Collection, preservation, identification and study of specimens of the local flora, with occasional lectures. [Open to students who are prepared; any term; credit to be arranged.]

PROFESSOR FOSTER.

XV, XVI, XVII. Forestry. History and progress of forestry as a science; sylviculture and uses of trees; problems presented for solution in the Pacific Northwest. Lectures, theses, and field work. [Two times a week throughout the year. Prerequisite, III.]

PROFESSOR MEANY.

ZOOLOGY.

SUBJECTS.

I, II, III. Elements of Zoology. An elementary study of the protoplasm of the animal cell. Structure, function, relation to environment, classification. I. Types of invertebrates, including protozoans, coelenterates, and vermes. II. Types of echinoderms, arthropods, and mollusca. III. Other types of invertebrates and vertebrate types. [Two lectures and four laboratory hours throughout the year. Credit, three hours.]

ASSISTANT PROFESSOR KINCAID.

IV, V. Comparative Anatomy of Vertebrates. Work on selected forms, including fishes, amphibians, reptiles, birds, and mammals. Also work on vertebrate embryology is begun. [Fall and winter terms. Credit, five hours.]

ASSISTANT PROFESSOR KINCAID.

IVa, Va. Subjects IV and V may be taken as three hour subjects by special permission.

VI. Vertebrate Embryology. A study of the development of the chick with preliminary work and comparative work on amphistoma. [Spring term. Credit, five hours.]

PROFESSOR FOSTER OR ASSISTANT PROFESSOR KINCAID.

VII, VIII, IX. **Physiology.** A study of the vegetative functions of the human body; problems in the anatomy and physiology of circulation; the digestive organs and problems in digestion and foods; the organs of respiration, their function and problems in animal heat. Lectures and laboratory work. [Two lectures and four laboratory hours throughout the year. Credit, three hours.]

PROFESSOR FOSTER.

X, XI, XII. **Structure and Classification of Insects.** Lectures, field and laboratory work. [May be taken as three hour subjects throughout the year, or by special permission, as research work with credit to be arranged.]

ASSISTANT PROFESSOR KINCAID.

XIII. **Comparative Anatomy of Invertebrates.** [Three times a week; spring term; to be elected only by special permission.]

ASSISTANT PROFESSOR KINCAID.

XIV. **Field Club.** Collection, preservation, identification, and study of specimens of the local fauna, with occasional lectures. [Open to students who are prepared; any term; credit to be arranged.]

ASSISTANT PROFESSOR KINCAID.

XV. **Ichthyology.** Lectures and research work. [Three hours a week; spring term. Prerequisite, III.]

ASSISTANT PROFESSOR STARKS.

GEOLOGY.

PROFESSOR LANDES AND ASSISTANT PROFESSOR LYON.

In this department about one-half of the courses offered may be styled general courses and are such as might be taken by any student as a part of a liberal education. The remaining courses are more technical and are designed for those who wish to engage in mining or advanced geological work. In all courses enough time is given to ensure absolute thoroughness, and every precaution is taken that the student may be well-grounded. The method of instruction is in the main by lectures and laboratory work, but in every course a certain amount of reading is required. Lantern slides, photographs, maps, models, etc., are used extensively in a majority of the courses as an important means of illustration. There are good collections of minerals and rocks at the disposal of the

classes in mineralogy and petrography. There is a fairly complete set of natural crystals and wood models for the study of crystallography. A fine microscope, with lathe for cutting and grinding rock-sections, is provided for petrography. 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.

I, II, III. **General Geology.** A consideration of the following general topics: Wearing away of the land; soils; glacial action; igneous and organic agencies; the nature and composition of rocks; mountain-building; fossilization; climate; the historical geology of the United States; the geology of Washington; etc. LeConte's *Elements of Geology* as text, with lectures, reading, and field excursions. [Credit, three hours.]

IV, V, VI. **Mineralogy.** A study of the principles of crystallography, with laboratory work on wood models and natural crystals; blowpipe analysis, with tests for 35 elements; descriptive and determinative mineralogy. Moses and Parsons's *Mineralogy, Crystallography, and Blowpipe Analysis*. [Two lectures and four laboratory hours a week throughout the year. Credit, three hours.]

VII. **Meteorology.** A general consideration of the atmosphere; winds and storms; the causes and distribution of rainfall; weather; climate; etc. Davis's *Elementary Meteorology*. [Three times a week; fall term.]

VIII. **Physical Geography.** A course of lectures on the earth's surface features, considered in the light of their origin and history. [Three times a week; spring term.]

IX. **Economic Geology.** A study of the origin and extent of metalliferous veins and ore deposits; theories of the accumulation of gas and oil; varieties of coal, and localities of coal fields; building stones and other mineral products of use in the arts and of commercial importance. Lectures, with Kemp, Tarr, and Phillips as references. [Three times a week throughout the year; fall term. Prerequisites, III and VI.]

X, XI. Petrography. A study of the distinguishing characteristics of the different groups and species of rocks, with the methods of classification employed. Lectures, reading, laboratory and field-work, with Rosenbusch's *Physiography of the Rock-forming Minerals* and Kemp's *Handbook of Rocks*, as reference books. [Winter and spring terms. Credit, three hours. Prerequisites, III and VI.]

XII. Field-Work. Instruction and practice in the methods of geologic field-work; investigation of special problems. [To be taken only by special permission. Fall term. Credit to be arranged.]

ASTRONOMY.

PROFESSOR RANUM AND MR. FRAZER.

The work in 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.

I, II. General Astronomy. Outline of fundamental facts in regard to the solar system and the stellar universe. The observatory will be used for illustrative purposes. [Two times a week; fall and winter terms. Prerequisite, mathematics I, and preparatory physics.]

III. Practical Astronomy. Use of instruments and the determination of time, latitude, and longitude. [Two times a week; spring term. Prerequisite, II; and mathematics X.]

IV.—DIVISION OF MATHEMATICS AND APPLIED SCIENCE.**MATHEMATICS.****PROFESSOR RANUM AND MR. FRAZER.**

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 I, II, III, which are required of all regular freshmen, are especially adapted to the needs of students of the first class mentioned above. Such students would in many instances profit by taking subjects VII, VIII, IX, in analytical geometry and calculus.

Subjects IV, V, VI are intended to supplement I, II, III. They are recommended to all students who intend to study calculus and are absolutely essential to the proper understanding of the higher branches of mathematics.

Subjects VII, VIII, IX, which are required of all students in engineering, form the basis for most of the higher practical applications of mathematics to mechanics, physics, and astronomy. They also furnish the starting point for the further study of pure mathematics.

Subjects XI, XII, XIII, XIV, XXIII, and XXIV are also of great utility to the physicist and engineer.

The other courses are intended primarily for the specialist in pure mathematics.

The aim in all subjects is to secure a full possession of leading principles and methods rather than to burden the memory with details.

SUBJECTS.

I. Plane Trigonometry. The solution of triangles, use of logarithms; solution of problems in heights and distances. [Three times a week; fall term. Prerequisites, elementary algebra, plane and solid geometry.]

MR. FRAZER.

II. Higher Algebra. Binomial theorem; infinite series; permutations and combinations; probabilities; complex numbers; and related subjects. [Three times a week; winter term. Prerequisite, I.]

MR. FRAZER.

III. Plane Analytic Geometry. Elements of curve tracing; straight line; introduction to conic sections. [Three times a week; spring term. Prerequisite, II.]

MR. FRAZER.

IV, V, VI. Supplementary. Plane trigonometry and Higher Algebra, including the transformation of trigonometric formulæ, determinants, elementary theory of equations. [Two times a week throughout the year. Prerequisites, elementary algebra; plane and solid geometry.]

MR. FRAZER.

VII. Analytic Geometry. Conic sections, the general equation of the second degree, elements of solid analytic geometry. Continuation of III. Text-book, Tanner and Allens' Analytic Geometry. [Five times a week; fall term. Prerequisite, III.]

PROFESSOR RANUM AND MR. FRAZER.

VIII, IX. Calculus. Elementary course in differential and integral calculus, with applications to geometry and mechanics. Text-books, MacMahon & Snyder's Differential Calculus, Murray's Integral Calculus. [Five times a week; winter and spring terms. Prerequisite, VII.]

PROFESSOR RANUM.

X. Spherical Trigonometry. [Once a week; winter term. Prerequisite, I.]

PROFESSOR RANUM.

The following subjects will be given by Professor Ranum every two or three years, if a sufficient number of students elect them.

XI. Advanced Calculus. [Three times a week. Fall term. Prerequisites, IV, V, VI, and IX.]

XII, XIII. Differential Equations. Text-book, Murray's Differential Equations. [Three times a week. Winter and spring terms. Prerequisites, IV, V, VI, and IX.]

XIV, XV. Solid Analytic Geometry. Advanced Course. Text-book, C. Smith's Solid Analytic Geometry. [Two times a week. Fall and winter terms. Prerequisites, IV, V, VI, and IX.]

XVI. **Least Squares.** Theory of errors of observation and their adjustment. [Three times a week. Spring term. Prerequisites, IV, V, VI, and IX.]

XVII, XVIII, XIX. **Projective Geometry.** Text-book, Reye's *Geometrie der Lage*. [Two times a week throughout the year. Prerequisite, VII.]

XX, XXI, XXII. **Theory of Functions.** [Two times a week throughout the year. Prerequisites, IV, V, VI, and IX.]

XXIII, XXIV, XXV. **Modern Analytic Geometry.** Trilinear coordinates, homogeneous equations, duality, linear transformations. Text-book, Scott's *Modern Analytic Geometry*. [Two times a week throughout the year. Prerequisites, IV, V, VI, VIII, and IX.]

CIVIL ENGINEERING.

PROFESSOR FULLER, ASSISTED BY SPECIAL LECTURERS.

The aim in this department is to impart training that will prepare the student for immediate usefulness in field and office. While the subjects offered have been arranged primarily for those pursuing one of the four complete courses of the College of Engineering, yet they are all open to any student of the University prepared to take them.

DRAWING.

The work in drawing begins with instruction in the use of instruments and practice in linear drawing. Drawings to scale, of geometric forms are made in isometric, cabinet, and orthographic projections from printed descriptions, thus giving the student early practice in working from specifications. In the elementary machine drawing, freehand sketches are made of parts of machinery, from which accurate working drawings are constructed. Special attention is given to lettering. Accurate constructions are made of Roman and Gothic letters and numerals. Due regard is given to proper proportioning and spacing. Freehand lettering is taken up with the view of giving the student a ready command of a practical alphabet for working drawings. Topographic drawing includes an understanding of the conventional signs universally used and practice in the representation of the earth's surface with both pen and brush.

SUBJECTS.

I, II. Mechanical Drawing. Use of instruments; linear drawing; isometric, cabinet and orthographic projections; plane sections and section lining; intersections of simple geometric forms; lettering. [Nine hours a week; fall and winter terms. Credit, three hours.]

III. Elementary Machine Drawing. Free hand sketches; working drawings. [Nine hours a week; spring term. Credit three hours.]

IV. Topographic Drawing. Pen and colored topography. [Nine hours a week; winter term. Credit, three hours. Prerequisite, II.]

DESCRIPTIVE GEOMETRY.

Descriptive geometry is taught by lectures, recitations, and drawing periods. The first term's work aims to make the student perfectly familiar with the projections and rotations of points, lines and planes. This is followed by curved and warped surfaces, and shades, shadows, and linear perspective.

SUBJECTS.

I, II, III. Descriptive Geometry. Shades, shadows, and linear perspective. [Credit, two hours; throughout the year. Prerequisite, II; and Mathematics III. At present given only alternate years. Not offered in 1899-1900.]

SURVEYING.

Surveying is taught by lectures, recitations, and field and office work. It includes elementary land, city, and topographic work, and the elements of geodesy. Complete maps and profiles are made by each student from notes taken in the field.

SUBJECTS.

I. Plane Surveying. Theory of chain, compass, and transit surveying and leveling; the construction, adjustment, and use of instruments; computation of area. Survey of a portion of the campus; maps. [Two recitations and two afternoons in the field a week; spring term. Credit, four hours. Prerequisites, II; and mathematics II.]

II. City Surveying. Study of the precision necessary to be obtained; survey of a convenient portion of the city; maps. [One lecture and two afternoons in the field a week; fall term. Credit, three hours. Prerequisite, I.]

III. Topographic Surveying. Base line measurement; transit triangulation; plane table or stadia work; maps. [One lecture and two afternoons in the field a week; spring term. Credit, three hours. Prerequisites, II; and Drawing IV.]

