





FRONT VIEW OF THE ADMINISTRATION BUILDING.



GYMNASIUM AND ARMORY INTERIOR OF MAIN LIBRARY. LADIES' HALL. MEN'S HALL.



NORTH HALL. ASSAY SHOPS. LAW BUILDING. OBSERVATORY. DORMITORY ON OLD SITE. OLD POWER HOUSE.



NEW BUILDINGS IN PROCESS OF ERECTION.

FRONT VIEW OF SCIENCE HALL.

1.7

VIEW OF NEW POWER PLANT.



#### DENNY HALL. INTERIOR OF GYMNASIUM.

PORTION OF MUSEUM. YOUNG MEN'S CHRISTIAN ASSOCIATION.

# CATALOGUE FOR 1900-1901

AND

ෝ

### ANNOUNCEMENTS FOR 1901-1902

OF THE

# UNIVERSITY OF WASHINGTON.



### SEATTLE, WASHINGTON.

OLYMPIA, WASH.: GWIN HICKS, . . . STATE PRINTER 1901.

# TABLE OF CONTENTS.

1	PAGE.
UNIVERSITY CALENDAR FOR 1901-1902	9
BOARD OF REGENTS	10
FACULTY AND OTHER OFFICERS	11
·	
GENERAL INFORMATION.	
Historical Sketch	19
Seat of the University	22
Government	25
Endowment and Support	25
Buildings	27
Grounds and Arboretum	31
Library	32
Auditorium.	33
Small Auditorium	34
Museum	34
Laboratories	36
Chemical	36
Physical	37
Botanical	40
Zoological	42
Mineralogical	43
Assaving	44
Equipment for Civil Engineering	46
Observatory	47
Gymnasium and Armory	47
Student Associations	47
Expenses of Students	51
Laboratory Fees	52
Discipline	54
Management of Dormitories	54
Addresses at Assembly	55
University Extension	57
Lectures at Teachers' Institutes	57

# University of Washington.

ORGANIZATION OF THE UNIVERSITY	58
DIVISION OF THE YEAR	59
Admission	59
REGISTRATION AND ELECTION OF STUDIES	59
THE COLLEGE OF LIBERAL ARTS.	
FACULTY AND OTHER INSTRUCTORS	63
PURPOSE	65
Admission	66
By Examination	66
Suggestions for Preparation.	67
From Accredited Schools	74
List of Accreation School	74
Of Special Students	74
To Advanced Standing.	75
ELECTION OF STUDIES	75
COURSE	76
Plan of the Course	76
Summary of the Course	77
Major and Collateral Studies	77
DEGREES	78
Degree with Honors	78
NORMAL DIPLOMA	78
Teachers' Certificate	79
THE COLLEGE OF ENGINEERING.	
FACULTY AND OTHER INSTRUCTORS	83
Purpose	85
ADMISSION Of Special Students and to Advanced Standing	85 86
Courses	86
Civil Engineering	86
Mechanical Engineering	87
Electrical Engineering	88
Thesis	88

4

Tuble of Contents.	5
DEGREES With Honors	89 89
THE SCHOOL OF MINES.	
FACULTY AND OTHER INSTRUCTORS	93
PURPOSE	95
ADMISSION	96
Courses	96
Mining Engineering	96
Mining Engineering with Geological Alternative	97
Metallurgical Engineering	98
Summer Work	98
Short Course	99
Course for Prospectors	99
STATE ASSAYING	102

#### THE GRADUATE SCHOOL.

FACULTY COMMITTEE IN CHARGE	105
PURPOSE	105
ADMISSION	106
Advanced Degrees.	106
Regulations	106
Master's Degrees	106
Doctor's Degree	107

# THE SCHOOL OF PHARMACY.

FACULTY	113
PURPOSE	114
ADMISSION To Advanced Standing	114 115
Course	115
GRADUATION	116 117

