

Catalogue

1897-1898

Announcements

1898-1899

REGISTRAR'S
OFFICE
ENSLONG

University of Washington.

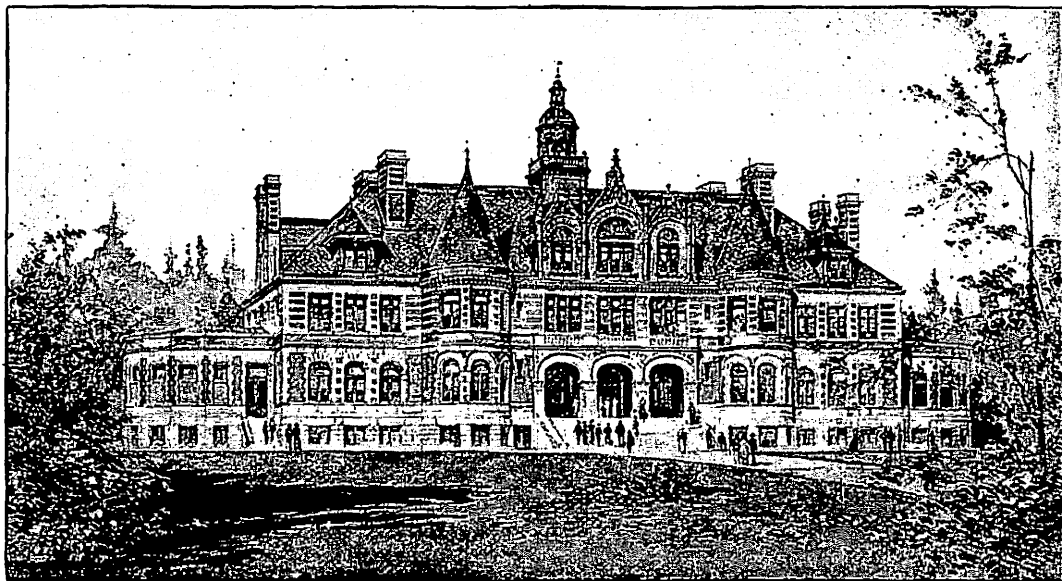
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Catalogue for 1897-98.

Announcements for 1898-99:

*See pg 116 - 117
Notes from letter of 5/10/94
written by President Gates.*



UNIVERSITY OF WASHINGTON.

University of Washington,

Seattle, Washington,

✧ CATALOGUE ✧

For 1897-98.

✧—ANNOUNCEMENTS—✧

For 1898-99.

OLYMPIA, WASH.:

GWIN HICKS, . . . STATE PRINTER.

1898.

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CALENDAR FOR 1898-99.

1898.

Baccalaureate Sermon	May 22.
Examinations for admission.....	May 24 and 25.
Class and Alumni Day.....	May 24.
Commencement	May 26.

AUTUMN TERM.

Examinations for admission.....	Sept. 12 and 13.
Registration Day	Sept. 13.
Term begins	9 A. M. Sept. 14.
Term ends	Noon, Nov. 24.
Thanksgiving recess.....	Nov. 24-28.

WINTER TERM.

Term begins.....	9 A. M. NOV. 28.
Christmas vacation	Dec. 23, Jan. 2.

1899.

Term ends.....	Evening, March 1.
Spring recess	March 2-6.

SPRING TERM.

Term begins	9 A. M. March 6.
Baccalaureate Sermon	May 28.
Class and Alumni Day	May 30.
Commencement	June 1.

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THE BOARD OF REGENTS.

Hon. GEORGE H. KING, *President*, Seattle, . Term expires, 1902.
Hon. RICHARD WINSOR, Sr., . Seattle, . Term expires, 1899.
Hon. JOHN W. HOYT, Seattle, . Term expires, 1899.
Hon. ALDEN J. BLETHEN, Seattle, . Term expires, 1902.
Hon. C. M. EASTERDAY, Tacoma, . Term expires, 1902.
Hon. JAMES Z. MOORE, Spokane, Term expires, 1904.
Hon. L. D. GODSHALL, Everett, . Term expires, 1904.

COMMITTEES OF THE BOARD.

Executive—Regents KING, WINSOR and HOYT.

Instruction—Regents WINSOR, HOYT and BLETHEN.

Library, Cabinet and Apparatus—Regents HOYT, BLETHEN and EASTERDAY.

Building and Grounds—Regents EASTERDAY, MOORE and WINSOR.

Reports and Publications—Regents GODSHALL, MOORE and HOYT.

FACULTY AND OTHER OFFICERS.

[Arranged in groups in order of seniority of appointment.]

† FRANK PIERREPONT GRAVES, ~~Ph.D., LL.D.~~ ^{Ph.D., LL.D.}, PRESIDENT.

CHARLES FRANCIS REEVES, M. S., ^{Dean of Faculty} ~~Acting President~~

Ind - Professor of Modern Languages. Angeline street, Columbia City.

~~WILLIAM FRANKLIN EDWARDS, B. S., PRESIDENT.~~

~~MARK BAILEY, JR., A. M.,~~ ^{Carl Morner, Ph.D.,}
Professor of Ancient Languages.

~~CHARLES HILL, M. S.,~~ ^{H.R. Foster Ph. B., M. S.}
Professor of Biology. Broadway, Brooklyn addition.

EDWARD JOHN HAMILTON, D. D., S. T. D.,
Professor of ~~Mental Philosophy~~ ^{Philosophy}, and Oratory. Broad-
way, Brooklyn addition. 116 East Lake Ave.

ADOLPH FREDERIC BECHDOLT, A. M., Ph. D.,
Professor of English. 741 Bellevue avenue.

HENRY LANDES, A. M.,
Professor of Geology and Mineralogy. Summit avenue, Brook-
lyn addition.

HENRY COFFINBERRY MYERS, Ph. D.,
Professor of Chemistry. Brooklyn addition. *Broadway*

JOHN HENRY WHOLLEY, LIEUT., U. S. A.,
~~Professor of Military Science and Tactics and Instructor in~~
~~Mathematics and Civil Engineering.~~ ~~Cor. East Denny way~~
~~and Bayston Avenue~~

* Election to take effect August 1, 1893.

+ Term ended October 1, 1897.

‡ Has leave of absence for one year from August 1, 1898.

§ Term expires July 31, 1898. Chair combined with that of Philosophy and Education.

Appointment as instructor in Mathematics and Civil Engineering expires July 31, 1898.

~~d~~ EDMOND STEPHEN MEANY, B. S.,

Professor of American History and Lecturer on Forestry. Summit avenue, Brooklyn addition.

JAMES ALLEN SMITH, Ph. D.,

Professor of Political and Social Science and History.

~~ADAM~~ THADDEUS LINCOLN BOLTON, Ph. D.

*Alex B. Liffey
Professor of Philosophy and Education. - Broadway, Brooklyn addition*

ARTHUR ~~X~~ RANUM, A. B.,

Professor of Mathematics and Astronomy. 1108-6th av.

~~f~~ ALMON H. FULLER, M. C. E.

Professor of Engineering. - Summit av. Brooklyn addition

~~ARTHUR HERMAN BEALS, Ph. D.,~~

~~*Professor of Philosophy and Education.*~~

CAROLINE HAVEN OBER,

Assistant Professor of Modern Languages. 1108 Sixth Avenue.

THOMAS EATON DOUBT, M. A.,

Assistant Professor of Physics. - Broadway, Brooklyn addition

VICTOR J. STALEY, Ph. D.,

Instructor in Latin and Greek. 3 Tremont Avenue,

MARTHA LOIS HANSEE, A. M.,

Instructor in Latin, Greek and English. Chester Street, Brooklyn Addition.

CHARLES WILCOX VANDER VEER,

Instructor in Physical Culture and Hygiene. 1508 Fourth Avenue.

J. B. WALKER, A. M.,

Instructor in Mathematics and Physics. Columbus av., Brooklyn addition

TREVOR CHARLES DIGBY KINCAID,

Tutor and Laboratory Assistant in Biology. Broadway, Brooklyn Addition.

^a Term expires July 31, 1898.

^b Term expires July 31, 1898.

^c Election to take effect August 1, 1898.

^d Election to take effect August 1, 1898.

* ~~DANIEL ELLIS DOUTY, B. S.,~~

~~Tutor and Laboratory Assistant in Physics.~~ Brooklyn Addition.

† ~~HENRY HAVELOCK HINDSHAW, B. S.,~~

~~Curator of the Museum.~~ Broadway, Brooklyn Addition.

Res.

CLARK DAVIS,

Registrar and Librarian. Broadway, Brooklyn Addition.

THOMAS WARNER LOUGH, Ph. G.,

Tutor and Laboratory Assistant in Chemistry. Fremont.

Orsey A. Lyon, A.B.
JAMES CONSTABLE,

& mining
~~Laboratory Assistant in Geology.~~ Broadway, Brooklyn Addition.

* Term expires July 31. 1898.

† Term expired March 31. 1898.

GENERAL INFORMATION.

HISTORY.

By an act of congress approved July 17, 1854, two townships of land were granted to the Territory of Washington for the purpose of establishing a University. This land was placed under the direction of the legislature of the territory, which enacted, January 29, 1855—

That the University shall be and hereby is located and established at Seattle, in the county of King; and there is hereby located and established a branch of said University on Boisfort Plains, in Lewis county, to be placed upon the same footing with respect to funds and all other matters as the University located at Seattle, in King county.

The act divided the two townships of land granted by congress equally between the University at Seattle and the branch at Boisfort Plains.

On the 30th of January, 1858, the territorial legislature enacted —

That the Territorial University be and the same is hereby located on the Cowlitz Farm Prairie: *Provided*, A good and sufficient deed to 160 acres of land, on an eligible part of said prairie, be first executed to the Territory of Washington.

This act also applied the two townships of land to the support and endowment of this University, and repealed the act of January 29, 1855. Here the matter rested until the session of the territorial legislature held in the winter of 1860-61, when an act was passed entitled "An act to relocate the Territorial University." In this it is declared —

"That the Territorial University be and the same is hereby located and established at Seattle, in King county: " *Provided*, a

good and sufficient deed to ten acres of land eligibly situated in the vicinity of Seattle, be first executed to the Territory of Washington for University purposes."

The proceeds of the two townships of land granted by congress were applied to the support and endowment of this University; and the act of January 30, 1858, locating it on Cowlitz Farm Prairie was repealed. During these six years of vacillation by the territorial legislature, nothing was done on any of the chosen sites in the way of erecting buildings and providing instructors.

On January 11, 1861, Daniel Bagley, John Webster, and Edmund Carr were appointed by the legislature to choose a site for the University, select and sell the lands granted by congress, clear the grounds, and erect suitable buildings. These commissioners chose the ten-acre site given to the territory by A. A. Denny, C. C. Terry, and Edward Lander. Of this tract about eight acres was the gift of Mr. Denny and the remainder of the other two. The tract at that time was a dense forest of fir timber, but under the direction of the commissioners, it was cleared and fenced. A part of the University lands was sold and the proceeds applied to the erection of buildings. On the 20th of May, 1861, the corner stone of the University building was placed in position with appropriate ceremonies.

In the autumn of 1862 the buildings were completed, and during the winter the institution was opened.

The first building erected was a strong, commodious structure for that early day, and was at that time the best school building in the Northwest. It was occupied by the University until September 4, 1895.

By an act of the legislature of the State of Washington, approved March 14, 1893, the University was re-located on a tract of 355 acres, between lakes Union and Washington, in the city of Seattle, and this was occupied September 4,

1895. The site has a water frontage on both lakes and is adorned by a natural growth of forest trees, except where removed to make way for buildings and athletic grounds. The buildings are about four miles from the center of Seattle, and can be reached by rail, by street car, by road, or by water. Seattle is a city of 65,000 inhabitants.

GOVERNMENT.

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, to hold office for a term of six years from the second Monday in March next succeeding their appointment. State laws governing the University are found in Title IV of the Code of Public Instruction.

ENDOWMENT AND SUPPORT.

The University of Washington is a state institution, and as such is maintained by the commonwealth. It has also been richly endowed with lands by the government. There still remains of the congressional grant of 1854 about 3,000 acres of valuable lands, and 320 acres of land near the city of Tacoma, acquired by purchase about thirty years ago.

The old site of ten acres in the center of the city of Seattle forms an important portion of the resources of the institution. Besides the above property, the following section from the law approved March 14, 1893, explains another important addition to the endowment of this University :

"SEC. 9. 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."

The powers and duties of the Board of Regents in the matter of bequests and gratuities are set forth in the follow-

ing clause taken from Section 186 of Chapter 1 of Title IV of the Code of Public Instruction :

"The Board of Regents is authorized to receive such bequests or gratuities as may be granted to the 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."

BUILDINGS.

The administration building is a commodious brick and stone structure, with recitation rooms, laboratories, museum, assembly hall, library, business offices, and society and auxiliary rooms. The main portion of the building is 244 feet long by 70 feet wide, and two and one-half stories high, with finished basement. Extending to the rear from the center is a wing 91 feet long by 54 feet wide, containing the assembly hall, the library, and the museum. The building covers 20,000 square feet of ground surface. The style of architecture is French renaissance. The building is furnished with the best known facilities for heating and ventilating. It is believed to be suitable for the accommodation of 600 to 800 students.

The gymnasium and drill hall building contains a gymnasium, 45x80 feet, and a drill hall, 80x120 feet, with rooms for the cadet companies, and with dressing rooms and baths for men and women respectively.

A substantial observatory building of stone and brick has been erected on the highest point of the campus in the rear of the main building.

The University has its own steam heat and pumping plant, in which can be installed all electrical and other mechanical apparatus as required. This plant provides an in-

dependent water supply, and the system of distribution affords plenty of pure water.

GROUNDS AND ABORETUM.

The University grounds cover about 355 acres. From an elevation of 225 feet on the north line, a gradual incline comes down to Lake Union on the south, and a series of steep bluffs and ravines forms the Lake Washington side on the east. Large clearings have been made about the buildings, and much of the remaining forest has been cleared of dead timber and brush, leaving a few groups of large firs and acres of young forest growth embracing nearly all the species of trees indigenous to Western Washington. A few trees have been set out among the wild growth and a nursery of young trees started.

LIBRARY.

The room used for the library is 91 x 54 feet. At the close of the college year, 1896-97 (May 27, 1897), the library contained 6,061 bound volumes and 7,456 pamphlets. Between that date and the close of the college year 1897-98, there were added to the library 1,575 bound volumes and 405 pamphlets; so that at present there are 7,636 bound volumes and 7,861 pamphlets. The library is a depository for the publications of the United States government.

The leading periodicals, foreign and American, representing the various departments of the University, in addition to about thirty periodicals from various parts of the state, are to be found in the library and reading room.

During the past year the card system of catalogueing has been introduced, and students have access to all the books.

In addition to this library the students have free access

to the public library of the city of Seattle, which contains 14,100 volumes, exclusive of pamphlets.

DENNY HALL.

The assembly hall of the University embraces what would have been the first and second floors of the wing of the main 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 the first campus to the University when it was located in Seattle in 1861.

MUSEUM.

The museum occupies that portion of the wing of the main building below Denny Hall. It is 91 feet long by 54 feet wide, lighted on three sides, and fitted up with 142 feet of wall cases, 300 feet of upright cases and two glass partitioned rooms for the display of large animals, etc. Some good material was obtained from the World's Fair to form the nucleus of a collection in the departments of botany, forestry, ethnology, and mineralogy. A collection of Paleozoic fossils made by Mr. Hindshaw in Illinois and Indiana, with more recent forms from the neighborhood of Seattle, makes a good beginning in paleontology. Large collections of shells, crabs, and other invertebrate forms of life from Puget Sound have been made and are being installed. Accessions to the collection of local fossils and minerals are being received and are increasing the knowledge of a very important and little known field.

The birds and mammals of Washington are represented

by a small collection of mounted specimens and skins. Collections of insects and plants are being made by Mr. Kincaid and others. Animals and plants peculiar to this district are being preserved in large numbers for exchange with other museums for typical forms not obtainable here.

LABORATORIES.

PHYSICAL.

The Physical laboratory consists 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; (2) a workshop 30 x 25 feet; and (3) a photometer room 28 x 7 feet.