IV. 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. [Spring term. Credit, three hours. Prerequisites, III; and Astronomy I. Preceded or accompanied by Astronomy II.]

RAILROADS.

The theory of curves, earthwork computation and the conditions controlling the economic relation of location, construction, and maintenance will be taken up in the class room. Reconnaissance and location will be made in the field, from which maps and profiles will be constructed and critically studied.

SUBJECTS.

I, II, III. Railway Location, Construction, and Economics. Theory of curves; field work; maps; profiles; earth work computation; economics. [Credit, three hours; throughout the year. Prerequisites, III; and Mathematics VI. Not given in 1899-1900.]

MECHANICS.

Statistics and dynamics are carefully considered from a theoretic standpoint and with regard to their application to engineering constructions. Mechanics of materials is treated under this head. Special attention is paid to practical applications.

SUBJECTS.

I, II, III. Statics, Dynamics, Mechanics of Materials. Lectures and recitations throughout the year. [Credit, four hours. Prerequisites, Mathematics VI; and Physics VI.]

HYDRAULICS.

Under the head of hydraulics are: Theoretic hydraulics, including hydrostatics, hydrodynamics and elementary thermody-

namics; hydraulic motors and the steam engine; experimental work, including a study of the flow of water through orifices and pipes and over weirs, and the testing of water motors and meters; water supply; irrigation and sewage disposal. Each student is required to design an imaginary system under one of the last three heads, making drawings, bill of material, and estimate of cost.

SUBJECTS.

I, II, III. **Hydraulics.** Theoretic hydraulics. Hydraulic motors and experimental hydraulics. Water supply; irrigation; sewage disposal. [Credit, four hours; throughout the year. Prerequisite, Mechanics III.]

ROOFS AND BRIDGES.

The theoretic treatment of framed structures is taught by lectures and recitations. Stresses in simple trusses are computed by analytic and graphic methods.

SUBJECTS.

I, II, III. **Stresses in Simple Trusses.** Designs with working drawings, bills of material, and detailed estimate of cost of a roof truss and a pin-connected bridge are made by each student. [Credit, three hours; throughout the year. Prerequisites, Descriptive Geometry III; and Mechanics III.]

MASONRY CONSTRUCTION.

The principal materials used, such as stone, brick, and cement, and the method of preparing mortar and concrete are considered. Long and short time tests of the standard brands of cement are made. Special attention is given to the construction of foundations, dams, retaining walls, piers, abutments, culverts, and arches. Careful study is made of existing structures.

SUBJECTS.

I. **Masonry Construction.** Civil constructions, with a study of the materials used. Lectures, recitations, and laboratory work. [Credit, five hours; fall term. Prerequisites, Descriptive Geometry III; and Mechanics III.]

ELECTRICAL ENGINEERING.

PROFESSOR DOUBT, MR. KELLY, AND MR. MORAN.

This department is associated with the department of Physics, and it has free use of its extensive apparatus and facilities for work. This includes the large general laboratory with five solid masonry piers for the support of sensitive instruments; the shop with its dynamo, motors, engine lathe, work benches, and battery room; the photometer and photographic room; and the lecture room and storage room. All these rooms are wired for electric light, time and experimental current, and furnished with gas and water.

There is a working equipment of primary and secondary cells, incandescent and arc lamps, adjustable rheostats, ammeters, voltmeters, galvanometers and portable testing sets, condensers, telephone instruments, photometers for arc and incandescent light testing, and other electric supplies.

The shop is supplied with power by electric motors connected with the 500 volt circuit of the University power plant. Additions are being made to the equipment. The laboratory is now supplied with standards for measuring electromotive force current, resistance, capacity, self-induction, and candle power. A Lummer-Brodhun photometer with standard lamp in a well ventilated dark room gives excellent facilities for tests of arc and incandescent lamps.

The aim of instruction in this department is to fit young men for filling responsible positions in the engineering profession by giving them a thorough knowledge of phenomena and principles and of the various applications of electricity. 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 laboratory and by making tests of available commercial plants. Throughout the third and fourth years the students have daily work with electrical instruments and apparatus and with commercial problems. Occasional inspection tours among the varied electrical interests in Seattle and vicinity will furnish excellent illustration. Engineering students are strongly advised to devote their vacations to work in factories, repair shops, electric light, and railway stations, to obtain commercial experience and a better appreciation of the relation of technical training to practical work.

SUBJECTS.

I, II, III. **Industrial Electricity.** Outline of the industrial uses of electricity. Ohm's law, methods, and calculation of wiring. [One lecture a week ; winter term. Prerequisites, Physics III and VI.]

IV, V, VI. **Electricity and Magnetism.** Mathematical theory of electricity. For engineering students and those who desire an introductory course. [Three times a week. Prerequisites, Physics IX; and Calculus.]

VII, VIII, IX. **Electrical Measurements.** Tests of electrical instruments and the determination of various electrical constants. Photometric and electrical tests of lamps. Designed to accompany IV, V, VI. [Nine laboratory hours a week. Credit, three hours.]

X, XI, XII. **Dynamo Electric Machinery and the Magnetic Circuit.** Theory of electro-magnets and continuous current dynamos and motors with methods of testing. [Two lectures a week throughout the year. Credit, two hours. Prerequisites, Physics III and VI; and Calculus.]

XIII, XIV, XV. **Electrical Laboratory.** Dynamo testing, measurement of electromotive force, conductivity, insulation, capacity, calibration of ammeters and voltmeters and wattmeters, operation of dynamos and motors, magnetization, characteristic curves of dynamos. Tests of batteries. [Six laboratory hours a week. Credit, two hours. Preceded or accompanied by subjects X, XI, XII.]

XVI, XVII, XVIII. **Electrical Design.** Problems in designing switches, electro-magnets, and mechanisms. A complete working drawing of some constant current dynamo to be made. [Six hours a week throughout the year. Credit, two hours. Not given in 1999-1900.]

XIX, XX, XXI. **Alternating Currents.** Alternating current machinery. The consideration of the practical designs of generators, transformers, and motors ; the measurement, control, and use of alternating current. [Two lectures a week throughout the year. Prerequisite, I to IX, inclusive. Two hours credit.]

XXII, XXIII. **Steam Engineering.** Study of types of boilers and engines, steam pumps, condensers, and heaters that are used in the application of steam power. [Three lectures a week ; fall

and winter terms. Prerequisites, Physics III and VI; and Calculus.]

XXIV. **Electro-Chemistry.** Primary and secondary batteries, their construction, working, and use; electro-metallurgy, electrotyping, and electroplating. [Three lectures a week; spring term.]

XXV. **Telegraphs and Telephones.** Theory of telephones and telephone systems, marine telegraphy, multiplex telegraphy. [Two lectures a week; spring term.]

MINING ENGINEERING.

PROFESSOR LANDES AND ASSISTANT PROFESSOR LYON.

The object of the instruction given in this department is to supplement the work of other departments, to give general information, and to afford a complete preliminary training of a practical as well as theoretical nature to students who desire to pursue the profession of mining, or who are preparing to enter any of the various branches of metallurgy.

The work consists of lectures on mining and metallurgy, illustrated by drawings and photographs, supplemented by required readings on the part of the students, and laboratory work in assaying.

The location of the University is such as to allow frequent visits to mining districts, where the practical workings of mines may be studied. Near Seattle there are some very well equipped reduction works which will be of great use to those studying metallurgy.

ASSAYING.

SUBJECTS.

I. **Furnace Assaying.** Lectures, recitations, and laboratory work. The preparing and testing of reagents, and assaying samples of ore, furnace, and mill products. Assaying of bullions for fineness. [One lecture, and six laboratory hours a week; winter term. Prerequisite, Chemistry I to VI, inclusive; and Geology VI.]

II. **Wet Assaying.** The determination by rapid methods of elements of commercial importance, and the performing of mill run tests. [One lecture and six laboratory hours a week; spring term. Prerequisites, Chemistry III and VI; and Geology VI.]

III. Advanced Wet Assaying. A continuation of II. Arrangements made separately with each student, as the work is entirely individual. [Six laboratory hours or more a week; any term. Prerequisite, II.]

MINING.

SUBJECTS.

I. Preliminary Work and Development. Lectures on boring, excavating, blasting, tunneling, and shaft sinking. A study of tools used, such as hand, steam, compressed air percussion drills, diamond drills, etc. [Three times a week; fall term.]

II. General Mining. Lectures on supporting excavations, mine transportation, and mining machinery; such as hoisting engines, windlass, winches, drums, ropes, cables, ore cars, locomotives, steam and electric, with drawings, cuts, and comparisons of each. [Three times a week; winter term.]

III. Pumping, Ventilation, Lighting, and Hydraulic Mining. Lectures on pumping, with a comparison of representative systems. Ventilation and lighting, with a discussion of the derivation of expressions as applied to temperature, velocity, motive, height, etc. Hydraulic mining, its advantages and disadvantages. [Three times a week; spring term.]

IV. Mining Law. Lectures, recitations, and required readings. A study of the mining laws of the United States. [Two times a week; winter term.]

V. Monograph. A study and exhaustive report on some mining district. [Time depends upon the ability of the student. Elected only by special permission.]

METALLURGY.

SUBJECTS.

I. Introductory. Physical properties of metals, alloys, fuels, furnaces, typical metallurgical processes, etc. Lectures and recitations, illustrated with ores of all the most important metals, drawings of furnaces and models, and samples of all the furnace products. [Three times a week; fall term. Prerequisite, Chemistry III.]

II. Base Metals. Principally iron, steel, and copper. Lectures and recitations. [Three times a week; winter term. Prerequisite, Chemistry III.]

III. Gold and Silver. A study of the various processes of extraction, including the desilverization of lead, the stamp battery and amalgamation processes, and the cyanide and chlorination processes. [Three times a week; spring term. Prerequisite, Chemistry III.]

IV. Advanced Work. Investigation upon metallurgical subjects. Individual work. Elective only by permission.

V.—DIVISION OF PHYSICAL TRAINING.

PHYSICAL CULTURE AND HYGIENE.

ASSOCIATE PROFESSOR VANDER VEER.

Ample preparation has been made to give students the benefit of a full course of physical training. Every student is advised to give at least three half-hour periods a week to work in this department. It will be especially beneficial to those students who get, in their daily routine, very little physical exercise.

Unless excused, all students who do not take the work in the department of Military Science and Tactics are required to take work in the department of Physical Culture and Hygiene during the first two years of their college residence.

In order to graduate, each student must have at least twelve credits in either the department of Military Science and Tactics or the department of Physical Culture and Hygiene, in addition to the 180 credits required in other departments.

The Director will be at the gymnasium from 9 A. M. until 5 P. M., to assist and instruct the students in gymnastic and athletic work.

SUBJECTS.

I, II, III. Practical. Exercises in the various forms of gymnastics. In general, this course will consist of class work three half-hour periods a week, but arrangements may be made for more or less work according to the time at the disposal of the student; whatever arrangement is made, however, must be adhered to with regularity. [Credit, two hours.]

IV, V, VI. Advanced. Instruction in anthropometry, charting, and tabulating of statistics, physical examinations, prescription of exercises, medical gymnastics, fitting of gymnasiums, and related subjects. Designed to prepare students who expect to teach or supervise the work of physical training in educational institutions.

MILITARY SCIENCE AND TACTICS.

PROFESSOR —*

The aim of this department is to give instruction in military science and tactics, and, by the observation of military discipline, to inculcate habits of attention, promptness, and obedience. In addition to these advantages, the careful and regular exercise afforded cannot fail to promote the health and physical development of the student.

The following regulations govern the department:

First: The name of the organization shall be the University of Washington Cadets.

Second: It shall, in all military matters, be under the instruction and discipline of a graduate of the United States Military Academy, as Commandant, and such cadet officers as may be nominated by him and approved by the President of the University.

Third: All officers and non-commissioned officers of the battalion shall provide themselves with the prescribed text-books, and attend recitations and lectures on military science at such times as the Commandant may order.

Fourth: The hours for drill and instruction and for military ceremonies shall be at such times as the Commandant may order, and as will not interfere with recitations in other University studies.