DEPARTMENTAL STATEMENT OF COURSES.	
LANGUAGE AND LITERATURE	121
Greek	121
Latin	122
German	123
French	124
Spanish	125
Rhetoric and Oratory	126
English Language and Literature	127
PHILOSOPHICAL SCIENCES	129
Philosophy	129
Pedagogy	130
Political and Social Science	132
History	133
PURE SCIENCE	135
Chemistry	' 135
Physics	137
Botany	138
Forestry	140
Zoology	140
Geology	142
Astronomy	143
MATHEMATICS AND APPLIED SCIENCE	144
Mathematics	144
Civil Engineering	146
Mechanical Engineering	148
Electrical Engineering	150
Mining Engineering	152
Metallurgy	153
Pharmacy	156
PHYSICAL AND MILITARY TRAINING	157
Physical Culture and Hygiene	157
Military Science and Tactics	158

6

# Table of Contents.

#### THE SCHOOL OF LAW.

FACULTY AND LECTURERS	165
PURPOSE	166
ADMISSION	166
SPECIAL STUDENTS	168
REGISTRATION.	169
COURSE	169
First Year	170
Second Year	171
Thesis	171
Practice Court	172
Elocution and Oratory	172
Constitutional History and Political Science	172
EXAMINATIONS	173
DEGREE	173
FEES	174

#### THE PREPARATORY SCHOOL.

PURPOSE	177
GOVERNMENT	177
Admission	178
SUBJECTS OFFERED	178
PREPARATORY LAW COURSE	181
PREPARATORY MEDICAL COURSE	182

#### STUDENTS AND ALUMNI.

COMMENCEMENT, 1900	187
REGISTER OF STUDENTS	189
ALUMNI ASSOCIATION	208

#### GIFTS.

MUSEUM	<b>2</b> 23
LIBRARY	224
Apparatus and Equipment	224

# GENERAL CALENDAR.

							1		-	•			
1901.						1902.							
			July	•					Ja	nuai	у.		
s.	М.	т.	w.	<b>°</b> T.	F.	S.	S.	М.	Т.	w.	Т.	F.	s.
7 14 21 28	1 8 15 22 29	2 9 16 23 30	8 10 17 24 81	4 11 18 25	5 12 19 26	6 18 20 27	5 12 19 26	6 18 20 27	7 14 21 28	1 8 15 22 29	2 9 16 23 30	8 10 17 24 81	4 11 18 25 
		A	ugu	st.	_				Fe	brua	ry.		
4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 23 30	8 10 17 24 81	2 9 16 23	3 10 17 24	4 11 18 25	5 12 19 26	6 18 20 27	7 14 21 28	1 8 15 22
		Sep	tem	ber.					N	larcl	1.		
1 8 15 22 29	2 9 16 28 30	3 10 17 24	4 11 18 25 	5 12 19 26	6 13 20 27	7 14 21 28 	2 9 16 23 30	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29
		0	ctob	er.			April.						
6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 28 30	3 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 28 30	8 10 17 24 	4 11 18 25 	5 12 19 26
		No	veml	ber.						May	•		
3 10 17 24	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 28 80	4 11 18 25	5 12 19 26	.6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 23 30	8 10 17 24 81
December.								lune	•				
1 8 15 22 29	2 9 16 23 30	8 10 17 24 31	4 11 18 25	5 12 19 26	6 13 20 27	7 14 21 28	1 8 15 22 29	2 9 16 23 30	8 10 17 24	4 11 18 25 	5 12 19 26	6 13 20 27	7 14 21 28

8

**(**8`

100

# UNIVERSITY CALENDAR FOR 1901-1902.

₽

### 1901.

#### FALL TERM.

Examinations for admission begin. . Monday, Sept. 30.

(Between 8:40 A. M. and 12:30 P. M. on Monday and Tuesday will be held all examinations in the departments of sciences, mathematics, and drawing. Between 1 and 5 p. m. of the same days will be held all examinations in the departments of languages. English. history, and political science.)