The laboratory is supplied with the most modern apparatus from American and European makers. Among the pieces of apparatus may be mentioned (1) an Attwood's machine with friction wheels and electro-magnetic trip and time attachments, Bertram's apparatus for the laws of machines, a fine balance and weights, a centrifugal machine with numerous attachments, a Bianchi's air pump with all necessary accessories, a regular clock with mercury compensation pendulum electrically connected to a Morse sounder and double pen writing register, and a cathetometer; (2) a helmholtz double siren, an apparatus with electro magnetic arrangement for producing continuous vibrations of tuning forks for Lissajous' curves, an apparatus for studying sounds by the use of manometric flames; (3) a spectro-goniometer, a polarimeter, a refractometer, a direct vision spectroscope with attachments, an optical bench with accessories for the laws of reflection, refraction, polarization, interference, diffraction, and photometry, and a complete projection lantern with all necessary attachments; (4) Melloni's apparatus complete with thermo pile and galvanometer, a Le Chalelier electric pyrometer, standard ther-

mometers, Hoffman's apparatus complete, Victor Myer's vapor density apparatus, Beckman's apparatus and parabolic reflectors; (5) two 10,000-ohm standard resistance boxes, a standard Wheatstone bridge, a Kohlrausch bridge, a Thompson galvanometer with 10,000 ohms resistance, Hartman & Brann's complete apparatus for electrolytic resistance, a Kohlrausch variometer, a standard microfarad condenser, a Thompson-Mascart electrometer, a Wimshurst influence machine, an inductive coil giving five-inch spark, a fine set of Crooke's tubes, a twenty-five cell storage battery with normal capacity of fifteen amperes, a Lummer-Brodhem photometer, a Westinghouse motor and generator with gravity system ammeter and voltmeter. 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 electrical engineering purposes.

The workshop contains a lathe and attachments, a scroll saw with wood turning attachments, a tool grinder, a crystal cutting and polishing machine, a forge, and a carver's work-bench made heavy enough to answer as a tool-bench as well. Students are encouraged to construct accessory apparatus in the shop.

CHEMICAL.

The three laboratories devoted to chemistry alone were opened at the beginning of University year in 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 entirely free from fumes or disagreeable odors, and a uniform temperature is 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 of 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 re-agents 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 varied 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 their 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 the private laboratory of the instructor and also 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 pharmaceutical 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 clear 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 qualitative 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 are very large and particularly adapted to research work; there are desks here for twenty-five students.

All these laboratories are supplied with balances for rough weighing, as well as finer ones for quantitative work. The lecture room is just above laboratory E, is exceptionally well lighted and ventilated, and modern in all respects. The seats are of the most approved pattern, and accommodate about one hundred students. This room is convenient to all three laboratories. At present all apparatus, glassware, chemicals, etc., as well as instruction and the lecture courses, are gratis, students being expected simply to replace any article broken and being held responsible for apparatus taken from the stock room, and the condition of the desks.

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. These laboratories 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 consist of thirty-one compound microscopes with one-sixth and two-third inch

objectives; a one-twelfth inch oil immersion lens (Leitz); ten dissecting microscopes with double lenses (Bausch and Lomb, series W); improved Abbe camera; Naples water bath; Minot's microtome, incubator, stains, chemicals, and the glassware necessary for the study of microscopy.

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

MINERALOGICAL AND PETROGRAPHICAL.

This laboratory is in the basement, and is furnished with five mineral cabinets and three large tables with tile tops. The tables have gas fittings for blow-pipe work, and will accommodate at one time twenty-four students. For work in blow-pipe analysis there is ample equipment in the way of blow-pipes, burners, mortars, hammers, magnets, and chemical re-agents. There is a choice collection of over 200 important species of minerals for the course in mineralogy. The collection of rocks for the study of lithology is large, embracing nearly all of the known varieties. For work in petrography the laboratory is fitted with a Bausch and Lomb petrographical microscope, and a cutting and grinding lathe run by an electric motor. The equipment for assaying consists of two complete Hoskin's gasoline furnaces, a com-

bined crucible and muffle furnace, a Bosworth ore crusher, two bucking-boards and rubbers, two Becker pulp balances, and a very fine Troemner button balance.

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.

The present equipment consists of an excellent refractor telescope of six inch clear aperature, equatorially mounted. The optic parts were made by Broshear, and the mountings by Warner & Swasey. The instrument is furnished with eye-pieces ranging in power from fifty to four hundred, a fine solar eye-piece by Broshear, and a filar position micrometer. When the equipment of the observatory is complete it will contain, besides the instruments enumerated above, a transit instrument, a chronograph, chronometers, clocks, etc. All these are to be added as soon as practicable.

GYMNASIUM AND ARMORY.

The gymnasium is 40x80 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.

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.

There are two literary societies in the University, the Aletheuonian and the Philomathian, which afford opportunities to the student for improvement in debate, oratory, criticism, correct methods of conducting deliberative bodies, and a knowledge of parliamentary usages.

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 to new students at the beginning of each year, and are active in assisting in many ways and in making them feel at home in their new surroundings.

The Athletic Association is an organization of students. Its aim is to encourage all healthful and legitimate sports. This association receives every possible assistance from Mr. Vander Veer, who is at the head of the department of Physical Culture and Hygiene.

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

The Oratorical Association is an organization of students for the cultivation of interest in elocution and oratory. It is a member of an intercollegiate association, under whose

direction an annual oratorical contest is held, wherein each institution is represented by one speaker.

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. This year the offer was limited to the University of Washington, but was opened to all students irrespective of classes; also the sum offered was divided into a first and second prize of \$75 and \$25, respectively.

The Classical Association is an organization of students of the ancient languages, the object being to cultivate an interest in philological, archeological and linguistic subjects.

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 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.

There are other organizations of University officers and students, whose objects are the investigation and discussion of topics of interest that fall outside of regular classroom work.

EXPENSE OF STUDENTS.

Tuition is free to all residents of the State of Washington in all departments of the University.

The fees charged to graduates are \$5 for those receiving

a baccalaureate or higher degree, and \$3 for those receiving a normal diploma.

In the laboratories students are required to purchase their own material.

No dormitories or boarding halls are provided by the University, but students readily find accommodation in the homes of Seattle citizens. In the past the expense of board and lodging with private families has ranged from \$15 to \$22 per month. Some students have organized clubs, and thus reduced the expense of living very materially. By the exercise of a little care and economy, the student can keep the expense for board, lodging and books within \$150 or \$250 per year.

The Registrar is always ready to give information and assistance to those seeking home places for the collegiate year.

Those desiring to attend the University who are not residents of the State of Washington are required to pay a tuition fee of \$10 per term.

Many students who have found it necessary to support themselves while attending the University, have been enabled to do so by securing occupation in various ways in the city. There is a limited amount of work which the Board of Regents has decided to give the students. This includes assistance in the library, the laboratories, the engine rooms, and in janitor work.

LABORATORY FEES.

Fees for the use of materials and for replacing such apparatus as may be worn out by constant use, or broken by students, are as follows:

IN THE CHEMICAL LABORATORIES.

At the beginning of each school year each student will make a deposit of ten dollars with the Professor of Chem-

istry before being assigned room in any of the Chemical laboratories.

From the deposits of first year students (courses a, b and c) five dollars will be deducted to defray the actual cost of chemicals and from the remainder, breakage at the actual cost of apparatus and glassware.

Second year students (and for the following years) will pay three dollars for chemicals and for breakage as above.

IN THE OTHER LABORATORIES.

A deposit of five dollars will be required at the beginning of each year in the Physical Laboratory.

In the Mineralogical Laboratory the fees will be two dollars per term for students taking the regular course and five dollars per term for those taking special courses.

In the Biological Laboratory the fees will be one dollar each for courses o, oo and ooo, and two dollars per course for courses 1 to 9 inclusive. Fees for special laboratory courses subject to the nature of work done.

In each case any unexpended portion of the deposit will be returned at the end of the school year.

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 autumn, 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 autumn term.

ORGANIZATION OF THE UNIVERSITY.

The University of Washington embraces—

THE COLLEGE OF LITERATURE, SCIENCE, AND THE
LIBERAL ARTS.

THE COLLEGE OF ENGINEERING.

THE COLLEGE OF MINES AND MINING.

THE COLLEGE OF CHEMISTRY.

THE DEPARTMENT OF MILITARY SCIENCE AND TACTICS.

The courses leading to baccalaureate degrees in the several colleges are arranged to cover a period of four years.

In the College of Literature, Science, and the Liberal Arts, are given the degrees of Bachelor of Arts, Bachelor of Philosophy and Bachelor of Science, Master of Arts, Master of Science, and Doctor of Philosophy.

In the College of Engineering are given the degrees of Bachelor of Science, Civil Engineer, Mechanical Engineer, and Electrical Engineer.

In the College of Mining and Metallurgy are given the degrees of Bachelor of Science, Mining Engineer, and Metallurgical Chemist.

In the College of Chemistry are given the degrees of Bachelor of Science, Pharmaceutical Chemist, and Analytical Chemist.

The College of Medicine and Surgery, and the College of Law are not yet organized.

Work in the Department of Military Science and Tactics is required of all able-bodied male students in the University during the first two years of their University residence, and young ladies are required to take the work in the Department of Physical Culture and Hygiene, under the same conditions.

**THE COLLEGE OF
LITERATURE, SCIENCE,
AND THE
LIBERAL ARTS.**

THE COLLEGE OF LITERATURE, SCIENCE, AND THE LIBERAL ARTS.

ADMISSION.




The Faculty and the Board of Regents of the University have arranged the following requirements and provisions for the admission of students:

ADMISSION BY EXAMINATION.

Candidates for admission must be at least fifteen years of age and must present satisfactory evidence of good moral character. They must bring credentials from their last instructor or from the last institution of learning with which they have been connected.

Unless admitted on diploma from an accredited school (p. 44), any student who becomes a candidate for a degree must pass an *examination in the subjects of some one of the four groups of subjects described below. These groups correspond respectively to the Classical, Latin, Scientific, and English courses of the high schools of the state.

The subjects from which these groups are made up are—

- I. ENGLISH. ✓
- II. MATHEMATICS. ✓
- III. AMERICAN HISTORY. ✓
- IV. CIVICS. ✓
- V. BOTANY. 
- VI. PHYSICS. 
- VII. CHEMISTRY. 

*For date of examination. see Calendar.

- VIII. GERMAN. ✓ 1 year
IX. FRENCH.
X. ELEMENTARY LATIN. ✓
XI. GREEK.
XII. ADVANCED PREPARATORY LATIN. ✓
XIII. SOLID GEOMETRY AND PLANE TRIGONOMETRY. ✓
XIV. GENERAL HISTORY. ✓
XV. ENGLISH HISTORY.
XVI. GRECIAN AND ROMAN HISTORY.
XVII. DRAWING.
XVIII. ZOOLOGY.
XIX. PHYSICAL GEOGRAPHY AND GEOLOGY.
XX. PHYSIOLOGY.
XXI. ASTRONOMY.

Group I includes subjects I to VI and X to XII, inclusive, and one other subject selected from the remainder.

Group II includes subjects I to VI, inclusive, VIII or IX, X, XII, and one other subject selected from the remainder.

Group III includes subjects I to VI, inclusive, VIII or IX, and four other subjects selected from the remainder.

Group IV includes subjects I to VI, inclusive, and five other subjects selected from the remainder.

Before entering upon the examination each candidate must present his credentials to the President at his office, where he will receive written permission to enter upon the examination if his credentials are found satisfactory. This applies also to special students.

For admission to advanced standing see page 41.

For admission of special students see page 46.

SUGGESTIONS FOR PREPARATION.

I—ENGLISH.

A short composition, correct in spelling, punctuation, paragraphing and grammar, upon a subject announced at the time of the examination; and taken from one of the following works, to be selected by the applicant for examination: Shakespeare's "Merchant of Venice," Longfellow's "Evangeline," Scott's "Lay of the Last Minstrel," Burns' "The Cotter's Saturday Night."

The texts used are selected from the "English Classics Series," published by Effingham, Maynard & Co., and should be studied according to the following plan:

1. *Merchant of Venice*.—Give special attention to the examination papers given by Kellogg in his text, and also to Shakespeare's versification. The plan of study as given in the book should be carefully followed. Applicants will also be required to analyze sentences selected from the play.

2. *Evangeline*.—Study the life of Longfellow, the critical opinions and the meter. Be prepared to paraphrase. Study the foot notes with great care.

3. *Lay of the Last Minstrel*.—Write a biographical sketch of the author from memory. Study the meaning of the words as given in the notes. Analyze the sentences and scan the verse.

4. *The Cotter's Saturday Night*.—Give the biography of Burns. Note the peculiar forms of the words as given by Burns in the Scotch dialect.

Full preparation in English is designed to be the equivalent of the grammar and composition, rhetoric and English literature of the state course for high schools. See page 44.

II — MATHEMATICS.

1. *Algebra*.—Acquire a thorough knowledge of the elements of algebra through quadratic equations. Special attention should be given to factoring and the theory of exponents. 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 but not required.

VII — CHEMISTRY.

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

VIII — 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.

IX — FRENCH.

French Grammar as outlined in Edgren's French Grammar, or an equivalent, including the translation of not too difficult exercises from French into English, and *vice versa*; and the reading of about 150 pages of standard French prose.

X—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 & 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.

XI—ADVANCED PREPARATORY 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 knowledge in Latin syntax and in the Latin modes of expression, as also his fund of vocabulary.

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*.

XII—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, connecting 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 and II 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 in syntax.

XIII.—SOLID GEOMETRY AND PLANE TRIGONOMETRY.

Books VI, VII, and VIII of Beman and Smith's *Geometry* should be carefully read, giving particular attention to the exercises.

In plane trigonometry the student must show his ability to compute with logarithms accurately and rapidly; to solve the plane triangle and transform trigonometrical formulæ with ease. Loney's, Lock's, and Chauvenet's *Trigonometries* are recommended.

XIV—GENERAL HISTORY.

Myer'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.

XV—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.

XVI—GRECIAN AND ROMAN HISTORY.

Prepare thoroughly in Grecian history through the period of Alexander the Great, with the geography connected therewith, and in ancient Roman history and development of the Roman constitution. Myer's and Allen's text-books are recommended.

XVII—DRAWING.

The student must demonstrate on paper evidence of at least one year's daily exercise in freehand drawing. He should also bring his school work with him as further evidence.

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—PHYSICAL GEOGRAPHY AND GEOLOGY.

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.

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.

XXI—ASTRONOMY.

The student will be examined in work based upon Young's General Astronomy.

ADMISSION FROM ACCREDITED SCHOOLS.

Upon request of the principal of any public school in the State of Washington whose course of study embraces in kind and extent the subjects required for admission to the University, the President or 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.

Principals desiring an examination of their schools should make application not later than the first day of March of each year.

Two-year and three-year high schools whose courses of study correspond to the first two or the first three years of any one of the four groups of study adopted by the State Board of Education for the high schools, may be examined by the President or a Committee of the Faculty, and if found satisfactory the graduates may be admitted without examination in those subjects of groups (I, II, III, or IV, pages 33-4,) which correspond to the work of the school.

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

Students admitted as above from two-year high schools will be required to take the following courses in the University, without credit toward graduation, before they will be considered as admitted to the freshman class.

1. Those admitted by subjects from group I will take during the first year English 0, 00, 000; Physics 0, 00, 000; Latin 0, 00, 000; and during the second year Greek 0, 00, 000; Chemistry 0, 00, 000; Biology 0, 00, 000; Mathematics 0, 00; and Political Economy 0.

2. Those admitted by subjects from group II will take the same studies as students admitted by subjects in group

I, except that German 1, 2, 3, will be substituted for Greek 0, 00, 000.

3. Those admitted by subjects from group III will take the same studies during the first two years as the students admitted by subjects from group I, except that German 1, 2, 3 will be substituted for Greek 0, 00, 000, and History 0, 00, 000 for Latin 0, 00, 000.

4. Those admitted by subjects from group IV will take the same studies as those admitted by subjects from group III.

Students admitted from three-year high-schools will be required to take the following courses in the University, without credit toward graduation, before they will be considered as admitted to the freshman class :

1. Those admitted by subjects from group I will take Greek 0, 00, 000 ; Mathematics 0, 00 ; Political Economy 0 ; Chemistry 0, 00, 000 ; and Biology 0, 00, 000.

2. Those admitted by subjects from group II will take Latin 0, 00, 000 ; Mathematics 0, 00 ; Chemistry 0, 00, 000 ; Biology 0, 00, 000 ; German 1, 2, 3 ; and Political Economy 0.

3. Those admitted by subjects from group III will take the same studies as those admitted by subjects from group II, except that History 0, 00, 000 will be substituted for Latin.

4. Those admitted by subjects from group IV will take the same studies as those admitted by subjects from group III.

The following schedule will show at a glance the studies to be taken by students admitted from two and three-year high schools before admission to the freshman class.

FROM TWO-YEAR HIGH SCHOOLS.

FIRST YEAR.

GROUP I.	GROUP II.	GROUP III.	GROUP IV.
English.	English.	English.	English.
Physics.	Physics.	History.	History.
Latin.	Latin.	Physics.	Physics.

SECOND YEAR.

Greek.	German.	German.	German.
Chemistry.	Chemistry.	Chemistry.	Chemistry.
Biology.	Biology.	Biology.	Biology.
Mathematics.	Mathematics.	Mathematics.	Mathematics.
Political Econ- omy.	Political Econ- omy.	Political Econ- omy.	Political Econ- omy.