Fifth: Attention is called to the following specifications of uniform dress:

(a) Coat—Regulation West Point fatigue coat, gray, single-breasted, buttoned down the front with five black horn buttons, concealed with a fly; the edges, bottom, and collar of coat faced with one and one-quarter inch black mohair braid, the back seams

*No army officers can be detailed by the War Department until the war closes. Meanwhile the work will be conducted by a cadet captain under the supervision of the President of the University.

from the bottom of the coat to within two inches of the shoulder, covered with the same braid; the sides or hips to have two rows of braid extending six inches from bottom, finished at top with points.

(b) Trousers of same color as coat, with stripes of black cloth one and one-quarter to one and one-half inches wide, welted at the edges.

(c) Cap of dark blue cloth, United States cadet pattern; ornament, a gold embroidered wreath encircling the letters U. of W. in silver.

(d) Gloves, white Berlin.

(e) Chevrons, for officers and non-commissioned officers, of black cloth, indicating rank as follows: Captain, four bars; adjutant, three bars and an arc; quartermaster, three bars and a tie; lieutenant, three bars; sergeant major, two bars and an arc; quartermaster sergeant, two bars and a tie; first sergeant, two bars and a lozenge; color sergeant, two bars and a star; sergeant, two bars — all foregoing, points up, on upper arm; corporals, two bars, points up, on lower arm. Students must provide themselves with this uniform within thirty days after their enrollment at the University, unless this time be extended by the President.

Sixth: The Commandant shall keep a regular roll, on which attendance, demeanor, and proficiency shall be marked, according to merit and demerit, and made the basis of military honor and promotion.

Seventh: Cadets, during the hours assigned to them for military exercises and recitations, shall promptly and fully obey the orders of their officers; the officers and privates shall deport themselves toward each other as gentlemen and with military precision and respect.

Eighth: An absence from drill must be accounted for before the next drill. If the excuse is not satisfactory, the students may be required by the Commandant to make up the omitted drill by drilling under special orders.

Ninth: Appointments of cadet officers and non-commissioned officers of the battalion are made solely upon merit, and no officer or non-commissioned officer will be continued in the line of promotion after failing to make satisfactory progress or showing lack of appreciation of the honor and responsibility of his office.

Tenth: All general orders published from headquarters will be posted on the University bulletin board.

Eleventh: The University holds the cadet accountable for injury to or loss of government property while in his possession.

Twelfth: The soldierly appearance and efficacy of the cadet depend upon his effort and zeal, not only during the specified hours of drill, but also at all times and places. As it is impracticable within the few hours allotted to military exercises to eradicate serious defects, he should bear in mind his deficiency and faithfully endeavor to conquer it—to develop a strong, manly physique and acquire a dignified, soldierly bearing. He should be scrupulously particular as to his appearance and deportment in uniform, always wearing the blouse buttoned throughout and preserving an erect carriage. To wear part uniform with part of citizen's dress is un-military and unsightly to the eye of the soldier.

SUBJECTS.

I, II, III. **Practical.** Infantry exercises in the school of the soldier, company, and battalion; extended order movements, target practice, duties of a sentinel, and ceremonies; formations for advance guards, rear guards, and outposts. Military signaling with flag, torch and heliograph. [Required of all able-bodied male undergraduates during the first two years of their University residence. Three times a week throughout the year.]

IV, V, VI. **Theoretical.** Lectures and recitations on the organization and administration of the United States army, supply and discipline of the company, military law, field works, preparation for war, the staff, tactics of the three arms, reconnaissance, security, marches, grand tactics, minor operations, logistics, strategy, military history, and material for war. [Required of cadet officers and non-commissioned officers. Once a week throughout the year.]

THE GRADUATE SCHOOL.

THE GRADUATE SCHOOL.

FACULTY.

FRANK P. GRAVES, PH. D., LITT. D., LL. D.,
PRESIDENT OF THE UNIVERSITY.

CHARLES F. REEVES, M. S., Dean of College of Liberal Arts,
Professor of German Literature.

ADOLPH F. BECHDOLT, PH. D., College of Liberal Arts,
Professor of Anglo-Saxon and English Philology.

ALMON H. FULLER, M. C. E., Dean of College of
Engineering,
Professor of Civil Engineering.

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

ALEXANDER B. COFFEY, A. M., Dean of School of Pedagogy,
Professor of Education.

FREDERICK W. COLEGROVE, PH. D., D. D., School of
Pedagogy,
Professor of Experimental Psychology.

PURPOSE.

The Graduate School is designed to offer advanced courses to students who desire, after graduation, to pursue special lines of work, preparatory to entering upon the vocation of teaching or some other profession, or for the sake of general culture.

The faculty, as shown above, is composed of the President of the University, and the Dean and one other repre-

sentative from the College of Liberal Arts, the College of Engineering, and the School of Pedagogy.

ADMISSION.

Any graduate of the University of Washington or of any other institution of like grade and standing may be admitted for graduate work upon the presentation of his diploma or other evidence of such graduation, and become a candidate for a higher degree under such restrictions and provisions as may be imposed for the conferring of such higher degrees.

REGISTRATION.

Students of the Graduate School must register in the manner described for the College of Liberal Arts. Upon presenting themselves for registration they must present to the President evidence of graduation from the University of Washington, or from some institution of like grade and standing. They should then choose their major and minor subjects and register for their chosen graduate work.

ADVANCED DEGREES.

The degrees conferred by the faculty of the Graduate School are Master of Arts (A. M.), Master of Science (M. S.), Civil Engineer (C. E.), Electrical Engineer (E. E.), Engineer of Mines (E. M.), Doctor of Philosophy (Ph. D.), and Doctor of Pedagogy (Ped. D.) They are granted in accordance with the regulations below.

REGULATIONS.

One month before his examinations each candidate for an advanced degree must pass an oral examination intended to show his general training and fitness. This oral examination will be conducted in the presence of the faculty of the Graduate School.

Master's 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 elsewhere, on the satisfactory completion in residence of one year of graduate work, and on the presentation of an approved thesis, or the passing of a satisfactory examination, or both. The course of study for the master's degree is intended to correspond in amount and character to the first year's work for the doctor's degree, and will be under the direction of a committee as in the case of the doctor's degree (which see, below). The thesis may be dispensed with at the discretion of the committee in charge of the student's work. In case a thesis is presented and approved, a bound copy must be presented to the library of the University.

The master's degrees in engineering, namely, Civil Engineer, (C. E.), Electrical Engineer (E. E.), and Engineer of Mines (E. M.), will be conferred upon graduates in engineering who have pursued satisfactorily one year of graduate work in the University, or who give evidence of having been engaged in responsible work for three years in their chosen profession and present a satisfactory thesis.

Doctor's Degrees.

I. The degree of Doctor of Philosophy (Ph. D.) is open to all students who have received a bachelor's degree in arts, science, philosophy, or letters, but no student will be accepted as a candidate for the doctor's degree who has not a knowledge of French and German sufficient for purposes of research.

II. It is not intended that the doctor's degree shall be

won merely by faithful and industrious work for a prescribed time in some assigned course of study, and no definite term of required residence can be specified. As a rule, three years of graduate study will be necessary, the last year of which must be spent at this University. The period of three years, however, may be shortened in the case of students who as undergraduates have pursued special studies in the direction of their proposed graduate work.

III. No student will be enrolled as a candidate for the doctor's degree until he has been in residence as a graduate student for at least one year. (This rule may be waived in the case of those who come properly accredited from a graduate school of some other university, and of those who as undergraduates in this University have shown special proficiency in the line of their proposed graduate work.)

IV. A student wishing to become a candidate for the doctor's degree must make a formal application to the faculty to be enrolled, at least one year prior to the time of presenting himself for examination.

V. A candidate for the doctor's degree must take a major study that is substantially co-extensive with some one department of instruction in the University. He must also take two minor studies, one of which may be in the same department as the major but involving a more thorough treatment of the same. Both minors must be cognate to the major. The candidate's work will be done under the direction of a committee consisting of the professors in charge of the three subjects, the professor of the major subject being chairman.

VI. Candidates are required to announce to the committee, as early as the first of October of each year, the particular branches of study to which they wish to give special attention.

VII. The subject of the thesis for the doctor's degree must be chosen, and must be approved by the committee, as early as the first of November of the college year in which the applicant expects to take the degree.

VIII. The thesis must be completed and put into the hands of the chairman of the committee as early as the first of April of the year in which the applicant expects to take the degree. It must be prepared for close scrutiny with reference not only to its technical merits, but also to its merits as a specimen of literary workmanship. It must be preceded by an analytical table of contents and a carefully prepared account of the authorities made use of. The thesis must be read and defended in public at such time as the committee may appoint. In case of the acceptance of their theses, candidates are required to have the accepted theses printed in full or in part as may be approved by the committee, and to present twenty-five copies to the University library.

I. The degree of Doctor of Pedagogy (Ped. D.) is open to all students who have received a bachelor's degree in pedagogy from the University of Washington or an institution of like standing, or who shall have been graduated from the "advanced course" of a normal school whose standard is equal to that established for the Washington State Normal Schools by the State Board of Higher Education, April 28, 1899.

II. Requirements II to VIII inclusive, for the doctorate in philosophy must be fulfilled, except that the major and minor studies must be chosen in the departments of pedagogy and philosophy.

THE PREPARATORY SCHOOL.

THE PREPARATORY SCHOOL.

PURPOSE.

From a recent report of the State Superintendent of Public Instruction, supplemented by information from other authorities, it is ascertained that only nine high schools of the state give complete preparation for college and nearly three-fourths of the school districts cannot carry on work beyond the eighth grade. Nine counties contain no school whose course extends farther than the grammar grades.

It is evident from this, that unless the Preparatory School is maintained by the State University, a gap must for some time exist between it and the rest of the system of public education. In order that as many young people as possible may enjoy the advantages of higher education, the University will bridge this gap with its Preparatory School as long as may be necessary.

As the income from the school tax is increased and the courses maintained by the common schools are extended, one year after another in the course of the Preparatory School will be dropped.

INSTRUCTION AND GOVERNMENT.

The work of the Preparatory School is under the supervision of the Dean of the College of Liberal Arts, as Principal, assisted by the Deans of the College of Engineering and the School of Pedagogy, as Vice Principals. Instruction is given by tutors and various members of the University faculty as the circumstances require.

The methods of government in the Preparatory School are stricter than in the colleges of the University. Thus young students obtain all the advantages of contact with trained specialists without losing the discipline best adapted to secondary schools.

ADMISSION.

Students who graduate from schools accredited for twelve grades may enter the freshman year of the college department upon presentation of their diplomas; those from schools accredited for eleven, ten, nine, or eight grades may enter the fourth, third, second, or first year respectively of the Preparatory School.

Students will, however, not be admitted to any year of the Preparatory School, except by special permission, unless they have completed all the work offered by the schools in their district.

List of Accredited Schools

Until a complete report on the schools of the state can be made by committees from the University faculty, the schools named below will be considered accredited to the extent mentioned. Full information concerning several good schools could not be obtained, or they would have been accredited. Correspondence concerning accrediting is invited.

The right is reserved by the Principal and Vice Principals of the Preparatory School to require a student at any time to be graded lower than his diploma would indicate, if he is found to have inadequate training for the standing granted him.

FOR EIGHT GRADES.—*Chelan County:* Wenatchee. *Columbia:* Huntsville. *Cowlitz:* Castle Rock, Kalama, Woodland. *Island:* Coupeville. *Ferry:* Republic. *King:* Black Diamond, Enumclaw, Newcastle, Renton, West Seattle, Van Asselt. *Kitsap:* Port

Blakeley, Paulsbo, Sidney. *Kittitas*: Roslyn, Thorp. *Klickitat*: Goldendale. *Lewis*: Little Falls, Pe Ell, Toledo. *Lincoln*: Harrington, Edwall, Sprague. *Pierce*: Carbonado, Fern Hill, Gig Harbor, McMillan, Parkland, Steilacoom. *San Juan*: Friday Harbor. *Skagit*: Anacortes, Burlington, Lyman, Sedro-Woolley. *Snohomish*: Arlington, Edmonds, Marysville, Stanwood, Sultan. *Spokane*: Cheney, Fairfield. *Stevens*: Colville, Springdale. *Thurston*: Bucoda, Tumwater, Tenino. *Wahkiakum*: Skamokawa. *Walla Walla*: Dixie, Harrer, Prescott, Seeber, Touchet. *Whatcom*: Blaine, Clearbrook, Lynden, Sumas City. *Yakima*: Prosser, Sunnyside.