Registration day	.Tuesday, Oct. 1.
Recitations begin	Wednesday, Oct. 2.
Thanksgiving vacation	.Nov. 27-Dec. 2.
Term ends	.12:30 P. M., Friday, Dec. 20

#### 1902.

#### WINTER TERM.

Term begins	8:40 а.	м.,	Thursday,	Jan. 2	2.
Washington's birthday	.Saturd	lay,	Feb. 22.		
Term ends	.4 р. м	, w	ednesday, 1	March	19.

#### SPRING TERM.

Term begins	.8:40 A. M., Monday, March 24.
Baccalaureate sermon	.11 A. M., Sunday, June 15.
Examinations for admission begin.	. Monday, June 16.
Alumni day	.Tuesday, June 17.
Class day	Wednesday, June 18.
Commencement	10:30 A. M., Thursday, June 19.

(9)

### THE BOARD OF REGENTS.

Hon. JOHN P. HOYT, President....Seattle...Term expires, 1905. Hon. ALDEN J. BLETHEN......Seattle...Term expires, 1902. Hon. CHARLES M. EASTERDAY.....Tacoma..Term expires, 1902. Hon. GEORGE H. KING......Seattle...Term expires, 1903. Hon. JAMES Z. MOORE......Spokane..Term expires, 1904. Hon. JAMES E. BELL.....Everett...Term expires, 1904. Hon. RICHARD WINSOR......Seattle...Term expires, 1905.

WILLIAM J. MEREDITH, A. B., Secretary of the Board.

STANDING COMMITTEE OF THE BOARD OF REGENTS. Executive.

JOHN P. HOYT. CHAIRMAN.

RICHARD WINSOR. GEORGE H. KING.

ALDEN J. BLETHEN.

Instruction.

ALDEN J. BLETHEN, CHAIRMAN.

GEORGE H. KING. JOHN P. HOYT.

Library, Museum, and Apparatus.

RICHARD WINSOR, CHAIRMAN.

CHARLES M. EASTERDAY. JAMES E. BELL.

Buildings and Grounds.

GEORGE H. KING, CHAIRMAN,

ALDEN J. BLETHEN. JAMES Z. MOORE.

**Reports and Publications.** 

JAMES E. BELL, CHAIRMAN. JAMES Z. MOORE. CHARLES M. EASTERDAY. (10)

### THE UNIVERSITY FACULTY.

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

University Heights.

CHARLES FRANCIS REEVES, M. S., Dean of the College of Liberal Arts, Professor of the German Language and Literature. Summit Avenue, Brooklyn Addition.

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

EDMOND STEPHEN MEANY, M. S.,

l'rofessor of History. Summit Avenue, Brooklyn Addition.

J. ALLEN SMITH, LL. B., PH. D., Professor of Political and Social Science. Denny-Fuhrman Addition.

ARTHUR RANUM, A. B., Professor of Mathematics and Astronomy. 820 Ninth Avenue.

ALMON HOMER FULLER, M. S., C. E., Dean of the College of Engineering, Professor of Civil Engineering. Summit Avenue, Brooklyn Addition. (11) PHOMAS EATON DOUBT, B. Sc., A. M., Professor of Physics and Electrical Engineering. Brooklyn Avenue, Brooklyn Addition.

ALEXANDER BRAINARD COFFEY, M. S. D., A. M.,\* Professor of Pedagogy.

-HOMER REDFIELD FOSTER, PH. B., M. S., Professor of Botany.

University Heights.

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

University Heights.

ARTHUR RAGAN PRIEST, A. M., Professor of Rhetoric and Oratory. University Heights.

JOHN THOMAS CONDON, LL. M., Dean of the School of Law, Professor of Law.

Dean's House, Old Campus.

HORACE GREELEV BYERS, A. B., PH. D., Dean of the School of Pharmacy, Professor of Chemistry.

University Heights.

-CHARLES WILCOX VANDER VEER, Director of the Gymnasium, Professor of Physical Culture and Hygiene. 1302 University St.