FROM THREE-YEAR HIGH SCHOOLS.

FIRST YEAR.

Greek.	Mathematics 0, 00.	Mathematics 0, 00.	German.
Mathematics 0, 00.	German.	German.	Chemistry.
Chemistry.	Chemistry.	Chemistry.	Biology.
Biology.	Biology.	Biology.	Mathematics 0, 00.
Political Econ- omy.	Political Econ- omy.	Political Econ- omy.	Political Econ- omy.

Although it is deemed advisable, until there is a greater number of complete high schools in the state, to admit graduates from two-year and three-year high schools on the above conditions, yet it is not to be understood that students who have completed the first two years' work of a three-year or a four-year high school, or the first three years' work of a four-year high school, will be admitted under the same conditions. Students coming from places having three-year or four-year high schools will not be admitted until they have completed the work of some one of the courses of study offered in that school, except as provided under conditions of admission of students not candidates for a degree.

LIST OF ACCREDITED HIGH SCHOOLS.

The following high schools having complied with the requirements mentioned above, students from them are admitted on diploma under the conditions named:

FOUR-YEAR COURSES—

Fairhaven.
New Whatcom.
Seattle.
Spokane.
Tacoma.

THREE-YEAR COURSES—

Centralia, groups III and IV.
Chehalis, groups III and IV.
Everett, groups II and IV.
Olympia, group IV.
Port Townsend, groups II and IV.
Puyallup, groups II and IV.

TWO-YEAR COURSES—

Columbia City, groups III and IV.
Ellensburg, groups II and IV.
La Conner, group IV.

COURSE OF STUDY FOR HIGH SCHOOLS.

The following course of study for high schools was adopted by the State Board of Education, June, 1897:

FIRST YEAR.

FIRST TERM.

ENGLISH COURSE.	SCIENTIFIC COURSE.	LATIN COURSE.
Algebra Physical Geography Grammar and Composit'n Option	Same as English Course in both terms.	Substitute Latin for op- tion in each term.

SECOND TERM.

Algebra Physical Geography, or option Grammar and Composit'n Option		
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SECOND YEAR.

FIRST TERM.

Plane Geometry Rhetoric Civics, or option Botany	Same as English Course in both terms.	Plane Geometry Botany or Rhetoric Civics, or option Latin
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SECOND TERM.

Plane Geometry Rhetoric Botany, or option * Option		Plane Geometry Botany or Rhetoric Latin Option
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THIRD YEAR.

FIRST TERM.

Algebra Physics Literature Option	Algebra Physics Literature German or French	Algebra Physics Latin, and Roman Hist. German
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SECOND TERM.

Higher Arithmetic, or option Literature Physics Option	Higher Arithmetic, or option Physics Literature German or French	Higher Arithmetic, or option Physics Latin, and Roman Hist. German
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FOURTH YEAR.

FIRST TERM.

ENGLISH COURSE.	SCIENTIFIC COURSE.	LATIN COURSE.
Solid Geometry, or option Chemistry or Zoology Political Economy, or option General History	Solid Geometry, or option Chemistry or Zoology German or French General History	General History Chemistry or Zoology German Latin, and Grecian Hist.

SECOND TERM.

Trigonometry, or option Chemistry or Zoology Elementary Psychology, or option General History	Trigonometry, or option Chemistry or Zoology German or French General History	General History Chemistry or Zoology German Latin, and Grecian Hist.
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* Students who expect to enter the University are advised to take Botany or some other biological work.

Classical Course. First and second year, same as Latin Course; third and fourth year, same as Latin Course except that Greek is substituted for German.

In the above schedule it is supposed that each subject will be taught five times a week in periods of not less than forty minutes, and that a year will cover thirty-six weeks.

The foregoing course for high schools is designed for those schools which are able to maintain a course of four years. If a shorter course is desired, any school may adopt the first three years as a three-year course, or the first two years as a two year course.

ADMISSION OF STUDENTS NOT CANDIDATES FOR A DEGREE (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 University without examination except that all such candidates 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.

ADMISSION OF GRADUATE STUDENTS.

Any graduate of this University 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.

Such graduate students should choose their major subjects and register for their chosen graduate work upon their admission to the University.

ADVANCE CREDIT.

Students desiring advance credit must apply for the same at the time of matriculation, and all such credit must be adjusted and reported to the Registrar within sixty days after matriculation.

Advance credit will not be given for any work which is not the full equivalent of a course offered in this University, except that students coming here from institutions of like grade and standing may be allowed a certain total credit, at the discretion of the Faculty.

Students will not be given advance credit for work done in institutions of secondary standing, except upon examination.

REGISTRATION.

Each student must register in person at the office of the Registrar at the date of matriculation. Upon matriculation each student must present at the office of the Registrar a certificate of admission signed by the President.

Graduate students presenting themselves for registration must present to the President evidence of graduation from this University or from some institution of like grade and standing. 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 of 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.

trar within five 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 seventeen. 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.

All students who are candidates for a degree will be required to take, during the first two years, courses 1, 2 and 3 in English; 1, 2, 3, 4, 5 and 6 in German or French; 1, 2 and 3 in Mathematics; and at least the equivalent of twelve hours' credit in some natural science. All able-bodied male undergraduates are required to do work in the Department of Military Science and Tactics during the first two years of their University residence.

GROUP 1. Students entering on the subjects from group 1 should take the courses named on pages 33-4, during the first two years, except that such student will take Latin and Greek during the first year, instead of a modern language and mathematics.

GRADUATION.

THE BACCALAUREATE DEGREE.

The degree of Bachelor of Arts, Bachelor of Philosophy, or Bachelor of Science will be given to students who obtain 180 hours credit, which shall include the credits indicated as follows :

	B. A.	B. Ph.	B. S.
Greek.....	27 or 15		
Latin	15 or 17		
English.....	15.....	15	15
French or German.....	15.....	30	30
Mathematics.....	10.....	15	15
Natural Science.....	12.....	20	30
History.....		10	
Philosophy.....	10.....	10	10
Economics.....	10.....	10	10

With the exception of the required courses, the student may choose his work from all the courses offered, subject only to the restriction that he is prepared to take the work to advantage and has taken the prerequisites of the courses chosen.

DEGREE WITH DISTINCTION.

Any student who has earned ninety hours credit and has done all the required work, may make application to the President to continue his work as a candidate for a degree with distinction. Students working for a degree with distinction do not have the privilege of free election of courses, but must choose work along three lines of study, a major and two minors, which must be stated in the application to the President. The student's work is then done under the direction of a committee consisting of the professors in

charge of these subjects, the professor in charge of the major subject being the chairman of the committee. If the student does work which is satisfactory to the committee and passes a satisfactory examination in the major and the two minor subjects, he will be entitled to the baccalaureate degree with distinction in the major subjects.

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 Literature, Science and the Liberal Arts; provided that sometime during their study they shall have taken courses 1, 6 and 8 in Philosophy and Education, and one full course in Mental Science, one course in Logic and one course in Ethics, and otherwise satisfy the Faculty of their fitness to take charge of the work of high schools or academies.

TEACHERS' CERTIFICATES.

Graduates who intend to follow teaching as a profession will find the following, taken from the school laws of the State of Washington, to be of interest:

A portion of Section 186 of Chapter 1 of Title IV reads as follows:

"The said board [the Board of Regents of the University of Washington] shall grant to every student, upon graduation, a

5-17-32 - Mrs. Warner Melvin Karcher presented a diploma dated May 26, 1898 showing the degree of "Bachelor of Philosophy & Education". This was recorded on his permanent record card. No mention of above degree could be found. Common sense and common sense showed permanent diploma only. He said several people

suitable diploma or degree, such student having been recommended for such honor by the faculty. The board shall also have power, upon recommendation of the faculty, to confer the usual honorary degrees upon other persons than graduates of this university in recognition of their learning or devotion to literature, art or science; but no degree shall ever be conferred in the consideration of the payment of money or other valuable thing. Any diploma granted by the normal department of the university shall entitle the holder to teach in any public school in this state during life, under regulations consistent with other provisions of law relating to life diplomas."

A portion of section 137 of Article I of Chapter 9 of Title III reads :

"The teachers' certificates issued by authority of the State of Washington, and entitling the holder thereof to teach in the schools of the state shall consist of—

"*First:* Life diplomas, valid during the life of the holder, and state certificates, valid for five years from the date of issue; said life diplomas and state certificates shall be issued by the superintendent of public instruction on the authority of the state board of education: *Provided*, That state certificates may, upon application and without examination, be renewed, or a life diploma be authorized in lieu thereof by the state board of education."

Sections 138 and 139 of Article II of Chapter 9 of Title III read :

"State certificates shall be granted to such applicants only as shall file with the board [State Board of Education] satisfactory evidence of having taught successfully twenty-seven months, at least nine of which shall have been in the public schools of this state. The applicant must pass a satisfactory examination in all the branches required for first grade common school certificates, also plane geometry, geology, botany, zoology, civil government, psychology, history of education, bookkeeping, composition and general history; or file with the board a certified copy of a diploma from some state normal school or normal department of the University of Washington, or of a state or territorial certificate from a state or territory, the requirements to obtain which shall not have been less than those required by this act. Life diplomas

- Has received the same diploma
Specimen

shall be granted to such applicants only as shall file with the board satisfactory evidence that they have taught successfully for ninety months, not less than fifteen of which shall have been in the public schools of this state. In other respects the requirements shall be the same as those for state certificates. The fee for state certificates shall be three dollars, and for life diplomas, five dollars. Said fees must be deposited with the application, and cannot be refunded to the applicant unless the application be withdrawn before it has been considered by the board. Said fees shall be paid into the state treasury.

"The state board shall also have power to grant state certificates without examination to all applicants who are graduates of a regular four-year collegiate course of the university of Washington, the agricultural college and school of science, or of other reputable institutions of learning whose requirements for graduation are equal to the requirements of the university of Washington: *Provided*, That the applicant shall file with the board a certified copy of his diploma and a copy of the course of study for the year in which he graduated: *Provided, further*, That the applicant shall pass a satisfactory examination before the state board of education in theory and practice of teaching, psychology and history of education, and shall file with the board satisfactory evidence of having taught successfully for twenty-seven months, at least nine of which shall have been in the public schools of this state."

Section 141 of Article III of Chapter 9 of Title III reads :

"All applicants at the examination [for common school certificates] mentioned in the preceding section shall be at least seventeen years of age, and shall be examined, according to the rules and regulations of the state board of education, in reading, penmanship, orthography, written and mental arithmetic, geography, English grammar, physiology and hygiene, history and constitution of the United States, school law and constitution of the State of Washington, and the theory and art of teaching; but no person shall receive a first grade certificate who does not pass a satisfactory examination in the additional branches of physics, English literature and algebra, and who does not present satisfactory written evidence of having taught successfully one school year of nine months."

ADVANCED DEGREES.

THE MASTER'S DEGREE.

The degree of Master of Arts (A. M.) or Master of Science (M. S.) is conferred upon graduates of this 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 DOCTOR'S DEGREE.

The degree of Doctor of Philosophy is open to all students who have received a bachelor's degree, 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.

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.

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.)

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.

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.

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.

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.

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.

SYNOPSIS OF COURSES.

I.—ECONOMICS AND SOCIOLOGY.

AUTUMN TERM.

1. The Elements of Political Economy. Text-book and lectures. Credit, 5 hours. DR. SMITH.

4. Elements of Sociology. A study of the origin, development and functions of the family, church and state, and other social institutions. Lectures. Credit, 3 hours. DR. SMITH.

7. Industrial Revolution. Text-book and lectures. Credit, 2 hours. DR. SMITH.

10. Some Industrial Problems. A study of the various evils arising out of unrestricted competition. Some of the subjects considered are, sweat shops, food adulterations, etc. Lectures. Credit, 3 hours. DR. SMITH.

13. Seminary in Economic Problems. Prerequisite, courses 1 and 10. Credit, 2 hours. DR. SMITH.

WINTER TERM.

2. Economic Theory. A study of recent economic literature. Marshall's Principles of Economics, Vol. 1, will be used as a text-book with reports upon selected portions of other works. Prerequisite, course 1. Credit, 5 hours. DR. SMITH.

5. Political Institutions. This course will have especial reference to the political institutions of the United States and will deal with the origin, development, spirit and tendencies of our government. Prerequisite, courses 1 and 4. Lectures. Credit, 3 hours. DR. SMITH.

8. Socialism. Lectures and text book. Credit, 2 hours.

DR. SMITH.

NOTE.—The faculty reserves the right to withdraw any course if elected by less than six students.

11. Monopoly Problems. Lectures. Prerequisite, courses 1 and 10. Credit, 3 hours. DR. SMITH.

14. Seminary in the Monopoly Problems. Prerequisite, courses 1, 10 and 11. Credit, 2 hours. DR. SMITH.

SPRING TERM.

0. Political Economy. A preparatory course without credit. DR. SMITH.

3. The Development of Economic Thought. Lectures, readings and reports. Passages from Adam Smith, Ricardo and other economic writers, illustrating the development of theories of value, production and distribution. Prerequisite, courses 1 and 2. Credit, 5 hours. DR. SMITH

6. Problems of Municipal Government. A comparative study of the questions of taxation, municipal monopolies, etc. Lectures and text-book. Prerequisite, course 5. Credit, 3 hours. DR. SMITH.

9. Public Finance. Lectures. Credit, 2 hours. DR. SMITH.

12. The History, Theory and Functions of Money. Prerequisite, courses 1, 10 and 11. Lectures. Credit, 3 hours.

DR. SMITH.

15. Seminary in Public Finance. Prerequisite, courses 1, and 9. Credit, 2 hours. DR. SMITH.

II.—HISTORY.

AUTUMN TERM.

0. General History. A preparatory course without credit. PROFESSOR ———

1. American History. First Period, 1492-1750. Text book, THWAITE, *The Colonies*. Credit, 5 hours. PROFESSOR ———

4. Problems in American History. Research and thesis work. Intended for those who have completed work equivalent to courses 1, 2, and 3. ALBERT BUSHNELL HART'S *Revised Suggestions in United States History and Government* will serve as the

principal text-book, with collateral reading as outlined therein and in the *Guide to American History* by CHANNING AND HART. Credit, 3 hours. PROFESSOR _____

7. **Northwestern History.** Lectures, research and thesis work. Students will be guided in their research and reading by syllabi furnished by the instructor. The course will treat of the history of the Pacific Northwest, and especially of the history of the territory and state of Washington. Credit, 2 hours. PROFESSOR _____

10. **Constitutional History of England.** Credit, 5 hours. _____

WINTER TERM.

00. **General History.** Continuation of course 0. Without credit. PROFESSOR _____

2. **American History.** Second period, 1750-1829. Text-book, HART, *Formation of the Union*. Credit, 5 hours. PROFESSOR _____

5. **Problems of American History.** Continuation of course 4. Credit, 3 hours. PROFESSOR _____

8. **Northwestern History.** Continuation of course 7. Credit, 2 hours. PROFESSOR _____

11. **French Revolution.** Credit, 2 hours. _____

SPRING TERM.

000. **General History.** Continuation of course 00. Without credit. PROFESSOR _____

3. **American History.** Third Period, 1829-1889. Text-book, WOODROW WILSON, *Division and Reunion*. Credit, 5 hours. PROFESSOR _____

6. **Problems in American History.** Continuation of courses 4 and 5. Credit, 3 hours. PROFESSOR _____

9. **Northwestern History.** Continuation of courses 7 and 8. Credit, 2 hours. PROFESSOR _____

NOTE.—The above department will be combined with the department of Economics and Sociology, for the year 1898-99, and known as the Department of Political and Social Science and History. Courses in History will be arranged later.

III.—PHILOSOPHY AND EDUCATION.

AUTUMN TERM.

1. Psychology. Lectures three times a week and laboratory work twice a week. Credit, 5 hours.
3. History of Ancient Philosophy and Education. Text-book, WEBER'S *History of Philosophy*. Credit, 4 hours.
5. Seminary in Genetic Psychology. Recent literature in child-study will be read and problems assigned for investigation. Credit, 3 hours.
7. Seminary in Ancient Philosophy. The time will be devoted chiefly to the reading of selected dialogues of Plato. Credit, 2 hours.

WINTER TERM.

2. Psychology. Continuation of course 1. Text-book, JAMES' *Briefer Course in Psychology*. Credit, 5 hours.
4. History of Modern Philosophy. Continuation of course 3. Text-book, WEBER'S *History of Philosophy*. Credit, 4 hours.
6. History of Education. Text-book: COMPAYRE'S *History of Pedagogy*. Credit, 4 hours.
8. Seminary in Psychology. The time will be devoted chiefly to a study of Comparative Psychology. Credit, 3 hours.

SPRING TERM.