FOR NINE GRADES.—*Adams County*: Ritzville. *Chehalis*: Elma. *Franklin*: Pasco. *Jefferson*: Chimacum, Hadlock, Port Ludlow. *King*: Auburn, Bothell, Issaquah, Kirkland. *Lincoln*: Davenport, Reardan, Wilbur. *Pacific*: Ilwaco, South Bend. *Pierce*: Buckley, Orting, Wilkeson. *Skagit*: Hamilton. *Snohomish*: Granite Falls. *Walla Walla*: Waitsburg. *Yakima*: Yakima.

FOR TEN GRADES.—*Asotin County*: Asotin. *Chehalis*: Aberdeen, Cosmopolis, Hoquiam, Montesano. *Douglas*: Waterville. *King*: Ballard, Columbia, Kent. *Kittitas*: Ellensburg. *Lewis*: Winlock. *Skagit*: Avon, LaConner, Mt. Vernon. *Snohomish*: Snohomish.

FOR ELEVEN GRADES.—*Columbia County*: Dayton. *Lewis*: Centralia, Chehalis. *Pierce*: Puyallup, Sumner. *Thurston*: Olympia. *Yakima*: North Yakima.

FOR TWELVE GRADES.—See List of Accredited Schools under College of Liberal Arts, page 65.

Admission on Examination.

Students will be admitted to the first year of the Preparatory School by passing an examination in subjects required for graduation from the eighth grade. They will be admitted to subsequent years by passing an examination in all subjects pursued up to the year they desire to enter.

REGISTRATION.

Students desiring to enter the Preparatory School must immediately present their credentials to the Principal of

the Preparatory School at his office. If the credentials are satisfactory, written permission to enter will be given them.

Each student entering from an accredited school should bring a statement signed by the principal of such school, naming the subjects pursued, time given to each subject, text-books used, and the standing of the student in each subject.

After receiving permission to enter from the Principal of the Preparatory School, each student must register in person at the office of the Registrar. After registering no student should absent himself from the school, except on written permission from the Principal.

COURSES OF THE PREPARATORY SCHOOL.

During the scholastic year of 1899-1900, the following courses modelled on the State High School Course will be given by the Preparatory School:

Plan of the Courses.

Figures in parentheses represent the number of exercises a week. Where no figures are given, five exercises a week are understood.

FIRST YEAR.

FALL TERM.

<i>Classical Course.</i>	<i>Literary Course.</i>	<i>English Course.</i>
Grammar and Comp'sit'n.	Grammar and Comp'sit'n.	Grammar and Comp'sit'n.
Algebra.	Algebra.	Algebra.
Beginning Latin.	Beginning Latin.	Chemistry.
Drawing (2).	Drawing (2).	Drawing (2).

WINTER TERM.

Grammar and Comp'sit'n.	Grammar and Comp'sit'n.	Grammar and Comp'sit'n.
Algebra.	Algebra.	Algebra.
Beginning Latin.	Beginning Latin.	Chemistry.
Drawing (2).	Drawing (2).	Drawing (2).

SPRING TERM.

Grammar and Comp'sit'n. Algebra. Cæsar. Drawing (2).	Grammar and Comp'sit'n. Algebra. Cæsar. Drawing (2).	Grammar and Comp'sit'n. Algebra. Chemical Laboratory. Drawing (2).
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SECOND YEAR.

FALL TERM.

<i>Classical Course.</i>	<i>Literary Course.</i>	<i>English Course.</i>
Algebra. Botany and Zoology. Cæsar and Latin Composition. Rhetoric (2).	Algebra. Botany and Zoology. Cæsar and Latin Composition. Rhetoric (2).	Algebra. Botany and Zoology. English Literature. Rhetoric (2).

WINTER TERM.

Botany and Zoology. Cæsar and Latin Composition. English History. Rhetoric (2).	Botany and Zoology. Cæsar and Latin Composition. English History. Rhetoric (2).	Botany and Zoology. Physical Geography. English Literature. Rhetoric (2).
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SPRING TERM.

Botany and Zoology. Cæsar and Latin Composition. English History. Rhetoric (2).	Botany and Zoology. Cæsar and Latin Composition. English History. Rhetoric (2).	Botany and Zoology. Physical Geography. American Literature. Rhetoric (2).
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THIRD YEAR.

FALL TERM.

<i>Classical Course.</i>	<i>Literary Course.</i>	<i>English Course.</i>
Civics. Cicero. Beginning Greek. Ancient History (2).	Civics. Cicero. English Literature. Ancient History (2).	Civics. Physics. American History. Ancient History. (2).

WINTER TERM.

Plane Geometry. Cicero and Latin Composition. Beginning Greek. Ancient History (2).	Plane Geometry. Cicero and Latin Composition. English Literature. Ancient History (2).	Plane Geometry. Physics. English History. Ancient History (2).
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SPRING TERM.

Plane Geometry. Cicero and Latin Composition. Anabasis. Ancient History (2).	Plane Geometry. Cicero and Latin Composition. American Literature. Ancient History (2).	Plane Geometry. Physics. English History. Ancient History (2).
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FOURTH YEAR.

FALL TERM.

<i>Classical Course.</i>	<i>Literary Course.</i>	<i>English Course.</i>
Plane Geometry. Physics. Vergil. Anabasis and Greek Composition.	Plane Geometry. Physics. Vergil. General History.	Plane Geometry. French or German. Geology. General History.

WINTER TERM.

Solid Geometry. Physics. Vergil. Anabasis and Greek Composition.	Solid Geometry. Physics. Vergil. General History.	Solid Geometry. French or German. Geology. General History.
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SPRING TERM.

Physiology. Physics. Vergil and Latin Composition. Iliad.	Physiology. Physics. Vergil and Latin Composition. General History.	Physiology. French or German. Geology. General History.
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Course Arranged for Three Years.

Inasmuch as the work of this School is entirely of a preparatory nature, and omits some studies that might profitably be pursued by a student who did not intend going to college, the course may be completed by bright students in three years, according to the plans outlined below. To take the course as arranged for three years, a student must obtain special permission from the Principal of the Preparatory School.

No student who can complete his course in a four years' high school in his own district will be allowed to take this course without the consent of the principal of his home school.

Plan on the Three Years' Basis.

Numbers in parentheses represent the number of exercises a week. Where no figures are given, five exercises a week is understood.

FIRST YEAR.

FIRST TERM.

<i>Classical Course.</i>	<i>Literary Course.</i>	<i>English Course.</i>
Compositi'n and Rhetoric. Algebra. Civics (3). Beginning Latin. Drawing (2).	Comp'siti'n and Rhetoric. Algebra. Civics (3). Beginning Latin. Drawing (2).	Comp'siti'n and Rhetoric. Algebra. Civics (3). Physical Geography. Drawing (2).

SECOND TERM.

Comp'siti'n and Rhetoric. Algebra. Beginning Latin. Cæsar.	Comp'siti'n and Rhetoric. Algebra. Beginning Latin. Cæsar.	Comp'siti'n and Rhetoric. Algebra. Physical Geography. Chemistry.
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THIRD TERM.

Comp'siti'n and Rhetoric. Algebra. Cæsar. Latin Composition.	Comp'siti'n and Rhetoric. Algebra. Cæsar. Latin Composition.	Comp'siti'n and Rhetoric. Algebra. Chemistry. Chemical Laboratory.
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SECOND YEAR.
FIRST TERM.

<i>Classical Course.</i>	<i>Literary Course.</i>	<i>English Course.</i>
Algebra. Botany and Zoology. Cæsar and Cicero. Beginning Greek (3). Ancient History (2).	Algebra. Botany and Zoology. Cæsar and Cicero. General History.	Algebra. Botany and Zoology. English Literature. General History.

SECOND TERM.

Plane Geometry. Botany and Zoology. Cicero and Latin Composition. Beginning Greek (3). Ancient History (2).	Plane Geometry. Botany and Zoology. Cicero and Latin Comp'n. General History.	Plane Geometry. Botany and Zoology. English Literature. General History.
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THIRD TERM.

Plane Geometry. Botany and Zoology. Cicero and Latin Composition. Beginning Greek and Anabasis (3). Ancient History (2).	Plane Geometry. Botany and Zoology. Cicero and Latin Comp'n. General History.	Plane Geometry. Botany and Zoology. American Literature. General History.
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THIRD YEAR.
FIRST TERM.

<i>Classical Course.</i>	<i>Literary Course.</i>	<i>English Course.</i>
Plane Geometry. Physics. Vergil and Latin Comp'n. Anabasis (3). Greek Composition (3).	Plane Geometry. Physics. Vergil and Latin Comp'n. English Literature.	Plane Geometry. Physics. French or German. American History.

SECOND TERM.

Solid Geometry. Physics. Vergil and Latin Comp'n. Anabasis (3). Sight-reading and Greek Composition (3).	Solid Geometry. Physics. Vergil and Latin Comp'n. English Literature.	Solid Geometry. Physics. French or German. English History.
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THIRD TERM.

Physiology. Physics. Vergil and Latin Comp'n. Iliad (3). Sight-reading and Greek Composition (3).	Physiology. Physics. Vergil and Latin Comp'n. American Literature.	Physiology. Physics. French or German. English History.
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INSTRUCTORS.

The following instructors will teach the subjects named in the Preparatory Course :

Civics — President Graves.

Composition and Rhetoric — Professor Priest.

English and American Literature — Professor Bechdolt.

Latin — Mr. Reese.

Greek and Ancient History — Professor Moench.

French — Associate Professor Ober.

German — Professor Reeves.

Algebra, Plane and Solid Geometry — Mr. Frazer.

Drawing — Professor Fuller.

Physical Geography — Professor Landes.

Chemistry — Mr. Lough.

Botany and Zoology — Assistant Professor Kincaid.

American, English, and General History — Professor Meany.

Physics — Mr. Kelly.

Physiology — Professor Foster.

PREPARATORY LAW COURSE.

Students who intend to enter the Law School of the University of Washington, or a similar institution, are advised to take a complete course in the College of Liberal Arts before entering. If this is impossible, the following course, which includes the most essential subjects, is open to students who have finished the eighth grade of an accredited school.

Those who complete the work here outlined may enter the Law School without further examination.

Students must be at least eighteen years of age to enter upon this course.

FIRST YEAR.

<i>Fall Term.</i>	<i>Winter Term.</i>	<i>Spring Term.</i>
Composit'n and Rhetoric. Beginning Latin. Civics. American History.	Composit'n and Rhetoric. Beginning Latin. Cæsar. American History.	Composit'n and Rhetoric. Cæsar. Latin Composition. American History.

SECOND YEAR.

English Literature. Cæsar and Cicero. English History. French or German.	English Literature. Cicero and Latin Composition. English History. French or German.	American Literature. Cicero and Latin Composition. English History. French or German.
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PREPARATORY MEDICAL COURSE.

The best preparation for students intending to enter the medical profession is the completion of a course in the College of Liberal Arts, with chemistry and biology as the principal studies. In the case of those who are not able to afford the time for this, a special course of two years as outlined below may be pursued.

Several medical schools will admit without examination those who complete this course.

Students are required to be eighteen years of age before taking the course.

FIRST YEAR.

<i>Fall Term.</i>	<i>Winter Term.</i>	<i>Spring Term.</i>
Composit'n and Rhetoric. Beginning Latin. Civics. Botany and Zoology.	Composit'n and Rhetoric. Beginning Latin. Cæsar. Botany and Zoology.	Composit'n and Rhetoric. Cæsar. Physiology. Botany and Zoology.

SECOND YEAR.

Cæsar and Cicero. Chemistry. Zoology. French or German.	Cicero and Latin Composition. Chemistry. Zoology. French or German.	Cicero and Latin Composition. Chemical Laboratory. Zoology. French or German.
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THE SCHOOL OF LAW.

"The time has gone by when an eminent lawyer, in full practice, can take a class of students into his office and become their teacher. Once that was practicable, but now it is not. The consequence is that law schools are now a necessity." — *The late Chief Justice Waite.*

Professor Bryce, in the "American Commonwealth," attributes the superior attainments of the members of the legal profession in the United States "to the extraordinary excellence of many of the law schools."

Mr. Heron, of Dublin, in his work on the History of Jurisprudence, declares that in the matter of legal reform, and in that of legal authorship, the United States has surpassed England, and he attributes the fact "to the superior legal education which the American lawyers receive, and to the schools of law established throughout the United States."

"It is now generally believed that the law school and not the office is the place to obtain a legal education." — From the proceedings of the American Bar Association for 1897, p. 362.