\*Absent, engaged in special study.

CAROLINE HAVEN OBER, Professor of the Romanic Languages and Literatures. Broadway, Brooklyn Addition.

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

Professor of the Greek Language and Literature.

-DORSEV ALFRED LYON, A. B., E. M.,

Dean of the School of Mines,

Professor of Mining Engineering and Metallurgy. Men's Hall.

THOMAS FRANKLIN KANE, A. B., PH. D.,

Professor of the Latin Language and Literature. University Heights.

-TREVOR CHARLES DIGBY KINCAID, B. S., A. M., Professor of Zoology.

Columbus Avenue, Brooklyn Addition.

**FREDERICK MORGAN PADELFORD, A. B., PH. D.,** Professor of English Literature.

University Heights.

ALBERT HENRY YODER, A. B.,

. Acting Professor of Pedagogy.

Brooklyn Addition.

WILLIAM JOHN MEREDITH, A. B Associate Professor of English.

Brooklyn Avenue, Brooklyn Addition.

.

JUNIUS ROCHESTER, A. M.,

· Associate Professor of Law.

416 Leonora Street.

HARRY CANBY COFFMAN, A. B., Librarian.

Men's Hall.

/JAMES EDWARD GOULD, PH. B.,

Assistant Professor of Mathematics and Physics. Second Avenue North and Blaine Street.

ALBERTA SPURCK, A. B., Assistant Professor of Physical Culture. Brooklyn Addition.

Curator of the Museum. Assistant Professor of Anthropology.

THOMAS WARNER LOUGH, PH. G., A. B., Assistant Professor of Chemistry and Pharmacy. Fremont.

JAMES MONTGOMERY GILCHRIST, M. E., Assistant Professor of Mechanical and Electrical Engineering. Brooklyn Addition.

-DAVID KELLY, B. S., A. M., Assistant Professor of Physics and Electrical Engineering. 2816 Fifth Avenue.

HENRY LINDLEY REESE, A. M., Assistant Professor of Greek and Latin.

622 Spring Street

#### INSTRUCTORS AND OTHER OFFICERS.

JACOB DUTTENHOEFER, University Engineer.

Brooklyn Addition.

THOMAS WARNER MITCHELL, A. B., Instructor in Mathematics.

Men's Hall.

BIRDIE IRA BEALS, PH. B., A M., Instructor in English and History.

Brooklyn Addition.

STIRLING BRYANT HILL, B. S., Instructor in Civil Engineering.

704 Howard Avenue, North.

OTTILIE GERTRUDE BOETZKES, A. B., Instructor in Modern Languages.

University Heights.

HENRY GRANGER KNIGHT, Instructor in Chemistry.

Men's Hall.

ÆLIZABETH PEARL MCDONNELL, PED. B., Cataloguer in the Library. Summit Avenue, Brooklyn Addition.

WILLIAM CLARKSON HASTINGS, B. S., M. D., Instructor in Materia Medica and Microscopy. 221 First Avenue. GEORGE BENJAMIN MOREHOUSE, Assistant in Chemistry.

Men's Hall.

FRANK JOSEPH MCKEOWN, Assistant in the Library.

Men's Hall.

HON. FRED RICE ROWELL, A. B., Lecturer on Mining Law.

511 East Pike Street.

HON. CORNELIUS H. HANFORD, Lecturer on the Law of Admiralty.

1021 Madison Street.

HON. THEODORE L. STILES, A. M., Lecturer on the Law of Insurance.

Tacoma.

HON. JAMES HAMILTON LEWIS, Lecturer on Criminal Law and Jury Trials. 617 Minor Avenue.

EDWARD WHITSON, Lecturer on Irrigation and Water Rights. North Yakima.

TWYMAN O. ABBOTT, Lecturer on Wills and Administration of Estates. Tacoma.

CHARLES E. SHEPARD, A. B., LL. B., Lecturer on the Law of Patents, Trade Marks, and Copyrights. The Blackwell. GEORGE E. WRIGHT, A. B., LL. B., Lecturer on the Law of Real Property. 436 Burke Building.