9. Advanced Psychology. Open only to those who have taken courses 1 and 2. Special problems will be selected for study and each student will be required to work up one subject and present a thesis upon the same. Credit, 4 hours.
10. Seminary in English Philosophy. Devoted to a study of Hobbs, Berkeley and Locke. Credit, 3 hours.
11. Recent Educational Thought. This course will be devoted to a study of systems of education, to educational psychology and to special problems like school hygiene, curricula, moral training, etc. Credit, 3 hours.
12. School Organization and Government. This course is designed for those who are preparing for the work of superintending schools in the smaller towns and villages. Credit, 2 hours.

IV.—MENTAL AND MORAL SCIENCE AND ORATORY.

AUTUMN TERM.

1. Logic. A study of the forms and laws of rational conviction. Five hours a week. Text-book, HAMILTON, the *Modalist*. Credit, 5 hours.

2. Mental Science. A study of the laws and operations of the human intellect. Five hours a week. Text-book, HAMILTON, *Mental Science*. Credit, 5 hours.

3a. Aristotle's Logic. A study of the original Greek text as abridged by Trendelenburg. Three hours a week. Text-book, *Elemental Logices Aristoteleæ*. Credit, 3 hours.

3b. Cicero de Officiis. A critical study of Cicero's Work on Morals. Three hours a week. Alternative with 3a. Credit, 3 hours.

WINTER TERM.

4. Mental Science. A study of the phases and developments of intellectual life. Five hours a week. Text-book, HAMILTON, *Mental Science*. Credit, 5 hours.

5. Ethics. The science of moral thought and life. Lectures, supplemented by text-book instruction. Five hours a week. Credit, 5 hours.

6. Elocution and Oratory. Theoretical instruction once a week by recitations and lectures. In addition, personal training at hours set by the professor. Text-book, SMITH, *Reading and Speaking*. Credit, 1 hour.

7. Theism and Science. Lectures once a week on philosophic and scientific topics in their theistic implications. Credit, 1 hour.

SPRING TERM.

8. Logic. A study of syllogism and fallacies. Five hours a week. Text-book, HAMILTON, the *Modalist*. Credit, 5 hours.

9a. Applied Ethics. A sequel of course 5. Lectures and text-book instruction. Five hours a week. Text-book, MACKENZIE'S *Manual of Ethics*. Credit, 5 hours.

9b. Comparative Philosophy. Lectures supplemented by the study of some leading author, as Locke, Berkeley, Reid or Kant. Alternative with 9a. Credit, 5 hours.

9c. International Law. Studied with special reference to the ethical questions involved. Lectures and text-book. Five hours a week. Also alternative with 9a. Credit, 5 hours.

10. Oratory. A continuation of course 6. Attention will be given to the composition and delivery of orations. One hour a week of class work. Credit, 2 hours.

11. Theism and Science. A continuation of course 7. Credit, 1 hour.

V.—ANCIENT LANGUAGES.

LATIN.

AUTUMN TERM.

0. Cicero; Latin Prose Composition. Three orations against Catiline. Text-books, JOHNSTON, *Selected Orations and Letters of Cicero*; COLLAR, *Practical Latin Composition*. Prerequisite, entrance elementary Latin (see p. 37). No credit. DR. STALEY.

1. Ovid. Metamorphoses. Sight reading in average prose and poetry. Text-book, LINCOLN, *Ovid*. Prerequisite, entrance Latin, elementary and advanced preparatory. Credit, 5 hours.

MISS HANSEE.

4. Roman Comedy. Plays of Terrence. Text-book, WAGNER, *Plays of Terrence*. Prerequisite, course 3. Credit, 4 hours.

DR. STALEY.

7. Rapid Reading Course. Intended to give the student facility of translation, combined with accuracy. This course, together with 8 and 9, will cover various orations of Cicero, poems from Horace, and extracts from Pliny. Prerequisite, entrance Latin. Credit, 1 hour.

PROFESSOR BAILEY.

NOTE.—For the year 1898-99 the Department of Mental and Moral Science and Oratory will be combined with the Department of Philosophy and Education.

10. Pliny and Cicero (De Senectute). Text-books, CHASE AND STUART, *Pliny*; KELSEY, *Cicero*. Prerequisite, course 3. Credit, 4 hours. PROFESSOR BAILEY.

13. Advanced Latin Composition. A special study is made of the Principles of the Latin Grammar, and the styles of prose and poetry. Prerequisite, course 3. Credit, 1 hour. PROFESSOR BAILEY.

16. Reign of Tiberius. A study of the Early Empire. Text-book, FURNEAUX, *Annals of Tacitus*. Prerequisite, course 12. Credit, 3 hours. PROFESSOR BAILEY.

19. Roman Scenic and Private Antiquities. Lectures, with theses by the students. Credit, 1 hour. PROFESSOR BAILEY.

WINTER TERM.

00. Cicero; Vergil: Latin Prose Composition. One oration of Cicero and the first book of Vergil. Continuation of course 0. DR. STALEY.

2. Augustan Prose. Books I and XXI of Livy. Text book, WESTCOTT, *Livy*. Prerequisite, course 1. Credit, 5 hours. MISS HANSEE.

5. Roman Comedy. Text book, HARRINGTON, *Plautus*. Prerequisite, course 4. Credit, 4 hours. DR. STALEY.

WINTER TERM.

8. Rapid Reading Course. Continuation of course 7. Credit, 1 hour. PROFESSOR BAILEY.

11. Roman Satire. Its development through Horace, Juvenal, and Persius. Text-books, CHASE and STUART, *Horace*; LEVERETTE, *Juvenal and Persius*. Prerequisite, courses 3 and 10. Credit, 4 hours. PROFESSOR BAILEY.

14. Advanced Latin Composition. Continuation of course 13. Credit, 1 hour. PROFESSOR BAILEY.

17. Roman Philosophy. Lucretius (*De Rerum Natura*) and Cicero (*De Natura Deorum*). Text-books, KELSEY, *Lucretius*; HARPER'S TEXTS, *Cicero's De Natura Deorum*. Prerequisite, course 16. Credit, 3 hours. PROFESSOR BAILEY.

20. Roman Scenic and Private Antiquities. Course 19 continued. Credit, 1 hour. PROFESSOR BAILEY.

SPRING TERM.

000. Vergil (Books II-VI); Latin Prose Composition. Continuation of course 00. DR. STALEY.

3. Augustan Poetry. Odes, epodes and Ars Poetica of Horace. Text-book, CHASE AND STEWART, *Horace*. Prerequisite, course 2. Credit, 5 hours. MISS HANSEE.

6. Roman Tragedy. Plays of Seneca. Text-book, PEIPER AND RICHTER, *Tragedies of Seneca*. Prerequisite, course 5. Credit, 4 hours. DR. STALEY.

9. Rapid Reading Course. Continuation of course 8. Credit, 1 hour. PROFESSOR BAILEY.

12. Epigrammatic and Lyric Poetry. As developed through Martial, Catullus, Tibullus and Propertius. Text-books, WESTCOTT, *Martial*; WRATISLAW AND SUTTON, *Catullus, Tibullus, Propertius*. Prerequisite, courses 3 and 11. Credit, 4 hours. PROFESSOR BAILEY.

15. Advanced Latin Composition. Continuation of course 14. Credit, 1 hour. PROFESSOR BAILEY.

18. The Latin Language. Text-books, ALLEN, *Remnants of Early Latin*; BONNELL, *Quintilian*. Prerequisite, a thorough working knowledge of Latin. Credit, 3 hours. PROFESSOR BAILEY.

21. Roman Scenic and Private Antiquities. Course 20 continued. Credit, 1 hour. PROFESSOR BAILEY.

GREEK.

AUTUMN TERM.

0. Greek Lessons. An introductory course in Greek. Text-book, WHITE, *Greek Beginner's Book*. Credit, 5 hours. PROFESSOR BAILEY.

3. Xenophon's Anabasis; Greek Prose Composition. Text-books, GOODWIN AND WHITE, *Xenophon's Anabasis*; SEDGWICK, *Greek Prose Composition*. Credit, 5 hours. DR. STALEY.

6. Greek Comedy. Aristophanes. Text-book, MERRY, *The Clouds and the Knights*. Prerequisite, course 6. Credit, 5 hours. MISS HANSEE.

9. Attic Oratory. Text-book, DRAKE, *Demosthenes De Corona*. Prerequisite, course 9. Credit, 3 hours.

DR. STALEY.

12. Peloponnesian War. Text-book, MORRIS, *Thucydides* (Book 1). Prerequisite, course 12. Credit, 3 hours.

PROFESSOR BAILEY.

15. History of Greek Literature. Lectures, with theses by the students. Credit, 1 hour.

PROFESSOR BAILEY.

WINTER TERM.

00. Xenophon's Anabasis (Book 1). The inductive method is used. Text-book, GOODWIN AND WHITE, *Xenophon's Anabasis*. Prerequisite, course 1. Credit, 5 hours.

PROFESSOR BAILEY.

4. Xenophon's Hellenica (Books I-III); Greek Prose Composition. Text-book, BLAKE, *Xenophon's Hellenica*. Prose Composition as in course 4. Prerequisite, course 4. Credit, 5 hours.

DR. STALEY.

7. Greek Tragedy. Text-book, BECKWITH, *Euripides' Bacchantes*. Prerequisite, course 7. Credit, 5 hours.

MISS HANSEE.

10. Attic Oratory. Text-book, MARCHANT, *Andocides' De Mysteriis and De Reditu*. Prerequisite, course 10. Credit, 3 hours.

DR. STALEY.

13. Lyric Poetry. Text-book, GILDERSLEEVE, *Pindar* (Olympian and Pythian Odes). Prerequisite, course 13. Credit, 3 hours.

PROFESSOR BAILEY.

16. History of Greek Literature. Course 16 continued. Credit, 1 hour.

PROFESSOR BAILEY.

SPRING TERM.

000. Xenophon's Anabasis. (Book II). Course 2 continued. Credit, 5 hours.

PROFESSOR BAILEY.

5. Lysias (Selections); Greek Prose Composition. Text-book, WHITON, *Lysias*. Prose composition as in courses 4 and 5. Prerequisite, course 5. Credit, 5 hours.

DR. STALEY.

8. Greek Tragedy. Sophocles. Text-book, WHITE, *Sophocles' Oedipus Tyrannus*. Prerequisite, course 8. Credit, 5 hours.

MISS HANSEE.

11. Homer's *Odyssey*. Text-book, MERRY, *Odyssey* (Books VII-XII). Prerequisite, course 11. Credit, 3 hours.

DR. STALEY.

14. Elegiac and Iambic Poetry. From Callinus to Xenophanes. Text-book, BERGK, *Anthologia Lyrica*. Prerequisite, course 14. Credit, 3 hours.

PROFESSOR BAILEY.

17. History of Greek Literature. Course 17 continued. Credit, 1 hour.

PROFESSOR BAILEY.

VI.—MODERN LANGUAGES.

GERMAN.

AUTUMN TERM.

1. Elementary Course. Text-books, OTIS, *German Grammar*; SCHRAKAMP AND VAN DAELL, *Das Deutsche Buch*. This course is intended to give the student an outline of the declensions and conjugations, practice in pronunciation, and exercise in the translation of simple German sentences into English, and English into German. Credit, 5 hours.

PROFESSOR REEVES.

4. General Course. Selections from German History. Text-book, SCHRAKAMP, *Erzaehlungen aus der Deutschen Geschichte*. In addition to the above, work will be required in German composition, Macmillan's First Course. Prerequisite, courses 1, 2, and 3. Credit, 5 hours.

PROFESSOR REEVES.

7. German Classics. The work of the third year will be devoted to Lessing and Goethe. During the autumn term Lessing's *Minna Von Barnhelm* or *Nathan der Weise* will be read. Work in advanced German composition will be required. Prerequisite, two years in German. Credit, 3 hours.

PROFESSOR REEVES.

10. Modern German Ballads and Lyrics. As outlined in DR. VON KLENZE'S *Deutsche Gedichte*. Credit, 2 hours.

PROFESSOR REEVES.

WINTER TERM.

2. Elementary Course. Continuation of course 1. In addition to the texts named for course 1, some other text, such as

BUCHEIM'S *German Reader*, containing easy prose selections by representative writers, will be used. In the grammar the order of the German sentence, the use of the subjunctive and the syntax of the cases will be presented. Credit, 5 hours.

PROFESSOR REEVES.

5. General Course. Continuation of course 5. GORE'S *German Science Reader* will be used to familiarize the student with technical German. FREYTAG'S *Die Journalisten*, a standard German comedy, will be read, and KELLER'S *Bilder aus der Deutschen Literatur-Geschichte* will be taken up. Credit, 5 hours.

PROFESSOR REEVES.

8. German Classics. Goethe's idyllic masterpiece, *Hermann und Dorothea*, will be read. Credit, 3 hours.

PROFESSOR REEVES.

11. Historical German Grammar. As presented in BRHAGEL, *Historical German Grammar*. Credit, 2 hours.

PROFESSOR REEVES.

SPRING TERM.

3. Elementary Course. Continuation of courses 1 and 2. During this course the grammatical outline will be completed, more difficult prose selections will be read, and SCHILLER'S *Wilhelm Tell* will be used as an introduction to classical literature. Credit, 5 hours.

PROFESSOR REEVES.

6. General Course. Continuation of courses 5 and 6. KELLER'S *Bilder aus der Deutschen Literatur-Geschichte* will be completed, giving the student a general outline of the history of German literature, and another selection from Schiller will be read (*Die Jungfrau von Orleans*). Credit, 5 hours.

PROFESSOR REEVES.

9. German Classics. Selections from GOETHE'S *Faust* will be read together with a review of the development of the Faust legend. Credit, 3 hours.

PROFESSOR REEVES.

12. Historical German Grammar. Continuation of course 11. Credit, 2 hours.

PROFESSOR REEVES.

NOTE.—The best results in scholarship in German will be obtained by previous or concurrent training in other languages, preferably Latin. It is earnestly recommended that students in German take up the study of Old English at the beginning of the third year.

FRENCH.

AUTUMN TERM.

1. Introductory Course. Text books, EDGREN, *French Grammar*; HARPER, *French Principia*, Part II. This course presents an outline of the essentials of French grammar, exercises in pronunciation, translations from French into English and English into French, and reading of easy prose selections. Credit, 5 hours. ASSISTANT PROFESSOR OBER.

4. Readings and Composition. Text-book, FORTIER, *Sept Grands Auteurs du XIX me Siecle*. An introduction to the literature of the present century. Credit, 5 hours. ASSISTANT PROFESSOR OBER.

7. French Literature. History of French literature continued, together with selections from the classics of Corneille, Racine, and Moliere. Credit, 2 hours. ASSISTANT PROFESSOR OBER.

WINTER TERM.

2. Introductory Course. Continuation of course 1. Credit, 5 hours. ASSISTANT PROFESSOR OBER.

5. Reading and Composition. On the basis of FORTIER'S *Sept Grands Auteurs du XIX me Siecle*. Some familiarity with technical terms will be given by the reading of selections on scientific subjects. Credit, 5 hours. ASSISTANT PROFESSOR OBER.

8. French Literature. A continuation of course 7. Classical selections. Credit, 2 hours. ASSISTANT PROFESSOR OBER.

SPRING TERM.

3. Introductory Course. A continuation of course 2. EDGREN'S *French Grammar* will be completed, and moderately difficult selections from representative writers will be read. Credit, 5 hours. ASSISTANT PROFESSOR OBER.

6. Introduction to the History of French Literature. DUVALL'S *Histoire de la Litterature Francaise* will be used as a text. Credit, 5 hours. ASSISTANT PROFESSOR OBER.

9. The Romantic Movement. Selections from Victor Hugo and other writers. Credit, 2 hours. ASSISTANT PROFESSOR OBER.

SPANISH.

AUTUMN TERM.

1. Introductory Course. Lessons in Spanish on every-day subjects. The aim of the course is primarily to train the ear and the tongue of the pupil. Credit, 5 hours.

ASSISTANT PROFESSOR OBER.

4. Practical Course. Business correspondence, grammar, and conversation. Prerequisite, courses 1, 2 and 3. Credit, 5 hours.

ASSISTANT PROFESSOR OBER.

7. Literary Course. KNAPP'S *Spanish Readings and Spanish Grammar*. Spanish is made as much as possible the means of instruction. Prerequisite, courses 1, 2 and 3. Credit, 5 hours.

ASSISTANT PROFESSOR OBER.

10. Advanced Course. Literature of the 16th and 17th centuries. *Lope de Vega*, Calderon; the *Aulo Sacramental*. Prerequisite, courses 7, 8 and 9. Credit, 3 hours.

ASSISTANT PROFESSOR OBER.

WINTER TERM.

2. Introductory Course. Continuation of course 1. Grammar is begun. Credit, 5 hours.

ASSISTANT PROFESSOR OBER.

5. Practical Course. Continuation of course 4. Readings selected from Spanish newspaper and magazine articles of the day. Credit, 5 hours.