"As an early product of a law school, I have always been a firm believer in schools of that kind which are of the right class. There are but few who are qualified by nature for teaching, and the busy lawyer has but little time and generally no adaptation for the occupation of an instructor. In the law schools are to be found those who have the qualities of teachers and are able to direct the study of their pupils to the best results." — *Judge James H. Cartwright.*

THE SCHOOL OF LAW.

THE FACULTY.

FRANK P. GRAVES, PH. D., LL. D.,
PRESIDENT.

JOHN T. CONDON, LL. M., DEAN,
Professor of Law.

J. ALLEN SMITH, LL. B., PH. D.,
Professor of Comparative Constitutional Law.

ARTHUR R. PRIEST, A. M.,
Professor of Oratory and Forensics.

HON. CORNELIUS H. HANFORD,
Judge of United States District Court.
Lecturer on Federal Jurisprudence.

HON. JOHN B. ALLEN,
Ex-United States Senator.
Lecturer on Constitutional Law.

HON. THOMAS BURKE, LL. D.,
Ex-Chief Justice of Supreme Court of Washington and Ex-Judge of United
States District Court.
Lecturer on Inter-State Commerce Law.

HON. GEORGE TURNER,
United States Senator.
Lecturer on Law of Mines and Mining.

HON. JOHN P. HOYT,
Ex-Chief Justice of Supreme Court of Washington.
Lecturer on Law of Bankruptcy.

Other lecturers will be announced later.

PURPOSE.

The design of the School of Law is 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 included in the following sub-divisions:

First.—The common law, in its development, and as it exists to-day in the United States, together with such statutory modifications as are generally in force in the State of Washington, and in the several states.

Second.—Equity, in its development, and as it exists to-day in the United States.

Third.—The law of the State of Washington, including pleading and practice under the Code of Civil Procedure, and the doctrines of substantive law peculiar to the State of Washington and to the western and Pacific states; *e. g.*

Community property law, being the law governing the property rights of married persons, admiralty law, mining law, public land law, including the practice before the register and receiver of the United States land office, and law of irrigation and water rights.

Fourth.—The public law of the United States, and of the principal European countries, including constitutional law, administrative law, and international law.

Fifth.—Comparative constitutional law and political science.

ADMISSION.

Any person is at liberty to matriculate in the School of Law, and have a seat assigned him for attendance upon the lectures.

If, however, the person applying for admission intends to be a candidate for a degree at the end of his course, he must not be less than eighteen years of age, and must pass such examination in respect to general education as shall

satisfy the faculty that his educational attainments are such as will justify his entering upon the practice of the law when his legal studies are completed. Examinations will be held in the lecture room, in the law building, at 2 P. M., on September 11 and 12, 1899.

The examination on the first of these days will have reference to general education, and will be on the subjects hereinafter named. The examination on the succeeding day will have reference to legal education, and is confined to candidates for advanced standing. Applicants for advanced standing are required to be present at both of these examinations.

Candidates are required to present themselves on these days, as they are expected to be in attendance on the first day of the term, at which time the regular course of instruction will begin. To provide for cases in which it is absolutely impossible for the candidate to be present at this time, supplementary examinations will be held at such times as may be determined upon by the faculty, but no excuse, except of an urgent character, will be accepted for failure to appear at the first examination.

Graduates of colleges, and students who have honorably completed an academic or high school course, and who present a certificate or diploma from the academy or high school will be admitted without preliminary examination. No student who does not present such certificate or diploma will be admitted as a candidate for a degree, until he has passed a satisfactory examination in arithmetic, geography, orthography, English composition, and the outlines of the history of the United States, and of England.*

*Ransome's Short History of England, or Green's History of the English People are recommended as affording the student a proper preparation for the examination in English History.

The examination will be conducted in writing, and the papers submitted by the applicants must evince a competent knowledge of English grammar.

Inasmuch as many present themselves a long time after completing their school education, it may be said that the examination will not be technical. The object is not to ascertain the amount of school-book knowledge which the candidate possesses, but the results of his previous training, and his present practical capacity and ability to appreciate the study of law.

Candidates for advanced standing will be examined in whatever subjects they may request, the examination not being restricted to the subjects included in the junior year, but being allowed as well on the subjects embraced in the senior year.

This examination is not final on the subjects taken, but the candidate must satisfy the faculty that he has made sufficient progress in his study of the law to justify his admission to the senior class. Before graduation, every student is required to pass satisfactory examinations on all subjects included in the course.

Candidates for advanced standing are required to be present at the beginning of the year, as the degree will not be conferred on any one who has not spent at least one full college year in this Law School.

SPECIAL STUDENTS.

There are two classes of special students—those who are candidates for a degree, and those who are not.

Persons not desiring to be candidates for a degree may pursue one or more courses as special students, provided they are qualified to pursue such courses to advantage. They will receive a certificate of all work done, and they

may at any time enter as candidates for a degree, provided they are qualified under the above requirements. Persons who are candidates for a degree, but who for some reason take other than the regular work of any given year, are registered as "special students, candidates for a degree."

REGISTRATION.

Before admission to examination, every student is required to present to the Dean of the Law School the Registrar's receipt for payment of the annual fee. It is essential therefore, that a candidate for examination should apply first to the Registrar of the University at his office in the administration building,* register his name as student in the School of Law, and pay his fees. He is then entitled to apply for admission to examination, and in case of rejection, the money paid preliminary to such examination will be refunded by the Registrar.

COURSE OF INSTRUCTION.

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 system. Realizing that all methods have in them elements of good, the instructors endeavor to embrace in the course what in their judgment are the best features of all. The following is a statement of the subjects upon which instruction is given. During the entire course the student has, in lecture and text-book work, at least twelve hours a week. In addition to this he has quiz work with instructors.

*To accommodate law students, the Registrar will be at the law building at certain specified hours.

I.—Lecture Topics.**JUNIOR YEAR.**

Principles of Jurisprudence. Agency. Partnership. Private Corporations. Domestic Relations. Torts. Personal Property and Sales. Bills and Notes. Bailments and Carriers. Criminal Law.

SENIOR YEAR.

Constitutional Law. Federal Jurisprudence. Wills and the Administration of Estates. Equity Jurisprudence, including the Law of Injunctions, Receivers, and Trusts. Municipal Corporations. Private International Law. Community Property Law. [This topic treats of the law governing the property rights of married persons in Washington, Idaho, California, Nevada, Texas, Louisiana, Arizona and New Mexico.] Medical Jurisprudence. Law of Admiralty and Shipping. Law of Mines and Mining. Insurance Law. Law of Bankruptcy. Public Land Law, including the Practice before the United States Land Department. Law of Irrigation and Water Rights. Law of Patents, Trade-marks, and Copyrights. Interstate Commerce Law. Extraordinary Legal Remedies, treating the writs of Habeas Corpus, Certiorari, Quo Warranto, Mandamus, and Prohibition. Attachment and Garnishment. Taxation and Local Assessments. Conveyancing and Office Practice. [This topic is intended to cover all the work of a law office not included in the courses on pleading and practice. Particular attention will be paid to the searching of titles, drawing of deeds, mortgages, trust instruments, wills, contracts and mercantile instruments of all kinds, and the drafting of papers relating to the organization, reorganization, and management of corporations, also the proper method of preparing and drafting bills to be enacted into laws by Congress and the legislatures.]

II.—Text - Book Instruction.

In addition to the instruction by lectures is the instruction by text-books.

JUNIOR YEAR.

The members of the junior class are required to attend daily recitations in Cooley's edition of Blackstone's Commentaries, Anson on Contracts, Gould on Pleading, Lube's Equity Pleading, Bliss on Code Pleading, and Heard's Criminal Pleading.

The following portions of Blackstone's Commentaries are studied by the class: Sections 2 and 3 of the Introduction; chapters 1, 7, and 10 of Book I; all of Book II, with the exception of chapters 18, 22, 27, and 28; chapters 1, 2, 3, 4, 7, and 14 of Book III. The other portions of the Commentaries are omitted on the ground that they are either covered by the lectures delivered in the School of Law or are of no especial importance.

SENIOR YEAR.

The members of the senior class are required to attend daily recitations in Greenleaf on Evidence, Tiedeman on Real Property Law, the Statutory Law of Washington, and Sutherland (or Endlich) on Statutory Interpretation and Construction.

III.—The Study of Leading Cases.

As much benefit can be derived from a proper study of what are recognized as leading cases, and as it is desirable that students should be familiar with the most important of these cases, both in the text-book and lecture courses particular attention will be paid to the leading cases upon the subject under consideration.

IV.—Theses.

It is the desire of the faculty to encourage original investigation and research by the students. Each candidate for

a degree will be required to prepare and deposit with the Dean of the Law School, before the commencement of the spring term of his senior year, a thesis 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 typewritten and securely bound, and is to be kept permanently in the Law School.

V.—The Practice Court.

It has been an objection frequently urged against the completeness of the training given in law schools that the student acquired no knowledge of actual practice. This objection has been entirely removed by the introduction of the practice court. The practice court is a part of the School of Law and is presided over by a competent instructor, while other members of the faculty co-operate in conducting it. Its work is divided into three parts, that of the law term, that of the jury term, and that of appellate jurisdiction. 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; the full bench of judges sitting as a supreme court; a clerk; a sheriff; and the necessary deputies.

The purpose of the court is to afford to the student practical instruction in pleading and practice both in law and in equity, under the common law system and under the code system, and actual experience in the commencement and trial of cases through all their stages. In commencing the actions the students assigned to the case are permitted to select the state in which the case is supposed to be brought, thus enabling the student to acquire the practice prevailing in his own state. All questions of practice and procedure are governed by the law of the

state in which the action is supposed to be brought, but questions of substantive law are governed by the weight of authority.

VI.—Elocution and Oratory.

It is important to those who study the law with the view of becoming advocates, that they should give attention to the subject of public speaking, the better to equip them for the performance of their duties as advocates. It is a mistake to suppose that excellence in speaking is simply a gift of nature, and not the result of patient and persistent labor and study. Instruction in elocution and oratory is highly important to law students.

The junior class receives 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.

VII.—Constitutional History and Political Science.

It seems to be conceded now that the law should be studied in a law school, and that the law school should be connected with a university, where students may avail themselves of opportunities for the study of such other branches of learning as are of allied significance.

It is believed that students in the School of Law may derive great benefit from the instruction given on kindred subjects in the College of Liberal Arts. Students who first obtain permission from the Dean of the Law School and make application to the Dean of the College of Liberal Arts are allowed to attend lectures and recitations in that school, free of charge. But the Dean of the Law School reserves the right to require such students to give up any or all studies they may be pursuing in the College of Liberal Arts whenever it appears that the pursuit of these

studies is attended with an unsatisfactory performance of the duties required in the School of Law.

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 subjected 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 used for the purpose of instruction.

In the case of written examinations, the student is required to certify on honor that previous to the examination he had no knowledge as to the questions to be propounded, and that he has received no assistance in making his answers thereto, and has given no assistance to others. The faculty will not hesitate to drop a student from the rolls at any time during the year, when satisfied that such student is neglecting his work and not conforming to the requirements of the School of Law.

DEGREE.

The degree of Bachelor of Laws (LL. B.) will be conferred upon such students as shall pursue the full course of two years in the School of Law of the University of Washington and shall pass an approved oral and written exami-

nation. 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, or practiced law for one year under a license from the highest court of general jurisdiction in any state, where the requirements for admission to the bar are equal to those in Washington, shall also pursue one year's course in this school and pass a like examination.

FEES.

The tuition fee for regular students is ten dollars a term, or twenty-five dollars a year. Fees are payable at the beginning of each term.

For any single course the fee is five dollars a term, payable at the beginning of the course.

GENERAL INFORMATION.

The college year begins on Thursday, September 14, 1899, and ends on Thursday, May 31, 1900.

The exercises of the School of Law are held in the Old University Building, Seattle, Washington.

The address of the President of the University is Latona, Washington; that of the Dean of the School of Law is 624 Burke Building, Seattle, Washington.

The office of the Registrar is in the Administration Building. At certain specified hours he will be at the Law Building.

If any further information is desired in reference to the School of Law, application should be made in person or by letter to the President of the University or to the Dean of the School.

**THE REGISTER OF STUDENTS
AND
THE ALUMNI ASSOCIATION.**

THE REGISTER OF STUDENTS, 1898-99.

GRADUATE SCHOOL.

Alvord, Elisha H., A. B., '86, University of Washington.....
Pealschie.
Mineralogy, Geology.

Brownscombe, Thomas F., A. B., '98, Pomona College.....
Riverside, California.
Political Economy, Philosophy.