> JOHN ARTHUR, Lecturer on Public Land Law. 1021 Seneca Street.

WILLIAM JOHN MEREDITH, A. B., Registrar.

WILLIAM MCDEVITT, A. B., LL. M., Stenographer.

JOHN DANIEL PATTERSON, Superintendent of Buildings and Grounds.

#### STANDING COMMITTEES OF THE FACULTY.

Admission.-Professors Foster, Kane, Meredith, and Fuller.

Accredited High Schools.-Professors Yoder, Kane, and Reeves.

Class Officers.—College of Liberal Arts: Freshmen, Dean Reeves; Sophomores, Professor Priest; Unclassified, Professor Landes; Juniors, Seniors, and Graduates, the respective Major Professors. College of Engineering: Civil and Mechanical Engineers, Professor Fuller; Electrical, Professor Doubt. School of Mines: Professor Lyon. School of Pharmacy: Professor Byers. School of Law: Dean Condon.

Program.—Professors Reeves, Smith, and Byers.

Student Assistance.-Professors Meany, Lyon, and Meredith.

Discipline.—Professors Doubt, Ranum, Smith, Colegrove, and Hansee.

Petitions .-- Professors Smith, Byers, and Ober.

Holidays -- Professors Padelford, Colegrove, and Lyon.

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

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

Dormitories.-Professors Fuller, Lyon, and Kane.

Library.-Mr. Coffman, and Professors Reeves and Padelford.

Museum.-Professors Meany, Landes, Kincaid, and the Curator.

Catalogue.- Professors Priest, Padelford, Meany, Kane, and Yoder.

## GENERAL INFORMATION.

#### HISTORICAL SKETCH.

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

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

On January 29, 1855, just six months from the date of the University land grant, the legislature enacted that the Territorial University of Washington should comprise two equal institutions, one at Seattle and the other on Boisfort Plains in Lewis county. The granted lands were to be divided equally between the two institutions. The county commissioners who were directed to select the granted lands failed in their duty, and in 1858 the legislature united the two universities. Cowlitz Farm Prairie, in Lewis county, was chosen as the new site, and another enactment was passed for the selection of all the granted lands.

This shifting and fruitless policy in locating the Territorial University led the pioneers of the Puget Sound region to secure an enactment incorporating another institution to be called the "Puget Sound University." The possibility of thus duplicating educational institutions resulted in bringing matters to a definite conclusion, and in January, 1861, the legislature relocated the Territorial University at Seattle. A board of University commissioners, consisting of Rev. Daniel Bagley, John Webster, and Edmund Carr, all of Seattle, was immediately appointed to select the granted lands, to sell them for not less than \$1.50 an acre, and to build the University within one year.

This board met on Washington's birthday, 1861, and organized for work. The land was cleared, the cornerstone of the main building was laid on May 21, 1861, and the building completed within the specified year. In the autumn of 1862 the other buildings were constructed, and during the winter the UNIVERSITY OF WASHINGTON was opened.

The legislature had made one other condition in relocating the University in Seattle and that was that a suitable site of at least ten acres be donated by the people of Seattle. The site was selected and the major portion of it donated by Hon. Arthur A. Denny from his farm. The other portion of the site was given by Charles C. Terry and Edward Lander. A few large maple trees were left on the grounds, but all the other trees were cleared off. The ground was plowed and harrowed, and the Rev. Daniel Bagley sowed the whole tract with grass seed he had brought from Oregon the year before. The records of the early years of the University are very meager, but it is certain that the institution had a severe struggle. A bare list of the men who filled the position of president shows that changes were numerous, no one of the first six presidents having held office for more than two years.