ASSITANT PROFESSOR OBER.

8. Literary Course. Continuation of course 7. Credit, 5 hours.

ASSISTANT PROFESSOR OBER.

11. Advanced Course. Continuation of course 10. Credit, 3 hours.

ASSISTANT PROFESSOR OBER.

SPRING TERM.

3. Introductory Course. Continuation of course 2. *El Pajaro Verde*, by Juan Valera. Credit, 5 hours.

ASSISTANT PROFESSOR OBER.

6. Practical Course. Continuation of course 5. Credit, 5 hours.

ASSISTANT PROFESSOR OBER.

9. Literary Course. Continuation of course 8. Lectures on Spanish literature. Credit, 5 hours.

ASSISTANT PROFESSOR OBER.

12. Advanced Course. Continuation of course 11. Early Spanish; the poem of the Cid; Spanish literature to the 15th century. Credit, 3 hours. ASSISTANT PROFESSOR OBER.

It is desirable that students taking Spanish should have a knowledge of French and Latin, though it is not required.

ENGLISH.

AUTUMN TERM.

0. History of English Literature. To the modern period. Text-book, PANCOAST, *Introduction to English Literature*. Reading of assigned authors and frequent essays on assigned topics required. Five hours. No prerequisite, and no credit.

MISS HANSEE.

1. Paragraph Writing. The elaboration of themes and the frequent preparation of essays to be read before the class and at stated times before the general assembly of students. Text-book, SCOTT AND DENNY, *Paragraph Writing*. No prerequisite. Required of all students. Credit, 5 hours. DR. BECHDOLT.

4. Elementary Course in Old English. The inflections and grammatical forms are here studied preparatory to courses 5 and 6. Text-book, COOK, *First Book in Old English* and *Exercises in Old English*. Courses 1, 2, and 3 are prerequisite. Credit, 3 hours. DR. BECHDOLT.

7. History of the English Language. The language is studied with reference to the elements, changes in spelling, inflectional forms, etc. Text-book, LOUNSBURY, *English Language*. Prerequisite, courses 1, 2, and 3. Credit, 3 hours.

DR. BECHDOLT.

10. Chaucer. A critical study of the times, style, and language of the author. Prerequisite, a fair knowledge of English history, some familiarity with French and German, and courses 4, 5, and 6. Text-book, CORSON, *A Selection from Chaucer's Canterbury Tales*. Credit, 3 hours. DR. BECHDOLT.

WINTER TERM.

00. History of English Literature. From the modern period to the present time. Text-book, PANCOAST, *Introduction to English Literature*. Reading of assigned authors and frequent

essays on assigned topics required. Course 0 is a prerequisite. Five hours. No credit.

MISS HANSEE.

2. Rhetoric. This is a continuation of course 1. Text-book, GENUNG, *Practical Elements of Rhetoric*. Required of all students. Credit, 5 hours.

DR. BECHDOLT.

5. Old English. Translation from COOK, *First Book in Old English*. Course 4 is prerequisite. Credit, 3 hours.

DR. BECHDOLT.

8. History of English Literature. A course of lectures on the growth and historic environment of our literature. Prerequisite, a fair knowledge of English classics and history. Credit, 3 hours.

DR. BECHDOLT.

11. Shakespeare. The play of Hamlet is made the basis of a close study of the language and dramatic skill of the author. This course is intended for advanced students in English. Credit, 3 hours.

DR. BECHDOLT.

SPRING TERM.

000. History of American Literature. Text-book, PAN-COAST, *Introduction to American Literature*. Reading of assigned authors and frequent essays on assigned topics required. This is a continuation of courses 0 and 00. Five hours. No credit.

MISS HANSEE.

3. Rhetoric. A continuation of course 2. Text-book, GENUNG, *Hand-Book of Rhetorical Analysis*. Required of all students. Credit, 5 hours.

DR. BECHDOLT.

6. Old English. Text-book, HARRISON AND SHARP, *Beowulf*. Course 5 is prerequisite. Credit, 3 hours.

DR. BECHDOLT.

9. English Etymology. Lectures on the phonology, roots, stems, affixes, and changes in the meaning of English words. This course is intended for advanced students in English. Credit, 3 hours.

DR. BECHDOLT.

12. Elements of Comparative Philology. Lectures on the phonology, inflections and grammar of the Aryan languages. This course is intended for students who have some acquaintance with the classical and the modern languages. Credit, 3 hours.

DR. BECHDOLT.

VII.--MATHEMATICS AND ASTRONOMY.

MATHEMATICS.

AUTUMN TERM.

- 0 Elementary Course. Algebra. MR. WALKER.
1. Plane and Spherical Trigonometry. Prerequisite, entrance algebra and plane geometry. Credit, 5 hours.
MR. WALKER.
4. Plane Analytic Geometry. Prerequisite, course 1. Credit, 5 hours.
PROFESSOR RANUM.
7. Advanced Calculus, including Complex Numbers, Hyperbolic Functions and Line, Surface and Volume Integrals. Prerequisite, course 6. Credit, 5 hours.
PROFESSOR RANUM.
10. Theory of Functions of a Complex Variable. Prerequisite, course 7. Credit, 3 hours.
PROFESSOR RANUM.

WINTER TERM.

00. Elementary Course. Solid geometry. MR. WALKER.
2. Advanced Algebra including Series, Determinants, the Theory of Numerical Equations and Graphic Algebra. Prerequisite, entrance algebra and plane geometry. Credit, 5 hours.
PROFESSOR RANUM.
5. Differential and Integral Calculus. Prerequisite, course 4. Credit, 5 hours.
MR. WALKER.
8. Differential Equations. Prerequisite, courses 3 and 7. Credit, 5 hours.
PROFESSOR RANUM.
11. Theory of Functions. Continuation of course 10. Credit, 3 hours.
PROFESSOR RANUM.

SPRING TERM.

3. Advanced Algebra. Continuation of course 2. Credit, 5 hours.
PROFESSOR RANUM.
6. Differential and Integral Calculus. Continuation of course 5. Credit, 5 hours.
MR. WALKER.

9. Solid Analytic Geometry. Prerequisite, course 5. Credit, 5 hours. PROFESSOR RANUM.

12. Modern Analytic Geometry, including Projective Properties of Conic Sections, and Trilinear Co-ordinates. Prerequisite, course 4. Credit, 3 hours. PROFESSOR RANUM.

ASTRONOMY.

AUTUMN TERM.

3. Celestial Mechanics. Prerequisites, course 1 in Astronomy, course 6 in Mathematics, and Theoretical Mechanics. Credit, 3 hours. PROFESSOR RANUM.

1. General Astronomy. Prerequisite, course 1 in Mathematics, and General Physics. Credit, 3 hours.

PROFESSOR RANUM.

2. Practical Astronomy. Prerequisite, course 1. Credit, 3 hours.

PROFESSOR RANUM.

VIII.—PHYSICS.

AUTUMN TERM.

0. Preparatory Course. Five times a week.

MR. WALKER.

1. General Physics. Lectures and recitations. Prerequisite, plane trigonometry. Credit, 5 hours.

ASSISTANT PROFESSOR DOUBT.

4. Theoretical Physics. Text-book, CHRISTIANSEN, *Elements of Theoretical Physics*. Prerequisite, courses 1, 2 and 3 in Physics, analytic geometry, integral calculus. Credit, 3 hours.

ASSISTANT PROFESSOR DOUBT.

7. Theoretical Mechanics. Prerequisite, courses 1, 2 and 3 in Physics, analytical geometry and calculus. Credit, 3 hours.

ASSISTANT PROFESSOR DOUBT.

a. Physical Measurement. Experimental work requiring quantitative results. Laboratory exercises three times a week.

Mechanics and Sound. Prerequisite, course 1 in Physics, preceded or accompanying. Credit, 3 hours.

ASSISTANT PROFESSOR DOUBT.

d. Advanced Physical Measurement. Exact determination of some of the physical constants. Prerequisite, courses 1, 2, 3, *a*, *b* and *c* in Physics. Credit, 4 hours.

ASSISTANT PROFESSOR DOUBT.

g. Electrical Measurements. Testing of electrical instruments and determination of the various electrical constants. Prerequisite courses, 1, 2, 3, *a*, *b* and *c* in Physics. Credit, 3 hours.

ASSISTANT PROFESSOR DOUBT.

WINTER TERM.

00. Preparatory Course. Continuation of course 0.

MR. WALKER.

2. General Physics. Continuation of course 1. Credit, 5 hours.

ASSISTANT PROFESSOR DOUBT.

5. Theoretical Physics. Continuation of course 4. Credit, 3 hours.

ASSISTANT PROFESSOR DOUBT.

8. Theoretical Mechanics. Continuation of course 7. Credit, 3 hours.

ASSISTANT PROFESSOR DOUBT.

b. Physical Measurements. Heat and Light. Must be preceded or accompanied by course 2. Credit, 3 hours.

ASSISTANT PROFESSOR DOUBT.

e. Advanced Physical Measurements. Continuation of course *d*. Credit, 4 hours.

ASSISTANT PROFESSOR DOUBT.

h. Continuation of course *g*. ASSISTANT PROFESSOR DOUBT.

SPRING TERM.

000. Preparatory Course. Continuation of course 00.

MR. WALKER.

3. General Physics. Continuation of course 2. Credit, 5 hours.

ASSISTANT PROFESSOR DOUBT.

6. Theoretical Physics. Continuation of course 5. Credit, 3 hours.

ASSISTANT PROFESSOR DOUBT.

9. Electricity and Magnetism. Elementary course in the mathematical theory of electricity and magnetism. Prerequisite, course 7. Credit, 5 hours.

ASSISTANT PROFESSOR DOUBT.

c. Physical Measurement. Electricity and magnetism. Must be preceded or accompanied by course 3. Credit, 3 hours.

ASSISTANT PROFESSOR DOUBT.

f. Advanced Physical Measurement. Continuation of course e. Credit, 4 hours.

ASSISTANT PROFESSOR DOUBT.

i. Continuation of course h. ASSISTANT PROFESSOR DOUBT.

IX.—CHEMISTRY.

AUTUMN TERM.

0. Preparatory Course. Experimental course with recitations and laboratory practice. Text-books, REMSEN, *Inorganic Chemistry*; REMSEN and RANDALL, *Chemical Experiments*. No credit.

MR. LOUGH.

1. Inorganic Chemistry. Experimental course with recitations covering laboratory course a. Text-book, FREER, *Inorganic Chemistry*. Credit, 4 hours.

DR. MYERS.

4. Organic Chemistry. Experimental course with recitations consisting of a careful study of the typical compounds of carbon and of the methods of organic analysis. Text-book, REMSEN, *Organic Chemistry*. Prerequisite, courses 3 and c. Credit, 2 hours.

DR. MYERS.

10. Theoretical Chemistry. Prerequisite, courses 1, 2, 3, 4, 5, 6, a, b, c and d, and Physics 1, 2 and 3. Credit, 2 hours.

PROFESSOR ———

7. Industrial Chemistry. Lectures on the processes of chemical arts and industries. Prerequisite, courses 3 and c. Credit, 1 hour.

DR. MYERS.

a. Laboratory Course in Inorganic Chemistry. Open to students taking course 1. Text-book, REMSEN and RANDALL, *Chemical Experiments*. Credit, 3 hours.

DR. MYERS.

d. Quantitative Analysis. Using both gravimetric and volumetric methods. Text-books, HARTLEY, *Quantitative Analysis*; FLEISCHER, *Volumetric Analysis*. Prerequisite, courses 3 and c. Credit, 4 hours.

DR. MYERS.

h. Organic Preparations. Continuation of course g. Credit, 3 hours.

DR. MYERS.

WINTER TERM.

00. Preparatory Course. Continuation of course 0.

MR. LOUGH.

2. Inorganic Chemistry. Continuation of course 1. Prerequisite, courses 1 and *a*. Credit, 4 hours.

DR. MYERS.

5. Organic Chemistry. Continuation of course 4. Prerequisite, courses 4 and *d*. Credit, 2 hours.

DR. MYERS.

8. Industrial Chemistry. Continuation of course 7. Prerequisite, course 7. Credit, 1 hour.

DR. MYERS.

11. Theoretical Chemistry. Continuation of course 10. Credit, 2 hours.

PROFESSOR ———

b. Laboratory Course in Inorganic Chemistry. Continuation of course *a*. Open to students taking course 2. Credit, 3 hours.

DR. MYERS.

e. Quantitative Analysis. Continuation of course *d*. Credit, 4 hours.

DR. MYERS.

i. Organic Preparations. Continuation of course *h*. Prerequisite, course *h*. Credit, 3 hours.

DR. MYERS

SPRING TERM.

000. Preparatory Course. Continuation of course 00.

MR. LOUGH.

3. Inorganic Chemistry. Continuation of course 2. Prerequisite, courses 2 and *b*. Credit, 4 hours.

DR. MYERS.

6. Organic Chemistry. Continuation of course 5. Prerequisite, courses 5 and *e*. Credit, 2 hours.

DR. MYERS.

9. Industrial Chemistry. Continuation of course 8. Prerequisite course 8. Credit, 1 hour.

DR. MYERS.

12. Theoretical Chemistry. Continuation of course 11. Credit, 2 hours.

PROFESSOR ———

c. Qualitative Analysis. A study of the chemical and physical properties of chemical combinations with their separations and detection, inclusive of analysis of unknown solutions and general methods of analysis. Prerequisite, courses 2 and *b*. Credit, 3 hours.

DR. MYERS.

f. Quantitative Analysis. Continuation of course *e*. Credit, 4 hours.

DR. MYERS.

g. Organic Preparation. Preparation and study of the principal compounds of Carbon. Text, DR. LEVY, *Anleitung zur Darstellung Organischer Präparate*. Orndorff Laboratory Manual. Prerequisite, courses 5 and e. Credit, 3 hours. DR. MYERS.

j. Advanced Laboratory Course. Combustion, nitrogen, and halogen, determinations, etc., may be taken up. Text-book, GATTERMANN, *Practical Methods of Organic Chemistry*. Open to graduate and third-year students. Credit, 3 hours. DR. MYERS.

X.—GEOLOGY AND MINERALOGY.

AUTUMN TERM.

1. General Geology. Recitations, lectures, collateral reading, and a few field excursions. Text-book, LE CONTE, *Elements of Geology*. A consideration of the following general topics: The 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. Credit, 3 hours.

PROFESSOR LANDES.

4. Mineralogy. Lectures and laboratory work. Text-book, MOSES AND PARSONS, *Mineralogy, Crystallography, and Blowpipe Analysis*. The work of the term is chiefly blowpipe analysis, consisting of the tests for thirty-five elements, and the qualitative analysis of minerals and alloys. Prerequisite, inorganic chemistry. Credit, 3 hours.

PROFESSOR LANDES.

7. Petrography. Lectures, reading, laboratory and field work. A study of the distinguishing characteristics of the different groups and species of rocks, with the methods of classification employed. Prerequisite, general geology and mineralogy. Credit, 4 hours.

PROFESSOR LANDES.

9. Physiography. Lectures, recitations, reading, laboratory and field work. A consideration of the origin and history of the earth's surface, as dependent upon internal structure. Prerequisite, general geology. Credit, 3 hours.

PROFESSOR LANDES.

15. Palaeontology. Lectures, reading, laboratory and field work. Credit, 3 hours.

PROFESSOR LANDES.

WINTER TERM.

2. General Geology. Continuation of course 1. Credit, 3 hours.

PROFESSOR LANDES.

5. Mineralogy. The first part of the term is devoted to crystallography, the latter part to a study of the important species of minerals, their physical characters, composition, uses, classification, and methods of determination. Text-book same as in course 4.

4. Prerequisite, course 4. Credit, 3 hours.

PROFESSOR LANDES.

8. Petrography. Continuation of course 7. Credit, 4 hours.

PROFESSOR LANDES.

10. Physiography. Continuation of course 9. Credit, 3 hours.

PROFESSOR LANDES.

11. Economic Geology. Lectures, recitations, reading, and theses. Text-book, KEMP, *Ore Deposits of the United States*. 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 stone and other mineral products of use in the arts and of commercial importance. Credit, 3 hours.

PROFESSOR LANDES.

13. Assaying. Lectures and laboratory work. Instruction and practice of assaying gold, silver, copper, lead, and other ores. Text-book, BROWN, *Manual of Assaying*. Prerequisite, Mineralogy and Quantitative Analysis. Credit, 2 hours.

PROFESSOR LANDES.

During the winter term the department of geology and mineralogy offers four courses for the benefit of prospectors and miners. These courses will be as follows:

Course *a*. Blowpipe Analysis. The various tests for the more important elements will be studied, together with schemes for the determination of the amounts of gold and silver in their ores. This course is designed to familiarize one with simple blowpipe tests, which require but little apparatus, and which can be made while in the field.

Course *b*. Furnace Assaying. Instruction and practice in the assaying of gold, silver and copper ores.