Colton, Grant H., B. S. A., '97, Iowa State College..... Seattle.
Physics.

Dailey, Arthur M., Ph. B., '97, University of Washington ...
Snohomish.
Botany, Zoology.

Frazer, Frank D., A. B., '97, University of Washington;
 A. M., '98, Princeton University.....Seattle.
Physics, Botany.

G Harry F., A. B., '96, University of Washington;
 A. M., '97, University of Washington...Fremont.
Latin, German.

Jackol, John, B. S., '97, University of Washington.....Everett.
Botany, Zoology.

Karshner, Warner M., B. S., '98, University of Washington..
Auburn.
Botany, Zoology.

Varn s, Ella B., A. B., '84, Vassar College.....Seattle.
Greek, Latin.

Wilson, Helen Pack, Ph. B., '98, University of Washington..
Seattle.
French.

COLLEGE OF LIBERAL ARTS.

The figures in the column headed "Credit" indicate the number of hours credit toward graduation at the close of the second term of the academic year, 1898-99.

NAME.	CREDIT.	RESIDENCE.
Allen, Ella Beck.....	163	Ravenna.
Allen, Jessie.....	176	Ravenna.
Allen, Riley.....	...	Ravenna.
Ames, Walcott G.....	32	Fairhaven.
Anderson, Albert.....	190	Port Orchard.
Anloff, Garfield.....	18	South Bend.
Baker, Harold J. M.....	125	Port Townsend.
Ballard, Arthur Condict.....	188	Ballard.
Barkley, James.....	115	Asotin City.
Barlow, Jessie.....	137	Tacoma.
Barlow, Tony Marvin.....	116	New Whatcom.
Bauman, Cora.....	...	Seattle.
Bechdolt, Margaret L. Z.....	104	Seattle.
Bell, Will Otto.....	10	Seattle.
Bender, Louis D.....	...	Spokane.
Berkman, Herbert A.....	12	Lynden.
Bethel, Sylvester.....	77	Olympia.
Bethel, Walter.....	...	Olympia.
Blaine, William W.....	31	Seattle.
Bird, Joseph V.....	...	Snohomish.
Bishop, Edward K.....	...	Seattle.
Blethen, Clarence B.....	38	Seattle.
Blodgett, Charla Anna.....	90	Fairhaven.
Boyd, Anna Criswell.....	170	Seattle.
Bridenstein, Matthew J.....	...	Ballard.
Brickey, Willard Livingston.....	...	Avon.
Brinker, Otis W.....	...	Port Townsend.
Brooks, Blanche.....	201	Fremont.
Brown, Ruby Louise.....	35	Everett.
Bucklin, May L.....	...	Seattle.
Buell, Harry R.....	...	Bozeman, Mont.
Buell, Marie L.....	...	Bozeman, Mont.
Bushell, Richard.....	25	Marysville.
Butt, William Howard.....	72	Seattle.

NAME.	CREDIT.	RESIDENCE.
Cann, Louise.....	78	Seattle.
Callison, John G	31	Chehalis.
Carnahan, Nettie.....	... ..	Seattle.
Carpenter, Ina.....	164	Ballard.
Case, Kathryn.....	120	Latona.
Calkins, Glenn Whitman.....	67	New Whatcom.
Ceis, J. Frederick.....	34	Seattle.
Chestnut, Fred.....	34	Fremont.
Chestnut, Ross Everett.....	168	Fremont.
Coffman, Harry Canby.....	173	Chehalis.
Coffman, Walter Roy.....	183	Chehalis.
Colson, Lizzie.....	... ..	Seattle.
Combes, Pearl H.....	... ..	Elma.
Canney, Mabel E.....	... ..	Seattle.
Corbet, Jackson B., Jr.....	167	Seattle.
Corson, William H.....	22	Issaquah.
Cosper, Elizabeth.....	... ..	Tacoma.
Cotchett, Euphrosyne .....	... ..	Seattle.
Cowan, Violet.....	... ..	Latona.
Cressman, Edward.....	... ..	Seattle.
Crookall, Arthur.....	180	Seattle.
Crueger, Emma.....	132	Snohomish.
Crueger, Minnie.....	... ..	Snohomish.
Crueger, Otta.....	... ..	Snohomish.
Cutler, Lucy A.....	... ..	Vashon.
Davidson, William E.....	... ..	Dunlap.
Davies, Jessie D.....	90	Seattle.
Davis, Cleo C .....	... ..	Latona.
Dean, J. Foster.....	... ..	New Whatcom.
Dean, Luella Mary.....	178	Seattle.
Delaney, Alma J.....	67	Juneau, Alaska.
Dodson, George E.....	36	Fairhaven.
Dougan, Ella Robena.....	132	Seattle.
Duffy, Edward A.....	28	Seattle.
Edgers, Cora Newton.....	... ..	Seattle.
Edmunds, James A.....	... ..	Ballard.
Edmunds, Thomas T.....	129	Ballard.
Esmond, Julia F.....	... ..	Montesano.
Evans, Goldie I	79	Snohomish.

NAME.	CREDIT.	RESIDENCE.
Fadden, Gorden G.....	31	New Whatcom.
Falk, Eric A.....	...	Seattle.
Farnsworth, Aimee.....	4	Seattle.
Fetterman, Glenn R.....	...	Ellensburg.
Fleischer, Amanda F.....	34	Seattle.
Fletcher, Rufus W.....	...	Latona.
Fowler, Charles A.....	191	Centralia.
Frye, Elizabeth Helan.....	182	Seattle.
Fuller, Lulu.....	126	Seattle.
Gaches, Charles E.....	76	La Conner.
Gephard, James M.....	...	Seattle.
Giles, Frank Price.....	177	Fremont.
Gillett, Adelaide.....	...	Hasbrouch, N. Y.
Gillette, Lillian.....	...	Seattle.
Glasgow, Grace.....	127	Seattle.
Goodman, Mae Rose.....	182	Tacoma.
Gordon, Oliver.....	56	Spokane.
Gottstein, Jacob Louis.....	170	Seattle.
Grantham, Winfred A.....	46	Fremont.
Griffith, Florence M.....	24	New Whatcom.
Griggs, Stephen E.....	31	New Whatcom.
Griggs, Urbane S.....	33	New Whatcom.
Griswold, Roy.....	...	Burton.
Griswold, Walter.....	183	Burton.
Gunn, Thomas McCheyne.....	163	Seattle.
Hallock, Mary.....	...	Ballard.
Harper, Paul.....	28	Seattle.
Hazzard, Minnie M.....	...	Claquato.
Harriman, Henry R.....	162	Tacoma.
Henriksen, Martin.....	...	Haudrup, Denm'k
Herren, Elizabeth M.....	29	Seattle.
Hill, Stirling B.....	145	Seattle.
Hopkins, Robert Henry.....	123	Ballard.
Hopkins, Paul.....	110	Ballard.
Horton, Caroline.....	173	Seattle. [Japan.
Hoshino, Tokuji.....	...	Yokohama,
Hubert, Anna.....	52	Seattle.
Huntoon, Mary Helen.....	32	Fairhaven.
Huntoon, Richard W.....	35	Fairhaven. [Cal.
Hughes, Edith.....	...	San Francisco,

NAME.	CREDIT.	RESIDENCE.
Ifland, Louise A.....	187	Port Townsend.
Jenkins, May	20	Saginaw, Mich.
Jennings, Helen.....	20	La Conner.
Jennings, Linda	18	La Conner.
Johnson, Carl A.....	22	Los Angeles, Cal.
Johnson, Ralph M.....	81	Acme.
Joyce, Emma M.....		Seattle.
Karr, Eunice Viola.....	174	Hoquiam.
Kellogg, Sadie.....		Seattle.
Kelly, David.....	171	Seattle.
Kincaid, Trevor.....	178	Olympia.
Kincaid, Zoe	98	Olympia.
Korstad, Hans M.....	111	Latona.
Knissel, Juanita.....		Latona.
Knight, Henry.....	45	Leland.
Knight, Lillian		Seattle. [Japan.
Kudo, Imajino	77	Tokushima-Ken,
Kuratsuji, Akiyosho		Yehime-Ken,
		[Japan.
Landes, Charles.....	63	Latona.
Lane, Alton W.....	66	Seattle.
Larson, Clarence M	170	Gig Harbor.
Laube, William Tell	38	New Whatcom.
Lawson, Juliana.....		Latona.
La Violette, Francis A.....	143	Fremont.
Leake, Ethel M.....	196	Seattle.
Leeman, Verna	173	Latona.
Levy, Aubrey.....	157	Seattle.
Le Sourd, Luther.....	77	Coupeville.
Lindberry, Charles.....	74	New Whatcom.
Lough, Thomas W	147	Fremont.
Lough, Jacob W.....		Fremont.
Lynch, Maybl.....	28	Seattle.
Marion, John.....		Woodinville.
Mauermann, Anna K.....		Dryad.
McCann, Charles.....	89	Everett.
McCrory, William Roland.....		Ballard.
McDonnell, Elizabeth T.....		Latona.
McDonnell, Pearl.....		Latona.

NAME.	CREDIT.	RESIDENCE.
McGinniss, Agnes T.....	...	Neillsville, Wis.
McIntyre, Lucile.....	31	Latona.
McKeown, Frank J.....	...	Mount Vernon.
Megrath, Winifred Hazlett.....	34	Seattle.
Meredith, William John.	114	Latona.
Metcalf, Lillie.....	188	Latona.
Minkler, Garfield A.....	20	Lyman.
Miracle, Blanche A.....	...	Seattle.
Mitchell, Annie.....	120	Olympia.
Mitchell, McBurney.....	28	Seattle.
Mitchell, Thomas W.....	125	New Whatcom.
Mooers, Benjamin C.....	...	Seattle.
Morford, Carl E.....	104	Seattle.
Morrison, Walter F.....	131	Spokane.
Morse, Helen E.....	...	Seattle.
Olney, Myrtle.....	...	Minneapolis,
Osborn, Frank M.....	93	Seattle. [Minn.
Palmer, Luella.....	...	Fremont.
Palmer, Don Henry.....	174	Seattle.
Peck, Olivia Cutler.....	168	LaConner.
Phillips, Horace	87	Seattle.
Pinkham, Starr.....	...	Seattle.
Porter, Alice Margaret.....	35	Seattle.
Pratt, Alida.....	35	Custer.
Pratt, Ruth.....	73	Custer.
Proctor, Helen S.....	...	Suohomish.
Prosch, Edith Gratia.....	101	Seattle.
Reagh, Agnes Lillian	181	Rossland, B. C.
Reans, Gertrude E .....	...	Seattle.
Reese, Henry L.....	187	Kelso.
Reeves, Carl H.....	87	Columbia City.
Reeves, Sarah C.....	17	Columbia City.
Remington, Alton David	35	Seattle.
Richardson, Harry Lowther.....	186	Laurel.
Richards, Truman L.....	...	Moorefield, Neb.
Ridgway, Josephine.....	47	Latona.
Robertson, Edna E.....	33	Olympia.
Roll, Emma Bell	192	Fairhaven.

NAME.	CREDIT.	RESIDENCE.
Rose, Clara A.....	...	Seattle.
Rowell, Stephen Parker.....	109	Seattle.
Ruddy, Charles.....	84	Everett.
Ryan, Lewis D.....	15	Sumner.
Schmid, Theresa.....	184	Mercer Island.
Schoder, Ernest W.....	163	Seattle.
Schricker, Hilda F.....	16	La Conner.
Singerman, Isidore Rueban.....	186	Seattle.
Sloan, Anna Alice.....	173	Seattle.
Smith, Burke.....	173	Auburn.
Soinford, May Agnes.....	...	Juneau, Alaska.
Souder, Audrey Blanche.....	164	Latona.
Souder, Winifred.....	...	Latona.
Stevens, May E.....	...	Seattle.
Sumner, Emily Weston.....	27	Everett.
Steel, Martha F.....	...	Seattle.
Stewart, Jessie.....	...	Fremont.
Storey, John C.....	130	Fremont.
Start, Mabel C.....	...	Vashon.
Street, Florence.....	...	Latona.
Sylvester, Frances C.....	115	Olympia.
Thayer, Lyman E.....	54	Everett.
Thompson, May.....	54	Seattle.
Thomas, Permilla.....	180	Black Diamond.
Tiedeman, Walter.....	89	Ballard.
Trout, Glenn Henry.....	73	Garfield.
Turnbull, William Garfield.....	175	Seattle.
Underwood, Julia.....	...	Loomis.
Vall, James R.....	93	Custer.
Walker, Agnes.....	...	Seattle.
Ward, Mable.....	188	Seattle.
Waughop, Sarah L.....	188	Seattle.
Weretnikove, Bella.....	131	Seattle.
Weybright, William H.....	...	Jamton, Ohio.
Whipple, Cyrus Avery.....	176	Eugene, Oregon.
White, Ethel Bert.....	133	Meyers Falls.
Wiley, Linnie W.....	...	Ballard.