For several years the work of the University did not rank much above that of an academy. The first class to be graduated was during the second administration of Dr. George F. Whitworth in 1876. This class consisted of one young lady, Miss Clara McCarty, now Mrs. Wilt o Tacoma, who was graduated with the degree of bachelor of science. The honor of having first organized the University on real college lines belongs to the seventh president, Dr. A. J. Anderson. Under his administration a small class was graduated in 1880, and from that date classes have been graduated annually with all the essentials of a college training.

The total number of graduates up to June, 1901, was 314. Records of the students in the earlier years were not preserved, but it is estimated that the number of those who have attended the University from its organization to the present time is about 5,000.

The building erected in 1861 was the finest educational structure at the time in the Pacific Northwest. It was the only building belonging to the institution except the president's cottage and two rather inferior dormitories. All were frame buildings. The money for their construction was obtained from the sale of the University lands. The territorial government paid out no money for the University's maintenance until 1879. Then the amount given was very small and was to apply on tuition fees of "free" scholars to be appointed by the governor, judges, and members of the legislature. This condition prevailed in all the appropriation bills for the University throughout the territorial period. During this time, from 1862 to 1889, the total sum appropriated by the territory for the University was only \$34,350.

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

The present year is the fortieth of the University's activity. Since the growth of the territory for years was slow and at times scarcely perceptible, it is not strange that the institution did not always make uniform progress. At the present time, however, the University of Washington is growing rapidly and has taken its place as the continuation of the public school system, the capstone in the state's great educational edifice. As in the rest of the public school system, from the kindergarten and primary school upward, instruction in the University of Washington is free to all, without regard to race, sex, creed, or social station.

#### SEAT OF THE UNIVERSITY.

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

<sup>\*</sup>The statistics used here are from the reports of the Chamber of Commerce. the United States Weather Bureau, and other reliable sources.

The city of Seattle is the metropolis of the state of Washington, and has a population of over 80,000. It is located on Elliott Bay, an arm of Puget Sound, and extends eastward to Lake Washington, one of the largest bodies of fresh water in the state.

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

It has been the custom to refer to the climate of Puget Sound as mild but wet, but from actual statistics the total precipitation for the year 1900 was only a few inches above that of the city of Chicago. The highest temperature reached in 1900 was 86 degrees on June 12th, and the lowest was 21 degrees on November 21st. A sure indication of the healthfulness of the Puget Sound climate is a low death rate. In Seattle during the past year the rate was the lowest in the United States,—a little over seven in one thousand.

Numerous lines of railroad, steamships, and sailing vessels furnish abundant facilities for transportation to and from the city, while within the city there are 100 miles of electric and cable street car lines. There are six public parks in the city and four private parks open to the public. The Magnolia Bluff Army Post, covering a tract of 650 acres of upland and 200 acres of tide land, also affords a beautiful public park.

Three branches of the superior court and the United

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

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

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

The city maintains a fine public library, whose books are available for students of the University. The management of the public library seeks every means possible to supplement the library of the University. The city library is rapidly recovering from a destructive fire. Andrew Carnegie has offered the city \$200,000 for a new library building on condition that the library is generously maintained. In a short time Seattle will own one of the finest libraries on the Pacific coast. There are seventy churches in the city. All the leading denominations are represented by several congregations. Besides the associations at the University, there are flourishing organizations of the Y. M. C. A. and the Y. W. C. A. in Seattle.

During the year 1900 twenty-five buildings were occupied by the public schools, two hundred and fifty-four teachers were employed and 10,697 pupils enrolled. The foundations are being laid for a magnificent high school building, to cost, when completed, \$200,000.