Course *c.* A series of lectures on metalliferous veins and ore deposits, being a consideration of their origin and extent, changes due to weathering, methods of prospecting, etc.

Course *d.* A series of lectures on the principles of mining.

SPRING TERM.

3. General Geology. Continuation of course 2. Credit, 3 hours. PROFESSOR LANDES.

6. Mineralogy. Continuation of course 5. Credit, 3 hours. PROFESSOR LANDES.

12. Economic Geology. Continuation of course 11. Credit, 3 hours. PROFESSOR LANDES.

14. Assaying. Continuation of course 13. Credit, 2 hours. PROFESSOR LANDES.

16. Palaeontology. Continuation of course 15. Credit, 3 hours. PROFESSOR LANDES.

17. Field Work. Instruction and practice in the methods of geologic field work. Open to advanced students in geology. Credit, 3 hours. PROFESSOR LANDES.

A special course of lectures will be given by Lincoln D. Godshall, Ph. D., treating of Metallurgy, Assaying and Analytical Chemistry.

XI.—BIOLOGY.

AUTUMN TERM.

0. Entrance Biology. A preparatory course, which, if taken through the whole year, may count as one-half entrance subject to the freshman class. PROFESSOR HILL.

1. Structural Cryptogamic Botany. A study of the simple forms of plant life according to ARTHUR, BARNES AND COULTER'S *Plant Dissection* and BESSEY'S *Botany*. Supplementary work to the above texts, upon plants peculiar to this coast, will be offered in this as well as in the following courses in botany. Credit, 5 hours.

PROFESSOR HILL.

4. Invertebrate Zoology. Protozoans, Coelenterates, and Vermes. Text-book, THOMPSON, *Outlines of Zoology*. Recitations and laboratory work. Credit, 5 hours. MR. KINCAID.

7. Comparative Anatomy of Vertebrates. Text-books, MARTIN, *How to Dissect a Bird*; WIEDERSHEIM, *Comparative Anatomy*. Lectures and laboratory work. Prerequisite, course 6. Credit, 5 hours. PROFESSOR HILL.

10. Advanced Physiology. Text-book, MARTIN, *Human Body*. Students are advised to complete a course in chemistry before electing this work. Credit, 3 hours. PROFESSOR HILL.

13. Advanced Botany. Lectures and laboratory work, four times a week. Credit, 4 hours. Hours to be arranged with instructor. PROFESSOR HILL.

16. Forestry. Lectures, research and thesis work. The history and progress of forestry as a science. Students will be guided in their reading and research by syllabi furnished by the lecturer. Credit, 2 hours. PROFESSOR ———

a1 or b1. Special Laboratory Work in Botany. This course may be elected as a1, 3 hours credit, or b1, 5 hours credit. Hours and subject to be arranged with the instructor. Prerequisite, course 4. This course is continued as a2 or b2 during the winter term, and as a3 or b3 during the spring term. PROFESSOR HILL.

c1 or d1. Special Laboratory and Museum Work in Zoology. This course may be elected as c1, 3 hours credit, or d1, 5 hours credit. Hours and subject to be arranged with the instructor. Prerequisite, course 7. This course is continued as c2 or d2 during the winter term, and as c3 or d3 during the spring term. PROFESSOR HILL.

e1. Structure and Classification of Insects. Laboratory and field work combined. Text-book, COMSTOCK, *Manual of Insects*. Prerequisite, course 6. Hours to be arranged with the instructor. Credit, 3 hours. This course is continued as e2 during the winter term, and as e3 during the spring term. MR. KINCAID.

WINTER TERM.

00. Entrance Biology. Continuation of course 0.

PROFESSOR HILL.

2. Structural Cryptogamic Botany. Continuation of course

1. Liverworts, mosses and ferns. Credit, 5 hours.

PROFESSOR HILL.

5. Invertebrate Zoology. Echinoderms and anthropods. Continuation of course 4. Credit, 5 hours. MR. KINCAID.

8. Comparative Anatomy and Histology. Text-book, SHAFER, *Histology*; WIEDERSHEIM, *Comparative Anatomy*. Continuation of course 7. Lectures and laboratory work. Credit, 5 hours. PROFESSOR HILL.

11. Advanced Physiology. Continuation of course 10. Credit, 3 hours. PROFESSOR HILL.

14. Advanced Botany. Lectures and laboratory work. Continuation of course 13. Credit, 4 hours. PROFESSOR HILL.

17. Forestry. Continuation of course 16. Credit, 2 hours. PROFESSOR ———

For special laboratory work, see courses outlined under autumn term.

SPRING TERM.

000. Entrance Biology. Continuation of course 00.

PROFESSOR HILL.

3. Structural Cryptogamic Botany. Continuation of course 2, completing ARTHUR, BARNES AND COULTER'S *Plant Dissection*, and BESSEY'S *Botany*. Gymnosperms and angiosperms. Credit, 5 hours. PROFESSOR HILL.

6. Vertebrate Zoology. Continuation of course 5, completing THOMSON'S *Outlines of Zoology*. Credit, 5 hours.

MR. KINCAID.

9. Vertebrate Embryology. Study the development of the chick by class room and laboratory work. Text-books, FOSTER AND BALFOUR, *Elements of Embryology*; HERTWIG-MARK, *Embryology*. Prerequisite, course 8. Credit, 5 hours.

PROFESSOR HILL.

12. Advanced Physiology. Continuation of course 11. Martin's Human Body completed. Credit, 3 hours.

PROFESSOR HILL.

15. Advanced Botany. Lectures and laboratory work. Continuation of course 14. Credit, 4 hours. PROFESSOR HILL.

18. Forestry. Continuation of courses 16 and 17. Attention will be given to forestry problems presented for solution in the Pacific Northwest. Credit, 2 hours. PROFESSOR ———

For special laboratory work see courses outlined under autumn term.

XII.—ENGINEERING.

AUTUMN TERM.

1. Elementary Drawing. Freehand and mechanical drawing. Credit, 5 hours. PROFESSOR ———
4. Structural and Machine Drawing. Application of descriptive geometry to engineering construction and machinery. Draughting. Credit, 5 hours. PROFESSOR ———
6. Surveying. Lectures and field practice. JOHNSON, *Theory and Practice of Surveying*. Continuation of course 5. Credit, 5 hours. PROFESSOR ———
10. Hydraulics. Including discussion of hydraulic and wind motors. Credit, 5 hours. MR. ———
16. Shop Work in Wood. Use of tools, pattern making, and turning. Lectures and laboratory practice. Credit, 5 hours. MR. ———
21. Machine Design. Theory of general design. Credit, 2 hours. MR. ———
23. Bridge Engineering. Survey of site; bridge design. The design is intended to be complete for the use of the manufacturer in the shop and mill. Credit, 5 hours. MR. ———
25. Electro-Dynamic Machinery. Direct current machines. Lectures, recitations and laboratory practice. Credit, 5 hours. MR. ———
28. Telegraph and Telephone. Credit, 3 hours.
31. Electrical Laboratory. Photometry and general electrical testing. Lectures and laboratory practice. Credit, 3 hours. MR. ———
34. Mechanical Engineering Laboratory. Lectures and laboratory practice. Credit, 3 hours. MR. ———
37. General Metallurgy. Fuels, refractory materials, and furnaces. Credit, 3 hours. MR. ———
40. Ore Testing. Determination of methods of ore treatment. Credit, 2 hours. MR. ———
43. Principles of Mining. Fluid mining, placer mining, ore mining, coal mining, quarrying. Credit, 3 hours. MR. ———

WINTER TERM.

2. Descriptive Geometry. Recitations and drawing. Pre-requisite, course 1. Credit, 5 hours.

PROFESSOR ———

7. Plotting from Notes, and Topographical Drawing. Four times a week, two hours each exercise. Credit, 4 hours.

PROFESSOR ———

8. Applied Mechanics. Prerequisite, theoretical mechanics. Credit, 5 hours.

MR. ———

11. Graphic Analysis of Structures. Bridges and buildings. Credit, 3 hours.

MR. ———

14. Efficiency and Economies of Prime Movers. Credit, 3 hours.

MR. ———

15. Irrigation. Construction of irrigation works and canals, including general treatment of water supply. Credit, 2 hours.

MR. ———

17. Shop Work in Metals. Use of tools. Lectures and laboratory work. Credit, 5 hours.

MR. ———

19. Blacksmithing. Use of tools, forging, welding, tool designing and tempering. Lectures and laboratory work. Credit, 3 hours.

MR. ———

22. Machine Design Completed. Designs of machinery with estimates and specifications for contractors. Credit, 3 hours.

MR. ———

Alternating Current Machinery. Generators, transformers, and other appliances. Credit, 5 hours.

MR. ———

29. Electric Lighting. Credit, 3 hours.

MR. ———

32. Electrical Laboratory. Continuation of course 31. Credit, 3 hours.

MR. ———

35. Mechanical Engineering Laboratory. Lectures and laboratory practice. Credit, 3 hours.

MR. ———

38. Metallurgy of Iron and Steel. Lectures and recitations. Credit, 2 hours.

MR. ———

41. Ore Dressing. Theory and practice. Credit, 2 hours.

MR. ———

44. Tunneling, Shaft-sinking, Drifting, Stopping, Timbering, etc. Credit, 3 hours.

MR. ———

SPRING TERM.

3. Shades, Shadows and Perspective. Credit, 5 hours.

PROFESSOR _____

5. Surveying. Lectures and Field practice. *Johnson's Theory and Practice of Surveying*. Prerequisite, plane trigonometry and drawing. Credit, 5 hours.

PROFESSOR _____

9. Strength and Resistance of Materials. Lectures. Prerequisite, theoretical mechanics. Credit, 3 hours.

MR. _____

12. Masonry and Foundations. Arches, dams, tunnels, etc. Lectures. Credit, 3 hours.

MR. _____

13. Steam Engines and Boilers. General theory and design, including description of different types. Credit, 5 hours.

MR. _____

18. Machine Shop Practice. Use of tools. Lectures and laboratory practice. Credit, 3 hours.

MR. _____

20. Foundry Practice. Moulding, casting in iron and alloy. Lectures and laboratory work. Credit, 3 hours.

MR. _____

24. Railway and Highway Location, Construction, and Economies. Credit, 5 hours.

MR. _____

27. Design of Electrical Machinery and Appliances. Credit, 3 hours.

MR. _____

30. Electric Railways. Credit, 3 hours.

MR. _____

33. Electrical Laboratory. Continuation of course 32. Credit, 3 hours.

MR. _____

36. Mechanical Engineering Laboratory. Continuation of course 35. Credit, 3 hours.

MR. _____

39. Metallurgy of Gold, Silver, Lead, Copper and Nickel. Credit, 2 hours.

MR. _____

42. Mining Machinery and Its Uses. Credit, 5 hours.

MR. _____

45. Practice in Mining Designing and Specification from notes taken in surveying and mapping a mine. Credit, 5 hours.

MR. _____

XIII.—PHYSICAL CULTURE AND HYGIENE.

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.

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

1. **Practical Course.** 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, 2 hours. MR. VANDER VEER.

2. **Advanced Course.** 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. MR. VANDER VEER.

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 university residence.

In order to graduate, each student must have at least 12 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 COLLEGE OF ENGINEERING.

THE COLLEGE OF ENGINEERING.

ADMISSION.

The requirements for admission to this college are the same as for admission to the College of Literature, Science and the Liberal Arts. Special students will not be admitted to this college to do work in the machine shop unless they have had sufficient instruction in mathematics and mechanical drawing to be able to make drawings for patterns to be used in foundry practice. Students desiring only machine shop practice are advised to go as apprentices into some machine shop doing a regular business.

REGISTRATION AND ELECTION OF STUDIES.

The regulations concerning registration and, in general, the election of studies, are the same as in the College of Literature, Science and the Liberal Arts. All able-bodied male undergraduates are required to do work in the Department of Military Science and Tactics during the first two years of residence.

COURSES OFFERED.

There are at present three courses, covering five years' work each, offered in this college, leading respectively to the degrees of Civil Engineer, Mechanical Engineer, and Electrical Engineer. (As soon as circumstances warrant, courses leading to the degrees of Marine Engineer and Architectural Engineer will be given.) Upon the completion of the work of the first four years of any one of these courses, the degree of Bachelor of Science will be conferred, the course of study pursued being indicated in the diploma.

The work of the fifth year is designed to be more strictly professional than that of the first four years. Unless students do good work in drawing, mathematics, and physics during the first four years, they will not be permitted to enter upon the fifth year of the work.

CIVIL ENGINEERING.

The courses named below are described under the synopsis of courses in the College of Literature, Science and the Liberal Arts.

FIRST YEAR.

Mathematics 1, 2, 3.

English 1, 2, 3.

SECOND YEAR.

* German or French 1, 2, 3, or 4, 5, 6.

Mathematics 4, 5, 6.

Physics 1, 2, 3.

† French or German 4, 5, 6, or elective.

THIRD YEAR.

Mathematics 7, 8, 9.

Chemistry 1, 2, 3, *a*, *b*, *c*.

Engineering 1, 2, 3.

FOURTH YEAR—AUTUMN TERM.

Physics 7 and *a*.

Engineering 4.

Elective, 4 to 6 hours.

WINTER TERM.

Astronomy 1.

Physics 8 and *b*.

Elective, 6 to 8 hours.

SPRING TERM.

Astronomy 2.

Physics *c*.

Engineering 5.

Elective, 4 to 6 hours.

*If the student offers French or German for admission he will take courses 4, 5 and 6 in that subject. If he offers neither French nor German he will take courses 1, 2 and 3 in whichever he prefers.

†If the student has taken French or German 4, 5 and 6 during the first year he may choose any subject he desires in its stead.

FIFTH YEAR—AUTUMN TERM.

Engineering 6, 10, 21, 23.

WINTER TERM.

Engineering 7, 11, 14, 15.

Thesis; or elective. 3 to 5 hours.

SPRING TERM.

Engineering 9, 12, 24.

Blue Printing.

Thesis; or elective 4 to 6 hours.

MECHANICAL ENGINEERING.

Work for the first three years the same as that outlined under Civil Engineering.

FOURTH YEAR—AUTUMN TERM.

Physics 7 and *a*.

Engineering 4 and 16.

WINTER TERM.

Physics 8 and *b*.

Engineering 8 and 19.

Elective, 1 to 3 hours.

SPRING TERM.

Physics *c*.

Engineering 5, 9, 20.

Elective, 1 to 3 hours.

FIFTH YEAR—AUTUMN TERM.

Engineering 10, 21, 25, 34.

WINTER TERM.

Engineering 11, 14, 17, 22, 35.

SPRING TERM.

Engineering 13, 18, 36.

Blue Printing.

Thesis; or elective, 4 to 6 hours.

ELECTRICAL ENGINEERING.

Work for the first three years the same as that outlined under Civil Engineering.

FOURTH YEAR—AUTUMN TERM.

Physics 7 and *a*.
Engineering 4, 28, 31.

WINTER TERM.

Physics 8 and *b*.
Engineering 8, 19, 32.

SPRING TERM.

Physics *c*.
Engineering 9, 20, 30, 33.

FIFTH YEAR—AUTUMN TERM.

Engineering 10, 16, 21, 25.

WINTER TERM.

Engineering 14, 17, 26, 29.

SPRING TERM.

Engineering 13, 18, 27.
Blue Printing.
Thesis; or elective, 4 to 6 hours.

THE COLLEGE OF

MINING AND METALLURGY.

THE COLLEGE OF MINING AND METALLURGY.

ADMISSION.

The requirements for admission to this college are the same as for admission to the College of Literature, Science and the Liberal Arts.

REGISTRATION AND ELECTION OF STUDIES.

The regulations concerning registration and, in general, the election of studies, are the same as in the College of Literature, Science and the Liberal Arts. All able-bodied male undergraduates are required to do work in the Department of Military Science and Tactics during the first two years of residence.

COURSES OFFERED.

Two courses, each covering five years' work, are offered in this college, leading respectively to the degrees of Mining Engineer and Metallurgical Chemist. Upon the completion of the first four years of either of these courses, the degree of Bachelor of Science will be conferred, the diploma indicating the course pursued.

During the winter term practical instruction in assaying and mining will be offered, for which no credit toward graduation will be allowed except to those who take the work regularly in the fifth year of the course in Mining Engineering. Persons taking these courses will be required to meet the actual expense incurred in the laboratory.

MINING ENGINEERING.

Work for the first three years the same as that outlined under Civil Engineering (College of Engineering).

FOURTH YEAR—AUTUMN TERM.

Physics *a*.
Chemistry *d*.
Geology 1 and 4.
Engineering 4.

WINTER TERM.

Physics *b*.
Chemistry *e*.
Geology 2 and 5.
Engineering 15 and 19.

SPRING TERM.

Physics *c.*
Chemistry *f.*
Geology 3 and 6.
Engineering 5 and 20.