NAME.	CREDIT.	RESIDENCE.
Wilgus, Thomas P.....	79	Seattle.
Wilson, Arthur S.....	165	Tacoma.
Williams, Ralph.....	... ..	Seattle.
Williams, Sara Augusta.....	191	Seattle.
Winsor, Blanche.....	29	Ballard.
Winsor, Gertrude L.....	... ..	Ballard.
Winters, Anne Karolyne.....	170	Seattle.
Wiswell, HESSIE L.....	... ..	Latona.
Wright, Edgar J.....	86	Fairhaven.
Yamaguchi, Jinta.....	208	Kanogawa-Ken, [Japan.]

COLLEGE OF ENGINEERING.

MINING ENGINEERING.

NAME.	RESIDENCE.
Benson, Bessie T.....	Seattle.
Bowen, William J.....	Chicago, Ill.
Bruckart, Daniel W.....	Seattle.
Burton, Guy V.....	Seattle.
Fox, Lewis D.....	Seattle.
Frank, Joe Z.....	Seattle.
Iverson, Andrew.....	Seattle.
Johnson, James	Seattle.
La Sar, Albert T.....	St. Louis, Mo.
Logan, George S.....	Seattle.
McLaughlin, Stellman W.....	Grand Forks, N.D.
Mitchell, Rollin.....	Everett.
Morrison, James.....	Seattle.
Peters, Anton.....	Seattle.
Rohlf, Adolph	Seattle.
Shaw, Sadie D.....	Lincoln, Neb.
Wahl, John F.....	Seattle.
Wood, A. Brier.....	Sumner.

SATURDAY COURSES FOR TEACHERS.

NAME.	RESIDENCE.
Adams, Florence	Seattle.
Allender, Odessa	Seattle.
Allender, Willa	Seattle.
Anthony, Julia E.	Seattle.
Anthony, Emma J.	Seattle.
Armour, Ellen E.	Seattle.
Armour, Harriet	Seattle.
Armour, Metta	Seattle.
Ayerst, Belle	Seattle.
Ayerst, Evelyn	Seattle.
Baldwin, Margaret A.	Seattle.
Baldwin, Vesta M.	Seattle.
Barnes, Lucy R.	Columbia City.
Beatty, Cordelia J.	Latona.
Bell, Annie V.	Seattle.
Bennett, Robert J.	Seattle.
Burbank, Jessie L.	Seattle.
Cade, Laura E.	Seattle.
Cameron, Sarah	Seattle.
Castilo, Malinda A.	South Park.
Challar, Clara J.	Seattle.
Collins, Emma L.	Seattle.
Concannon, E. Pearl	Seattle.
Condon, Eleanor A.	Seattle.
Conklin, George H.	Renton.
Connor, Edith D.	Ballard.
Cook, Jennie	Seattle.
Cook, Mary E.	Seattle.
Davidson, Mary C.	Seattle.
Dean, Mira	Seattle.
DeBolt, George W.	Seattle.
Dopp, Cora B.	Seattle.
Donaldson, Lillian W.	Seattle.
Dyer, M. Josephine	Seattle.

NAME.	RESIDENCE.
Fagan, Charles.....	Seattle.
Fields, Adeline G.....	Seattle.
Foley, Sarah.....	Seattle.
Fox, Arthur W.....	Seattle.
Frazier, Annie D.....	Ballard.
Frazier, Minnie B.....	Seattle.
Fuller, May.....	Seattle.
Gifford, Annie L.....	Seattle.
Gleason, Helen R.....	Seattle.
Goodspeed, Stella L.....	Seattle.
Griffith, Alice E.....	Seattle.
Hallock, Mattie.....	Seattle.
Hampton, Edgar L.....	Seattle.
Hammer, Charlotte L.....	Seattle.
Hanson, Howard A.....	Pontiac.
Hart, Alice J.....	Seattle.
Hart, Emma C.....	Seattle.
Hartranft, William G.....	Seattle.
Hartranft, Mary A.....	Seattle.
Head, William W.....	Seattle.
Hitchcock, Roscoe N.....	Ballard.
Hepwood, J. Belle.....	Seattle.
Hopkins, Nellie J.....	Seattle.
Hopkins, Kate S.....	Seattle.
Humphries, Viola R.....	Seattle.
Jackling, Josephine.....	Seattle.
Jennings, Lunette.....	Seattle.
Jordan, Julia.....	Seattle.
Klein, Irah H.....	Seattle.
Land, Alice.....	Seattle.
Lawrence, Joseph.....	Columbia City.
Lester, Blanche A.....	Seattle.
Maynard, Myrtle C.....	Seattle.
McCarney, Margaret L.....	Seattle.
McCarthy, William G.....	Seattle.
McConnel, Mary E.....	Seattle.
McIntosh, Annie.....	Seattle.

NAME.	RESIDENCE.
Mills, Henrietta C.....	Seattle.
Moburg, Linnie A.....	Seattle.
Morse, Hattie T.....	Seattle.
Murray, Anna H.....	Seattle.
Nettleton, Lulu.....	Seattle.
Nettleton, Mabel.....	Seattle.
Nickels, Adelaide G.....	Seattle.
Parsons, Flora.....	Seattle.
Parsons, Susan L.....	Seattle.
Pike, Mary E.....	Columbia City.
Price, Beatrice M.....	Seattle.
Quinn, Katherine L.....	Seattle.
Ramm, Mary C.....	Seattle.
Rasmussen, Walter.....	Seattle.
Reitze, Gertrude R.....	Seattle.
Resor, E. Bel.....	Seattle.
Richardson, Hattie M.....	Seattle.
Rice, Elizabeth.....	Seattle.
Russell, Ellen A.....	Seattle.
Sanford, Winnifred.....	Seattle.
Sargent, Albert Alonzo.....	Seattle.
Shumway, Carrie H.....	Seattle.
Sister Mary Alicia.....	Academy of Holy Names.
Sister Mary Alodia.....	Academy of Holy Names.
Sister Mary Helena.....	Academy of Holy Names.
Sister Mary Leonetta.....	Academy of Holy Names.
Sister Mary Milbirge.....	Academy of Holy Names.
Sister Mary Stephana.....	Academy of Holy Names.
Sister Mary Stephen.....	Academy of Holy Names.
Speer, Caroline W.....	Seattle.
Sprague, Roy L.....	Ballard.
Steel, Martha F.....	Seattle.
Storey, Thomas P.....	Fremont.
Susandt, Olive B.....	Ballard.
Sutherland, Esther.....	Seattle.
Sutherland, Flora.....	Seattle.
Sutherland, Lillias.....	Seattle.

NAME.	RESIDENCE.
Talmadge, Rena B.....	Seattle.
Tucker, Lillian	Columbia City.
Thornton, Edith G.....	Seattle.
Turner, Alice G.....	Seattle.
Tyler, Estella.....	Ballard.
Van Cleave, Georgia.....	Latona.
Walker, Ella Fields.....	Seattle.
Wallace, Isabell.....	Seattle.
Warren, Maud.....	Seattle.
Weedin, Charles W.....	Green Lake.
Wheeler, Gertrude.....	Columbia City.
White, Lillie	Seattle.
Young, Edith.....	Seattle.
Young, Essie	Seattle.
Young, Olive E.....	Seattle.
Young, Ethel D.....	Seattle.

SUMMARY OF ENROLLMENT.

Graduate School	10
College of Liberal Arts.....	236
College of Engineering.....	18
Total in regular courses	264
Saturday work.....	124
Total number receiving instruction.....	388

THE ALUMNI ASSOCIATION.

OFFICERS FOR THE YEAR 1898-99.

President, JOHN EDWIN PORTER, B. S., 1894.

Vice President, RALPH DAY NICHOLS, Ph. B., 1896.

Corresponding Secretary, HEARTIE WOOD, A. B., 1898.

Recording Secretary, ANNIE JENNIE PELTON, B. S., B. P.,
1894.

Treasurer, CLARA MAY TALMAGE, Normal, 1895.

Historian, ADELLA M. PARKER, A. B., 1893.

ALUMNI.

1876.

Clara (McCarthy) Wilt, B. S. 1326 E St., Tacoma.

1881.

Helen I. (Hall) Wayland, B. S. Seattle.

Edith (Sanderson) Redfield, B. S. 802 Minor Ave., Seattle.

1882.

Louis F. Anderson, A. B., A. M., Professor of Greek Language
and Literature. Whitman College, Walla Walla, Washington.

George A. Coleman, B. S., machinist. Third Ave. and Colum-
bia St., Seattle.

George H. Judson, B. S. (died May 18, 1891.)

Lelia A. (Shorey) Kilbourne, B. S. Green Lake, Seattle.

1883.

H. O. Chipman, B. S. (died March 4, 1887.)

Carrie V. (Palmer) Denny, B. S. (died Dec. 17, 1891.)

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1884.

Anna F. Sparling, B. S., B. P., teacher. 1013 Eighth Ave., Seattle.

1885.

Agnes M. (Greene) Veazie, B. S. 695 Hoyt St., Portland, Ore.

Louise M. (Root) Dement, B. S. Astoria, Oregon.

Hettie Louise (Greene) Camp, B. S. 515 Bell St., Seattle.

Charles Vancouver Piper, B. S., M. S., Professor of Biology. Washington Agricultural College and School of Science, Pullman, Washington.

Edmond Stephen Meany, B. S., M. S., Professor of History and Instructor in Forestry. University of Washington, Seattle.

John Huntington, B. S., M. D., Physician. Kelso, Washington.

1886.

Elisha H. Alvord, A. B. Seattle.

E. Emma (Clarke) Pratt, A. B., A. M. Woodinville, Wash.

James F. McElroy, B. S., Prosecuting Attorney of King County. Seattle.

Matthew H. Gormly, B. S., Captain of Company B., First Washington Volunteers, U. S. A. Manila, P. I.

1887.

Edwin Victor Bigelow, A. B., A. M., Pastor of the Congregational Church. Cohasset, Massachusetts.

Nellie E. (Powell) Drumheller, A. B. Spokane.

Florence M. Adams, A. B., teacher. Seattle.

James W. Porter, B. S. (died March 3, 1888.)

Edward T. Powell, B. S. Portland, Oregon.

Anna (McDiarmid) McLerman, B. S. Seattle.

1888.

Morris E. Adams, B. S. (died June 8, 1890.)

Charles A. Kinnear, B. S., attorney at law. Seattle.

Ida (Soule) Howes, B. S., M. S., teacher. Hoquiam, Wash.

Depalmer G. Wakefield, B. S. Lowell, Washington.

Anna E. (Willard) Hines, B. S. Seattle.

1889.

Ruth Gatch, A. B. (died Nov. 4, 1889.)

Royal T. Hawley, A. B., Post-Intelligencer office. Seattle.

Charles Clarence Ward, B. S., United States Geological Surveyor. San Jose, California.

Fanny L. (Churchill) Furber, B. S. 501 Roy St., Seattle.

1891.

Francis A. Noble, B. S., attorney at law. Seattle.

1892.

Maude L. Parker, A. B., Instructor in Science, Seattle High School. 1011 Pine St., Seattle.

Daniel Ellis Douty, B. S., graduate student, Clark University. Worcester, Mass.

John A. Kellogg, B. S., attorney at law. Northport, Wash.

Adelaide G. Nickels, B. S., B. P., teacher. Seattle.

Minnie J. Pelton, B. S., M. S., teacher. Garfield and Fifth Ave., North Seattle.

J. Herman Schirmer, B. S. Vancouver, Wash.

1893.

Winnifred (Ewing) Johnson, A. B., B. P. Seattle.

Grace Gatch, A. B. Corvallis, Oregon.

Beatrice A. (Karr) McNeil, A. B., B. P., 1894. Aberdeen, Wash.

Adella M. Parker, A. B., Instructor in Zoology, Seattle High School. 1011 Pine St., Seattle.

F. Otto Collings. New York City.

1894.