FIFTH YEAR—AUTUMN TERM.

Geology 7.
Engineering 16, 37, 40, 43.

WINTER TERM.

Geology 11 and 13.
Engineering 17, 38, 41, 44.

SPRING TERM.

Geology 12 and 14.
Engineering 39, 42, 45.
Blue Printing.

METALLURGICAL CHEMISTRY.

Work of the first four years the same as that outlined under Analytical Chemistry (College of Chemistry).

FIFTH YEAR—AUTUMN TERM.

Engineering 37 and 40.
Gas Analysis.
Select Methods of Analysis.
Blast Furnaces.

WINTER TERM.

Engineering 38 and 41.
Assaying (Geology 13).
Select Methods of Analysis.
Calorimetry and Pyrometry.
Physical Properties of Metals.

SPRING TERM.

Engineering 39.
Assaying (Geology 14).
Select Methods of Analysis.
Microscopic Structure of Iron and Steel.
Electrolytic Analysis.

THE COLLEGE OF CHEMISTRY.

THE COLLEGE OF CHEMISTRY.

ADMISSION.

The requirements for admission to this college are the same as for admission to the College of Literature, Science and the Liberal Arts.

REGISTRATION AND ELECTION OF STUDIES.

The regulations concerning registration and, in general, the election of studies, are the same as in the College of Literature, Science and the Liberal Arts. All able-bodied male undergraduates are required to do work in the Department of Military Science and Tactics during the first two years of residence.

COURSES OFFERED.

At present two courses, covering five years' work each, are offered in this college, leading respectively to the degrees of Analytical Chemist and Pharmaceutical Chemist. Upon the completion of the first four years' work of either of these courses, the degree of Bachelor of Science will be conferred, the diploma indicating the course pursued.

The character of the instruction in each course sufficiently indicates the scope of the work and the intention of the course as professional.

Persons desiring to enter as special students to prepare for the examination of the State Board of Pharmacy, are advised to take courses 1 to 9 and *a* to *d*, inclusive, in Chemistry, courses 1, 2, and 3 in Biology, and courses 0, 00, and 000 in Physics. This will prepare the student so that with a little reading and drug store practice he should be able to pass the examination with ease.

The course in Pharmaceutical Chemistry is designed to train men to take charge of the manufacture of pharmaceutical chemicals.

ANALYTICAL CHEMISTRY.

The courses named in this schedule are described under the synopsis of courses in the College of Literature, Science and the Liberal Arts, with the exception of a few advanced courses.

FIRST YEAR.

Mathematics 1, 2, 3.

English 1, 2, 3.

* German or French 1, 2, 3, or 4, 5, 6.

SECOND YEAR.

Mathematics 4, 5, 6.

Physics 1, 2, 3.

† French or German 4, 5, 6, or elective.

THIRD YEAR.

Chemistry 1, 2, 3 and *a*, *b*, *c*.

‡ French or German.

Engineering 1, 2, 3.

FOURTH YEAR—AUTUMN TERM.

Physics *a*.Chemistry 4 and *d*.

Geology 1 and 4.

Elective, 1 to 3 hours.

WINTER TERM.

Physics *b*.Chemistry 5, *e*, *g*.

Geology 2 and 5.

SPRING TERM.

Physics *c*.Chemistry 6, *f*, *h*.

Geology 3 and 6.

FIFTH YEAR—AUTUMN TERM.

Biology 1.

Gas Analysis.

Select Methods of Analysis.

* If the student offers French or German for admission he will take courses 4, 5 and 6 in that subject: if he offers neither, he will take courses 1, 2 and 3 in whichever course he desires.

† If the student has taken French or German 4, 5 and 6 during the first year, he may choose any subject he desires in its stead; but he is advised to elect whichever of the two languages he has not taken.

‡ The student is advised to elect French or German, to the end that he complete two years' work in each during his course.

WINTER TERM.

Biology 2.
Assaying (Geology 13).
Iron and Steel Analysis.
Select Methods of Analysis.

SPRING TERM.

Biology 3.
Assaying (Geology 14).
Iron and Steel Analysis.
Select Methods of Analysis.

PHARMACEUTICAL CHEMISTRY.

Work of the first three years the same as that outlined under Analytical Chemistry.

FOURTH YEAR—AUTUMN TERM.

Physics *a*.
Chemistry 4 and *d*.
Biology 1.
Elective, 2 to 4 hours.

WINTER TERM.

Physics *b*.
Chemistry 5, *e*, *g*.
Biology 2.

SPRING TERM.

Physics *c*.
Chemistry 6, *f*, *h*.
Biology 3.

FIFTH YEAR—AUTUMN TERM.

Chemistry 7.
Biology 10.
Organic Analysis.
Gas Analysis.
Materia Medica.

WINTER TERM.

Chemistry 8 and *i*.
Assaying (Geology 13).
Biology 11.
Organic Analysis.
Materia Medica.

SPRING TERM.

Chemistry 9 and *j*.
Assaying (Geology 14.)
Biology 12.
Organic analysis.
Materia Medica.

DEPARTMENT OF

MILITARY SCIENCE AND TACTICS.

DEPARTMENT OF MILITARY SCIENCE AND TACTICS.

JOHN HENRY WHOLLEY.
FIRST LIEUTENANT, TWENTY-FOURTH INFANTRY.

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

COURSES OFFERED.

1. Practical Course. 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. M., Tu., W., 12:30 P. M., throughout the year.

PROFESSOR WHOLLEY.

2. Theoretical Course. 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. Th., 12:30 P. M., throughout the year.

PROFESSOR WHOLLEY.

REGULATIONS.

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 Faculty.

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 college 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 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 stripe 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 Faculty.

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 efficiency 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 unmilitary and unsightly to the eye of the soldier.

The following extract from general order No. 15, 1890, from the War Department, will govern the instruction:

(a) The course of instruction shall be both practical and theoretical, and shall be so arranged as to occupy at least one hour per week for theoretical instruction, and at least two hours per week for practical instruction.

(b) The practical course in infantry shall embrace small arm target practice, and, as far as possible, all the movements prescribed by the drill regulations of the United States army applicable to a battalion. Instruction in artillery shall embrace, as far

as possible, such portions of the United States regulations as pertain to the formation of detachments, manual of the piece, mechanical manoeuvres, aiming drill, saber exercise, and target practice. Instruction shall also include the duty of sentinels, and, where practical, castramentation. Such instruction shall be given by the professor of military science and tactics personally or under his immediate supervision.

(c) Theoretical instruction shall be by recitations and lectures, personally conducted and given by the professor of military science and tactics, and shall include, as far as practicable, a systematic and progressive course in the following subjects: The drill regulations of the United States Army, the preparation of the usual reports and returns pertaining to a company, the organization and administration of the United States Army, and the elementary principles governing the art of war.

On the completion of the military work by each class, the professor of military science and tactics shall report to the Adjutant General of the Army the names of such students as have shown special aptitude for military service, and furnish a copy thereof to the Adjutant General of the state for his information. The names of the three most distinguished students in military science and tactics at each college shall, when graduated, be inserted on the United States Army Register and published in general orders.

ORGANIZATION FOR 1897-98.

COMMANDANT, JOHN H. WHOLLEY, 1st Lieut., 24th Infantry. U. S. A.

STAFF AND NON-COMMISSIONED STAFF.

First Lieut. and Adjutant—W. MORRISON.

Sergeant Major—C. B. BLETHEN.

Chief Trumpeter—G. TROUT.

Armour—W. GRISWOLD.

COMPANY A.

Captain, W. V. COTCHETT.

First Lieut., D. BAILEY.

Second Lieut., P. ROWELL.

First Sergeant, E. SCHODER.

Sergeants.

MITCHELL, T.

BLETHEN, C.

GACHES, C. E.

EDMUNDS, T.

Corporals.

ENNIS, W.

SAYRE, J.

TANNER, V.

HAMMOND, B.

GRADUATES, 1897.

MASTER OF ARTS—

Harry Farmer Giles.....Fremont.

BACHELOR OF ARTS—

Arthur Howard Hutchinson.....Seattle.

BACHELOR OF PHILOSOPHY—

Arthur Manvel Dailey.....Seattle.

Martin Harrais.....Seattle.

BACHELOR OF SCIENCE—

Frank Dean Frazer.....Seattle.

Ruth Harrington.....Seattle.

John Jackol.....Seattle.

Theodore Martel Jenner.....Seattle.

Theodore Johnston Ludlow.....Seattle.

Oscar Albert Piper.....Seattle.

Walter Scott Wheeler.....Columbia City.

NORMAL DIPLOMA—

Arthur Manvel Dailey.....Seattle.

Grace Gatch.....Seattle.

Ruth Harrington.....Seattle.

John Edwin Porter.....Seattle.

GRADUATES IN PHARMACY—

Arthur Willis Barton.....Seattle.

Rosamonde Lucile Crane.....Seattle.

Frank Giles.....Fremont.

REGISTER OF STUDENTS, 1897-98.

CANDIDATE FOR THE DOCTOR'S DEGREE.

Daniel Ellis Douty, B. S., '92.....Seattle

CANDIDATE FOR THE MASTER'S DEGREE.

Karr, Charlotte Ruth, B. P., '95; B. A., '96.... ..Hoquiam

GRADUATE PURSUING SPECIAL WORK.

John Jackol, B. S., '97.....Seattle

. UNDERGRADUATES.

The figures in the column headed "Credit" indicate the number of hours credit toward graduation at the close of the academic year 1897-98.

NAME.	CREDIT.	RESIDENCE.
Abrams, Violet.....	.....	Seattle.
Adams, Mrs. Birdie E.....	.....	"
Allen, Charles Thomas.....	.....	Brooklyn.
Allen, Ella Beck.....	123	Ravenna.
Allen, Jessie Blount.....	145	Ravenna.
Anderson, Albert Morehouse.....	156	Port Orchard.
Anderson, Gleabert.....	.....	Seattle.
Anderson, Katie T.....	.....	"
Andrews, Ada Blanche.....	7	LaConner.
Andrews, Lena Mary.....	25	LaConner.
Bailey, Clara Josephine.....	182	Seattle.
Bailey, Harry William.....	50	"
Baker, Harold James M.....	90	Port Townsend.
Ballard, Arthur Condict.....	144	Auburn.
Barlow, Jessie.....	99	Tacoma.
Barlow, Tony Marvin.....	76	Fairhaven.
Barton, Arthur Willis.....	127	Seattle.
Barton, Fred H.....	.....	"
Barton, May.....	.....	"

NAME.	CREDIT.	RESIDENCE.
Barton, R. Charles.....	...	Seattle.
Beals, Birdie Ira.....	180	"
Beatty, Harold R.....	42	Ballard.
Bechdolt, Margaret Louise Z.....	88	Seattle.
Berry, Mable Blanche.....	...	"
Blanck, Ernest A.....	...	"
Blethen, Clarence Brettum.....	29	"
Blodgett, Charlotte Anna.....	55	"
Bond, James R.....	...	Nonesuck, Ken.
Boyd, Anna Criswell.....	132	Seattle.
Brintnall, A. Estella.....	12	Olympia.
Brooks, Blanche.....	165	Fremont.
Brown, Beniah.....	...	Seattle.
Bryne, Thomas J.....	...	"
Button, Mary Rathbun.....	180	"
Camehl, Lillian M.....	...	Latona.
Camehl, Marie V.....	...	Latona.
Canne, Louise.....	...	Seattle.
Carpenter, Ina Letitia.....	130	Latona.
Case, Kathryn Eva.....	86	Snohomish.
Caulkins, Glenn.....	32	New Whatcom.
Chambers, Nora.....	91	Olympia.
Childe, Eugene Albert.....	35	Seattle.
Clark, Anna Mabell.....	56	Everett.
Coffman, Harry Canby.....	146	Chehalis.
Coffman, Walter Roy.....	141	Chehalis.
Comeford, John James.....	...	Marysville.
Concannon, E. Pearl.....	19	Wanatah, Ind.
Constable, James.....	146	Latona.
Cook, Jennie.....	87	Seattle.
Corbet, Galbraith Hamilton J.....	62	"
Corbet, Jackson Blakely, Jr.....	118	"
Cotchett, Walter Victor.....	142	"
Cowan, Violet.....	...	"
Creuger, Edward Adolph.....	180	Latona.
Creuger, Emmeline Elenora.....	121	Snohomish.
Davis, Mrs. Cleo. C.....	...	Seattle.
Dean, Mary Luella.....	139	"

NAME.	CREDIT.	RESIDENCE.
Delaney, Alma J.....	...	Everett.
Dill, Joseph.....	...	Seattle.
Dougan, Ella Robena.....	89	"
Edmunds, James Alexander.....	...	Ballard.
Edmunds, Thomas Thompson.....	87	Ballard.
Edwards, Marion.....	181	New Whatcom.
Edwards, U. G.....	...	Port Townsend.
Elder, Mrs. Lillian H.....	...	Seattle.
Ennis, William Colwell.....	73	Centralia.
Evans, Goldie Irene.....	49	Snohomish.
Farquhar, Margaret Hanna.....	81	Seattle.
Ford, Charles K.....	...	Chelan.
Fowler, Charles Arthur.....	155	Centralia.
Fredlund, Edwin.....	...	Mount Vernon.
Frye, Helen Elizabeth.....	143	Seattle.
Fuller, Fred W.....	...	"
Fuller, Lulu.....	81	"
Fuller, May.....	89	"
Gaches, Charles E.....	42	LaConner.
Gaches, George Herbert.....	34	LaConner.
Gardiner, Alice Erica.....	20	Everett.
Gardner, Arthur Harry.....	...	Seattle.
Gardner, Susan Davidson.....	...	"
Gassett, Corbin Beverley.....	...	"
Giles, Frank.....	139	Fremont.
Glasgow, Grace.....	94	Seattle.
Glasgow, Ruhamah.....	80	"
Goodman, Cora Lena.....	209	Gig Harbor.
Goodman, Mae Rose.....	149	Gig Harbor.
Gordon, Mrs. Ellen.....	57	Seattle.
Gordon, Oliver M.....	...	Spokane.
Gottstein, Jacob Lewis.....	151	Seattle.
Grantham, Winfred.....	22	Ross.
Green, E. E.....	...	Seattle.
Green, Grace Evarts.....	33	"
Griswold, Walter Stanley.....	154	Burton.
Gruwell, Maud Willow.....	28	South Bend.
Gunn, Thomas McChenye.....	140	Brooklyn.

NAME.	CREDIT.	RESIDENCE.
Hagan, Hetty B ..	...	Seattle.
Hammond, Benton A.....	49	"
Hartshorn, Ernest George.....	70	Port Blakely.
Hathaway, Gretchen.....	.....	Everett.
Hays, Anna Findley.....	129	Olympia.
Hazzard, Minnie M.....	.....	Claquato.
Hazzard, O. P. Morton.....	.....	Claquato.
Higgins, N. M.....	.....	Seattle.
Hill, Stirling Bryant.....	116	"
Holmfeld, F. de D.....	.....	Latona.
Hopkins, Paul.....	78	Ballard.
Horton, Caroline Eliza.....	136	Seattle.
Howie, Ledru James.....	142	"
Howie, William Durward.....	141	"
Hughes, Chester Payne.....	.....	"
Hull, Stephen Allen.....	21	"
Iffland, Louise Anna.....	138	Port Townsend.
Iverson, Andrew.....	.....	Seattle.
Jeffery, Edna May.....	.....	"
Karr, Eunice Viola.....	137	Hoquiam.
Karr, William Hay.....	182	Hoquiam.
Karshner, Warner Melvin.....	182	Olympia.
Kellogg, George Gibbs.....	143	Hoquiam.
Kelly, David.....	124	Seattle.
Kincaid, Trevor Charles Digby....	150	"
Kincaid, Zoe Rowena.....	74	"
Knight, Henry G.....	12	Port Townsend.
Korstad, Hans Martinus.....	64	Seattle.
Kudo, Imajino.....	75	"
Lane, Alton Wayland.....	40	Seattle.
Landes, Charles.....	26	Latona.
Larson, Clarence Melrose.....	144	Friday Harbor.
Lawson, Juliana.....	.....	Seattle.
Leake, Ethel May.....	157	"
Leeman, Verna Lulu.....	142	"
Levy, Aubry.....	124	"
Lindsay, John James.....	44	Everett.
Lindberry, Charles A.....	42	New Whatcom.

NAME.	CREDIT.	RESIDENCE.
Logan, George Swan.....	.....	Seattle.
Long, A. E. S.....	.....	Saxon.
Lough, Thomas Warner.....	125	Fremont.
Lunkley, Rollie Earle.....	51	Seattle.
Maxson, Frank Theodore.....	39	Bremerton.
McCann, Charles.....	51	Everett.
McDonald, Marion Rena.....	.....	Seattle.
McDonnell, Elizabeth T.....	.....	"
McDonnell, Emma Pearl.....	.....	"
McFarland, Laura Dell.....	183	"
McGlinn, Garfield.....	43	LaConner.
McMahon, Edward.....	191	Olympia.
McMannus, John Barrott.....	36	Everett.
Metcalf, Lillie.....	150	Latona.
Minkler, Garfield A.....	.....	Lyman.
Miracle, Blanche Avicestell.....	.....	Seattle.
Mitchell, Annie.....	82	Olympia.
Mitchell, Rollin H.....	.....	Everett.
Mitchell, Thomas Warner.....	90	New Whatcom.
Morford, Carl E.....	76	Seattle.
Morita, Noburn.....	62	Yamaguchi, Ken.
Morrison, Walter Ferguson.....	88	Spokane. [Japan.
Morse, E. D. C.....	.....	Seattle.
Morse, Laura E.....	.....	Seattle.
Murphine, Thomas Floyd.....	180	Stanwood.
Palmer, Don Henry.....	154	Seattle.
Palmer, Stella.....	.....	Latona.
Parsons, Bettie.....	184	Seattle.
Pearson, Henry F.....	.....	Tacoma.
Pederson, H. B.....	.....	Ballard.
Peck, Oliva Cutler.....	127	LaConner.
Perry, J. Sawyer.....	.....	Seattle.
Phillips, Horace P.....	39	"
Pratt, Ruth Pickering.....	45	Custer.
Prosch, Edith Gratia.....	61	Seattle.
Rathbun, Chauncey Benedict.....	56	Olympia.
Reagh, Agnes Lillian.....	142	Seattle.
Reese, Henry Lindley.....	161	Kelso.

NAME.	CREDIT.	RESIDENCE.
Reeves, Carl H.	47	Columbia City.
Reeves, Sarah Caroline		Columbia City.
Reinhart, William W.	42	Olympia.
Rice, Carlestone S.		Laurenceburg.
Richardson, Harry Louthier	153	New Whatcom.
Robertson, Guy Haviland	115	Seattle.
Roll, Emma Belle	153	Fairhaven.
Roundtree, Thomas Otis	45	Fayette.
Rowell, Stephen Parker	86	Seattle.
Ruddy, Charles Alfred	47	Everett.
Sackett, Errett Van Hook		Seattle.
Sayre, James Willis	34	"
Schmid, Caroline Anna		Mercer Island.
Schmid, Conrad George	29	Mercer Island.
Schmid, Theresa	151	Mercer Island.
Schmid, Victor Joseph	93	Mercer Island.
Schoder, Ernest William	89	Seattle.
Schricker, Hilda F.		LaConner.
Shurtleff, Flevelle Carlton		Ballard.
Sommons, E. R.		Seattle
Singerman, Isidore Reuben	155	"
Skinner, Mary Agnes	192	"
Sloan, Annie Alice	138	Seattle.
Smith, Burke	141	Auburn.
Smith, Frank Wilbur	134	Fairhaven.
Souder, Audrey Blanche	125	Seattle.
Souder, Winnifred		"
Stansbury, Claudius J.	65	"
Steffen, Charles Henry	157	Farmington.
Storch, James F.		Seattle.
Street, Florence M.		Latona.
Sutton, Charles Wood	181	Seattle.
Sylvester, Francis Cora	79	Olympia.
Tanner, Vaughn	82	Blaine.
Taylor, Maria Delia		Damariscotta Me.
Tenny, Cecil L.		Seattle.
Terrell, Mrs. Katie D.		Latona.
Thomas, Permila	125	Black Diamond.
Thompson, May	26	Seattle.

NAME.	CREDIT	RESIDENCE.
Tiedeman, Walter H.....	47	Ballard.
Trageser, Nettie M.....	...	Seattle.
Trout, Glen Henry.....	31	Garfield.
Turnbull, William Garfield.....	143	Black Diamond.
Twedy, Oliver.....	...	Dayton.
Vail, James R.....	90	Custer.
Van Eman, Clarice L.....	49	Great Falls, Mon.
Veser, Lucius Otto.....	149	Seattle.
Vinnedge, Alice Webb.....	51	"
Ward, Mable.....	161	"
Waughop, Sarah Leonard.....	148	"
Weretnikove, Belle.....	98	"
Whittle, Charles de Quetteville...	121	Roslyn.
Wilgus, Thomas P.....	54	Seattle.
Wilkinson, Charles.....	...	Dayton.
Williams, Frederick Bernard.....	73	Victoria, B. C.
Williams, Sara Augusta.....	160	Seattle.
Wilson, Helen Pack.....	185	"
Wilson, Kathrynne Clara.....	...	Ellensburg.
Winters, Anne Caroline.....	137	Seattle.
Witter, M. B.....	10	Fairhaven.
Wood, Heartie.....	180	Seattle.
Woodruff, George.....	130	"
Wright, Edgar James.....	47	Fairhaven.
Wyndearo, Viola.....	12	Olympia.
Yamaguchi, Jinta.....	174	Seattle.

SUMMARY OF STUDENTS.

Graduates—

Candidates for higher degree.....	2
Pursuing special work.....	1

Undergraduates—

Candidates for baccalaureate degree.....	140
Unclassified.....	96

3

236

Total.....	239
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ALUMNI ASSOCIATION.

OFFICERS FOR THE YEAR 1897-98.

- President*, MERIT ERNEST DURHAM, B. S., 1894.
Vice President, JAMES EDWARD GOULD, B. Ph., 1896.
Corresponding Secretary, GRACE GATCH, A. B., 1893.
Recording Secretary, HELEN MAY ANTHONY, B. S., 1894.
Treasurer, JOAN JACKOL, B. S., 1897.
Historian, ADELLA M. PARKER, A. B., 1893.

ALUMNI.

1876.

Clara McCarthy Will, B. S., 1326 E St., Tacoma.

1881.

Helen I. Hall Wayland, B. S., Helena, Montana.
Edith Sanderson Redfield, B. S., 802 Minor Ave., Seattle.

1882.

Louis F. Anderson, A. B., A. M., Whitman College, Walla Walla.

Geo. A. Coleman, B. S., machinist, Third Ave. and Columbia, Seattle.

Geo. H. Judson, B. S. (died May 18, 1891).

Lelia A. Shorey Kilbourne, B. S., Green Lake.

1883.

H. O. Chipman, B. S. (died March 4, 1887).

Carrie V. Denny, B. S. (died Dec. 17, 1891).

Notes recorded from letter of May 10, 1894,
by President Gatch - on file in
Comptroller's office.

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Alumni.

1884.

Anna F. Sparling B. S., B. P. teacher, 1013 Eighth Ave., Seattle.

1885.

Agnes M. Greene, B. S., artist, 2234 Fifth Ave., Seattle.

Louise M. Root *Dement*, B. S., Astoria, Ore.

Hettie L. Greene *Camp*, B. S., Dyea, Alaska.

Charles V. Piper, M. S., Professor of Entomology, Agricultural College, Pullman. *Rec. May 1894*

Edmond S. Meany, B. S., Professor of American History, University of Washington, Seattle.

John Huntington, B. S., M. D., Kelso, Wash.

1886.

E. A. Alvord, A. B., Latona, Wash.

E. Emma Clark Pratt, A. B., A. M., Woodinville, Wash.

James F. McElroy, B. S., Prosecuting Attorney, King county, Seattle.

Matt S. Gormley, B. S., Seattle.

1887.

E. V. Bigelow, A. B., A. M., Pastor Congregational Church, Cohasset, Mass.

Nellie E. Powell *Drumheller*, A. B., Spokane, Wash.

Florence M. Adams, A. B., teacher, Dunlap, Wash.

James W. Porter, B. S. (died March 3, 1888).

Edward T. Powell, B. S., Portland, Ore.

Anna McDairmid *McLerman*, Seattle. *Rec. May 1894*

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., Hoquiam, Wash.

Depalmer G. Wakefield, B. S., teacher, Seattle.

Annie E. Willard *Hines*, B. S., Seattle.

1889.

Ruth Gatch, A. B. (died Nov. 4, 1889).

Royal T. Hawley, A. B., *Post-Intelligencer* office, Seattle.

C. Clarence Ward, B. S., surveyor, North Yakima.

Fanny L. Churchill, B. S.

1891.

Francis A. Noble.

1892.

Maude L. Parker, A. B.

D. Ellis Douty, B. S., Tutor and Laboratory Assistant in Physics, University of Washington, Seattle.

John A. Kellogg, B. S., attorney at law, North Port, Seattle.

Adelaide G. Nickeus, B. S., B. P., teacher, 1105 Cherry St., Seattle. *Red. May 1894*

Minnie J. Pelton, B. S., M. S., teacher, Garfield and Fifth Ave., N. Seattle.

J. Herman Schirmer, B. S., Vancouver, Wash.

1893.

Winnifred Ewing Johnson, A. B., B. P.

Grace Gatch, A. B., Corvallis, Oregon.

Beatrice A. Karr, A. B., B. P., Aberdeen, Wash.

Adella M. Parker, A. B., Instructor in Latin and Mathematics in Seattle High School, Seattle.

F. Otto Collings, B. S., Seattle.

1894. *OK May 1894*

Roger Sherman Greene, B. A., B. P., Dawson City.

Adelbert Ernest Pierce, B. A.

Albert Roderick Sprague, B. A., Journalist, Dyea, Alaska.

Helen May Anthony, B. S., Seattle.

Mettie Heaton *Durham*, B. S., North Bend., Wash.

Merrit Ernest Durham, B. S., teacher, North Bend, Wash.

Annie Jennie Pelton, B. S., B. P., teacher, Garfield and Fifth Ave., N. Seattle.

John Edwin Porter, B. S.

Horace Amos Turner, B. S., post graduate at University of California.

Delton Alton Ford, B. P., Snohomish, Wash.

1895.

Helen Burrows Hubbard Smith, B. A., Seattle.

Anna Rayfield Parsons *Williams*, B. A., Seattle.

Earl Robinson Jenner, B. A., clerk Superior Court, Seattle.

Erastus Phillips Dearborn, B. A., student, Harvard college, Cambridge, Mass.

Isaac Phillips Morrison, B. A., clerk National Bank of Commerce.

Hilda Leonard Waughop, B. P., teacher, Seattle.

Harriet Alice Howell, B. P., graduate Emerson School of Oratory, Omaha, Neb.

Charlotte Ruth Karr, B. P., B. A., student, University of Washington, Brooklyn.

Myra Brewster Clarke, B. P., teacher, Seattle.

Barlie Reginald McElreath, B. P., county superintendent of Skagit county, Mount Vernon, Wash.

Martha Wiley, B. P.

Kate Skannon Williams, B. P., Walla Walla.

1896.

Tom Marie Alderson, B. A., Alaska.

George Merritt Allen, B. A., editor "Klondike Nugget," Dawson City.

William Henry Beatty, B. A., student, Harvard College, Cambridge, Mass.

Frederick Richie Bechdolt, B. A.

Albert Selden Burrows, B. A., teacher, Bellevue, Wash.

Harry Farmer Giles, B. A., M. A., teacher, Fremont.

Lydia Ezma Lovering, B. A., teacher, Falls City, Wash.

John Chisholm Dickson, B. S., Principal of Schools, Buckley, Wash.

John Hoegh Graff, B. S., Seattle, Wash.

John Haan, B. S. (died).

Robert Wesley Jones, B. S.

Ina Irena Pratt, B. S., teacher, Port Townsend High School, Port Townsend.

Francis Ell Burnham Smith, B. S., Dawson City, N. W. T.

Arthur Joseph Collins, B. A., Ph. B.

James Edward Gould, Ph. B., teacher, Port Townsend High School, Port Townsend.

Madison Monroe Moss, Ph. B., Instructor in English and Rhetoric, Seattle High School, Seattle.

Ralph Day Nichols, Ph. B., law student, Seattle.

Agnes Ward, Ph. B., teacher, Seattle.

1897.

Arthur Manvel Dailey, Ph. B., Seattle.

Martin Harraiss, Ph. B., Dawson City.

Arthur Howard Hutchison, B. A., Seattle.

Frank Dean Frazer, B. S., post graduate student, Princeton,
N. J.

Ruth Harrington, B. S., teacher, Ballard.

John Jackol, B. S., student, University of Washington.

Theodore Martel Jenner, B. S., Seattle.

Theodore Johnson Ludlow, B. S., Seattle.

Oscar Albert Piper, B. S., Seattle.

Walter Scott Wheeler, B. S., Columbia.

NORMAL GRADUATES.

1880.

Adda L. George, Albany, Ore.

Clara E. Lombard *Colkett*, Seattle.

Luella J. Wittnemeyer *Hurd*, Juanita.

1881.

Flora A Phelps *Judson*, Lynden.

Mattie S. Wade *Kyes*, Kent.

1882.

Lizzie S. Anderson *Davis*, Tacoma.

Addie J. Plummer *Mathiewson*, Lodi, Cal.

1884.

Louise M. Root *Dement*, Astoria, Ore.

1885.

Fannie E. Emery, Seattle.

Iva J. Jones *Kendrick*, Hadlock.

Hessie E. Cox *Hastings*, Seattle.

Lizzie Ward *Meany*, Seattle.

1886.

Hattie M. Kellogg, teacher of Music and Elocution, Fairhaven.
Colinta Cabanski, Seattle.

1887.

Anna L. Christopher, teacher, Marion, Ore.
Florence A. Leger *Whitford*, Seattle.
Gladys Austin, Whatcom.
Thomas Hayton, merchant, La Conner.
Albert W. Buddress, attorney at law, Port Townsend.

1888.

Nellie Clayton *Sands*, Tacoma.
Jay D. Dean, postmaster, Hoquiam.
Rebecca Gaines *James*, Sonoma, Cal.
Josie Jackling, teacher, Seattle.
Alice A. Parker *Carter*, Seattle.
— Ida Soule *Howes*, Oneonta, N. Y.

1889.

Louise H. Monroe, teacher, Tacoma.
Agnes M. Goddard, teacher, Seattle.

1890.

Beatrice A. Karr, B. P., Seattle.
Lulu J. Thompson, Alaska.

1891.

Isabel R. Dikeman, Sprague.
Isabel McDiarmid *Winter*, Hoodspport.
Helen E. Taylor, Seattle.

1892.

Marguerite A. Baldwin, teacher, Seattle.
Vesta M. Baldwin, Seattle.
Harriet P. Griswold, teacher, Hoodspport.
Maude L. Parker, Seattle.
Minnie J. Pelton, teacher, Seattle.
Lillian Keen *Le Ballister*, Seattle.

1894.

Carrie Grimes Davis, teacher, South Seattle, Van Asselt.
Olive May Hubbard, teacher, Sumner school, Puyallup.
James Frank Medearis.

1895.

Quigie Marie Lee.

Rena Bee Talmadge, teacher, Seattle.

Clara May Talmadge, teacher, Seattle.

Alice Penfield.

1896.

Lois Medora Adams, teacher, Seattle.

- Albert Selden Burrows, teacher, Bellevue.

Margaret Ellen Crane, teacher, Seattle.

Ollie Doke Davis, teacher, Van Asselt.

John Chisholm Dickson, Principal of Schools, Buckley.

Madison Monroe Moss, instructor, high school, Seattle.

- Ina Irena Pratt, teacher, Port Townsend.

Francis Ell Burnham Smith, Dawson City, N. W. T.

Agnes Ward, teacher, Seattle.

Sara Price Warren, Seattle.

1897.

Arthur Manvel Dailey, teacher, Ballard.

Grace Gatch, Corvallis, Or.

Ruth Harrington, teacher, Ballard.

John Edwin Porter, Seattle.

GRADUATES IN PHARMACY.

1896.

Helen May Anthony, B. S., Ph. B., Seattle.

Eva Maud Campbell, Ph. G.

Arthur Clifton Crookall, Ph. G.

Virginia Mackey Elder, Ph. G.

Charles Summer Leas, Ph. G.

Thomas Warner Lough, Ph. G., laboratory assistant in chemistry, University of Washington, Fremont.

James Miller McMurry, Ph. G.

Harry Louthier Richardson, Ph. G., student U. of W., Seattle.

August Christain Rosenfeldt, Ph. G.

Walter Rutz, Ph. G.

Harold Walter Walton, Ph. G.

1897.

Arthur Willis Barton, Seattle.

Rosamonde Lucile Crane, Seattle.

Frank Giles, Fremont.

BUSINESS GRADUATES.

1880.

W. J. Colkett, assistant postmaster, Seattle.

1881.

David E. Biglow, mechanic, Seattle.

1883.

John Huntington, physician, Montecello.

1887.

Malinda A. Watson *Williams*, Spokane Falls.

BEQUESTS.

The powers and duties of the Board of Regents in the matter of bequests and gratuities are set forth in the following clause taken from Section 186 of Chapter 1 of Title IV of the Code of Public Instruction:

“The Board of Regents is authorized to receive such bequests or gratuities as may be granted to the 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.”