Roger Sherman Greene, jr., A. B., B. P. Dawson, N. W. T.

Adelbert Ernest Pierce, A. B. Berkeley, California.

Albert Roderick Sprague, A. B., journalist. Skagway, Alaska.

Helen May (Anthony) Corey, B. S., Ph. G., 1896. Northport, Wash.

Mettie (Heaton) Durham, B. S. North Bend, Wash.

Merrit Ernest Durham, B. S., Principal of Schools. North Bend, Wash.

Annie Jennie Pelton, B. S., B. P., teacher. Garfield and Fifth Avenue, North Seattle.

John Edwin Porter, B. S., Principal of Schools. Bay View, Wash.

Horace Amos Turner, B. S. Seattle.

Delton Alton Ford, B. P. Snohomish, Wash.

1895.

Helen Burrows (Hubbard) Smith, A. B. Seattle.

Anne Rayfield (Parsons) Williams, A. B. San Francisco, Cal.

Earl Robinson Jenner, A. B., Clerk of Superior Court. Seattle.

Erastus Phillips Dearborn, A. B., graduate student, Harvard University. Cambridge, Mass.

Isaac Phillips Morrison, A. B., with W. D. Hoffius, agent of the Illinois Steel Company. 1315 Terry Ave., Seattle.

Harriet Alice Howell, B. P., graduate of Emerson School of Oratory. Omaha, Neb.

Hilda Leonard Waughop, B. P., teacher. Seattle.

Charlotte Ruth Karr, B. P., A. B., 1896, A. M., 1898, Instructor in Ancient Languages, Puget Sound Academy. Snohomish, Wash.

Myra Brewster Clarke, B. P., teacher. Seattle.

Bartie Reginald McElreath, B. P., Principal of Schools. Avon, Wash.

Martha Wiley, B. P.

Kate Skannon Williams, B. P., teacher. Walla Walla, Wash.

1896.

Tom Marie Alderson, A. B. Alaska.

George Merritt Allen, A. B., editor of Klondike Nugget. Dawson, N. W. T.

William Henry Beatty, A. B., graduate student, Harvard University. Cambridge, Mass.

Frederick Richie Bechdolt, A. B., Great Northern Railway service. Tunnel, Wash.

Albert Seldon Burrows, A. B., teacher. Bellevue, Wash.

Harry Farmer Giles, A. B., A. M., teacher. Ballard, Wash.

Lydia Ezma Lovering, A. B., teacher. Fall City, Wash.

John Chisholm Dickson, B. S., Principal of Schools. Buckley, Wash.

John Hoegh Graff, B. S., Northern Pacific Railway Survey in Idaho. Southeast corner of King and 22nd Ave., South Seattle.

John Haan, B. S. (died March 1, 1898.)

Robert Wesley Jones, B. S., Engineer, Great Northern Railway Construction. Tunnel, Wash.

Ina Irena Pratt, B. S., teacher, Port Townsend High School. Port Townsend, Wash.

Francis Ell Burnham Smith, B. S. Dawson, N. W. T.
 ✓ Arthur Joseph Collins, A. B., Ph. B., Principal of Schools.
 Shelton, Wash.

James Edward Gould, Ph. B., Principal of High School. Port
 Townsend, Wash.

Madison Monroe Moss, Ph. B., Instructor in English and
 Rhetoric, Seattle High School. Seattle.

✓ Ralph Day Nichols, Ph. B., attorney at law in Seattle. Colum-
 bia City.

✓ Agnes Ward, Ph. B., teacher. Seattle.

1897.

Arthur Manvel Dailey, Ph. B., Vice Principal of Puget Sound
 Academy. Snohomish, Wash.

Martin Harrais, Ph. B. Dawson, N. W. T.

Arthur Howard Hutchison, B. A., graduate student, Yale Uni-
 versity. Abington, Mass.

Frank Dean Frazer, B. S., A. M. (Princeton), 1898, Tutor in
 Mathematics, University of Washington. Seattle.

Ruth Harrington, B. S., student, University of Halle. Halle,
 Germany.

John Jackol, B. S., Instructor in Sciences, Everett High School.
 Everett, Wash.; Fellow in University of Chicago for 1899-1900.

Theodore Martel Jenner, B. S., miner. 1009 Seventh Ave.
 North Seattle.

Theodore Johnson Ludlow, B. S. 420 Boren Ave., Seattle.

Oscar Albert Piper, B. S., United States Coast Survey. Seattle.

Walter Scott Wheeler, B. S., City Engineer's Office, Seattle.
 Columbia City.

1898.

Clara Josephine Bailey, Ph. B. 2111 Third Ave., Seattle.

Birdie Ira Beals, Ph. B., graduate student, Yale University.
 New Haven, Conn.

Mary Rathbun Button, A. B., Instructor in Latin, Seattle High
 School, Seattle.

Edward Adolph Crueger, B. S., teacher. McMurray, Wash.

Marion Edwards, A. B., attorney at law. Seattle.

Cora Lena Goodman, B. S., teacher. Tacoma.

William Hay Karr, B. S., farmer. Hoquiam, Wash.

Warner Melvin Karshner, B. S., teacher in Covington, Wash.
 Auburn, Wash.

Laura Dell McFarland, Ph. B. Seattle.
Edward McMahon, Ph. B., teacher. Van Asselt, Wash.
Thomas Floyd Murphine, Ph. B., farmer. Stanwood, Wash.
Bettie Parsons, A. B. San Francisco, Cal.
James Smith Sheafe, B. S., Northern Pacific Railway Company.
Tacoma.
Mary Agnes Skinner, Ph. B., teacher. Yesler, Wash.
Charles Wood Sutton, B. S., engineer. Seattle.
Helen Pack Wilson, Ph. B. Seattle.
Heartie Wood, A. B., Instructor in English, Acme Business
College. Seattle.

NORMAL GRADUATES.

1880.

Adda L. George. Albany, Oregon.
Clara E. (Lombard) Colkett. Seattle, Wash.
Luella J. (Wittenmyer) Hurd. Juanita, Wash.

1881.

Flora A. (Phelps) Beeman. Lynden, Wash.
Mattie S. (Wade) Kyes. Kent, Wash.

1882.

Lizzie S. (Anderson) Davis. Tacoma.
Addie J. (Plummer) Mathiewson. Lodi, California.

1884.

Louise M. (Root) Dement, B. S., 1885. Astoria, Oregon.

1885.

Fannie E. Emery. Seattle.
Iva J. (Jones) Kendrick. 3346 Clay Street, San Francisco,
Cal.
Hessie E. (Cox) Hastings. Seattle.
Sarah Elizabeth (Ward) Meany. Seattle.

1886.

Hattie M. Kellogg, teacher. Seattle.
Colinta Cabanski. Seattle.

1887.

Anna L. Cristopher, teacher. Marion, Oregon.

Florence A. (Ledger) Whitford. Seattle.

Gladys Austin, teacher. New Whatcom.

Thomas Hayton, merchant. La Conner.

Albert W. Buddress, attorney at law. Port Townsend.

1888.

Nellie (Clayton) Sands. Tacoma.

Jay D. Dean, editor of The Washingtonian. Hoquiam, Wash.

Rebecca (Gaines) James. Sonoma, Cal.

Josie Jackling, teacher. Seattle.

Alice A. (Parker) Carter. Honolulu, H. I.

Ida (Soule) Howes, B. S., 1888, M. S., 1895, teacher. Hoquiam, Wash.

1889.

Louise H. (Monroe) Walton. Tacoma.

Agnes M. (Goddard) Gordon. Seattle.

1890.

Beatrice A. (Karr) McNeil, A. B., 1893, B. P., 1894. Aberdeen, Wash.

Lulu J. Thompson. Eagle City, Alaska.

1891.

Isabel R. (Dikeman) Pear. Sprague, Wash.

Isabel (McDiarmid) Winter. Hoodspport, Wash.

Helen E. Taylor. Seattle.

1892.

Marguerite A. Baldwin, teacher. Seattle.

Vesta M. Baldwin, teacher. Seattle.

Harriet P. Griswold. Seattle.

Maude L. Parker, A. B., 1892, Instructor in the Sciences, Seattle High School. 1011 Pine St., Seattle.

Minnie J. Pelton, B. S., 1892, M. S., 1895, teacher. Garfield and Fifth Ave., North Seattle.

Lillian (Keen) Le Ballister. Seattle.

1894.

Carrie Grimes Davis, teacher. Kent, Wash.

Olive May Hubbard, teacher in Sumner School. Puyallup.

James Frank Medearis, Lieutenant Colonel of Arkansas Volunteers, United States Army.

1895.

Ingie Marie Lee, teacher. Everett, Wash.

Rena Bee Talmadge, teacher. Denny-Fuhrman Addition, Seattle.

Clara May Talmadge, teacher. Denny-Fuhrman Addition, Seattle.

Alice Penfield, teacher. Eighth and Pine Streets, Seattle.

Charlotte Ruth Karr, B. P., 1895, A. B., 1896, A. M., 1898, Instructor in Ancient Languages, Puget Sound Academy. Snohomish, Wash.

1896.

Lois Medora Adams, teacher. Snohomish, Wash.

Albert Selden Burrows, A. B., 1896, teacher. Bellevue, Wash.

Margaret Ellen Crane, teacher. Seattle.

Ollie Doke (Davis) Shoudy. Roslyn, Wash.

John Chisholm Dickson, B. S., 1896, Principal of Schools. Buckley, Wash.

Madison Monroe Moss, Ph. B., 1896, Instructor in English and Rhetoric, Seattle High School. Seattle.

Ina Irene Pratt, B. S., 1896, Instructor in Port Townsend High School. Port Townsend, Wash.

Francis Ell Burnham Smith, B. S., 1896. Dawson, N. W. T.

Agnes Ward, Ph. B., 1896, teacher. Seattle.

Sarah Price Warren, teacher. Seattle.

1897.

Arthur Manvel Dailey, Ph. B., Vice Principal of Puget Sound Academy. Snohomish, Wash.

Grace Gatch, A. B., 1893. Corvallis, Oregon.

Ruth Harrington, B. S., 1897, student. Halle, Germany.

John Edwin Porter, B. S., 1894, Principal of Schools. Bay View, Wash.

1898.

Clara Josephine Bailey, Ph. B., 1898. 2111 Third Ave., Seattle.

Birdie Ira Beals, Ph. B., 1898, graduate student, Yale University. New Haven, Conn.

Marion Edwards, A. B., 1898, attorney-at-law. Seattle.

Cora Lena Goodman, B. S., 1898, teacher. Tacoma, Wash.
Warner Melvin Karshner, B. S., 1898, teacher. Seattle.
Laura Dell McFarland, Ph. B., 1898. Seattle.
Mary Agnes Skinner, Ph. B., 1898, teacher. Yesler, Wash.
James Edward Gould, Ph. B., 1896, Principal of the High School. Port Townsend, Wash.

GRADUATES IN PHARMACY.

1896.

Helen May (Anthony) Corey, B. S., 1894, Ph. G. Northport, Wash.
Eva Maud Campbell, Ph. G. Seattle.
Arthur Clifton Crookall, Ph. G., A. B., 1899; student in Cooper Medical Institute. San Francisco, Cal.
Virginia Mackay Elder, Ph. G., druggist. Chelan, Wash.
Charles Sumner Leas, Ph. G. Honolulu, H. I.
Thomas Warner Lough, Ph. G., Instructor in Chemistry, University of Washington. Seattle.
James Miller McMurry, Ph. G., photographer. Port Townsend, Wash.
Harry Lowther Richardson, Ph. G., A. B., 1899. New Whatcom, Wash.
August Christian Rosenfeldt, Ph. G., in charge of the Pheasant Pharmacy. Chehalis, Wash.
Walter Rutz, Ph. G., proprietor of Lawrence Street Pharmacy. Port Townsend, Wash.
Harold Walter Walton, Ph. G., druggist. Leadville, Colorado.

1897.

Arthur Willis Barton, Ph. G. Seattle.
Rosamonde Lucile Crane, Ph. G. Seattle.
Frank Price Giles, Ph. G., A. B., 1899. Fremont, Wash.

BUSINESS GRADUATES.

1880.

W. John Colkett, assistant postmaster. Seattle.

1881.

David E. Bigelow, mechanic. Berkeley, California.

1883.

John Huntington, B. S., 1885, M. D. (University of Oregon), 1888;
physician. Kelso, Wash.

1887.

Malinda A. (Watson) Williams. Spokane, Wash.