#### CENTER OF A PROHIBITION DISTRICT.

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

#### GOVERNMENT.

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

#### ENDOWMENT AND SUPPORT.

The University derives its support entirely from the state. There is no income from tuition fees, as instruction

### University of Washington.

in all departments of the University, except the School of Law, is free, and the lands granted the institution as an endowment vield no revenue as vet. The income from these lands will some day greatly help to support the Uni-The two townships of land granted by Congress versity. in 1854 were nearly all selected and sold in 1860 and 1861 to build and establish the Territorial University. There remains of this old grant some 3,000 acres, part of which is not vet selected. Besides this land the University owns 320 acres near the city of Tacoma, acquired by purchase about 1862, and the old site of ten acres in the central part of the city of Seattle. Both of these last named parcels of land are sure to become good revenue producing proper-In addition to the above mentioned property the ties. University was further endowed by the state on March 14, 1803, by the segregation of certain granted lands. Section 9 of the law approved on that day provides-

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

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

"The Board of Regents is authorized to receive such bequests or gratuities as may be granted to said University, and to invest or expend the same according to the terms of said bequests or gratuities. The said board shall adopt proper rules to govern and

26

٩

protect the receipt and expenditure of the proceeds of all fees, bequests, or gratuities, and shall make full report of the same in the customary biennial report to the Governor, or more frequently if required by law.

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

#### BUILDINGS.

Before the erection of any buildings on the new grounds the Board of Regents adopted a wise policy by deciding that each structure should be made of materials found in the state of Washington. In this way, besides serving their various purposes, the buildings furnish magnificent exhibits of the wealth of Washington in first class building materials.

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

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

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

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

The Power House is a brick structure 42 by 80 feet on the shore of Lake Washington, and close to the tracks of the Seattle and International Railway Company. This situation provides an adequate supply of water and fuel. There is installed here a new two phase electric generator for supplying light to the different buildings. The current is generated at 1100 volts, and it may be transformed for light, be used for power, or for experimental purposes in the electrical engineering laboratory. With this and the 500 volt direct current that is generated at the power house, the engineering students have available electric currents for numerous practical purposes. Besides these dynamos there are two engines, two pumps, and three boilers installed in the power house.

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

A resident steward, and his wife, the matron, have charge of the women's dormitory building. The dean of women also resides in this dormitory.

The Law Building is situated on the old site of the University near the business center of the city. It was formerly the administration building of the University, and was erected in 1862. It is a commodious building and conveniently located for law students.

The Hall of Science and the New Power Plant were provided for at the last session of the legislature and will be ready for use about January 1, 1902.

The science hall will be placed on the oval about 400 feet south of the Administration Building. It will be con-

structed of red pressed brick with trimmings of sandstone and terra cotta. It will be three stories in height, with six large rooms on each floor, and some additional space in the basement and attic.

In form the building will be T-shaped, the front having very large circular ends, giving ideal locations for laboratories and lecture rooms. The first floor will contain the lecture rooms and laboratories for the departments of geology and mining; the second floor, the laboratories for zoology, and the lecture room and drawing rooms for civil engineering; and the third floor, the lecture room for . zoology and botany, the botanical laboratories and the lecture room and drawing rooms for mechanical engineering.

The wing in the rear will be 50 by 60 feet in size, and will be separated from the front by light wells. This is to contain the State Museum, and will afford much more space and light than that possessed by the museum in its present quarters in the administration building.

The power house will be located upon the oval to the southeast of the science hall, and to the southwest of the women's dormitory. It will be of brick, massive in style, two stories in height, 80 by 50 feet in size, with a boiler room at the rear 60 by 50 feet in area. The boiler room will contain four 100 horse-power boilers, and will be fitted with coal handling machinery and automatic stokers.

The first floor of the front of the building will have two rooms. One room will contain two 100 horse-power engines and one 40 horse power engine, one Westinghouse 25 kilowatt dynamo, one two-phase 75 kilowatt dynamo, and one 75 kilowatt 500-volt generator. The other room will be fitted with testing apparatus.
The second floor will be in one room and will be provided with work benches and the necessary machines for wood-working. A brick conduit 4 by  $4\frac{1}{2}$  feet in cross section will connect the power house with all of the other buildings on the grounds. In this conduit will placed all of the steam, water, and gas pipes, and the electric wires.

#### GROUNDS AND ARBORETUM.

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

To the southern, or Lake Union side, the land slopes gently from the highest point in the northwestern corner, which is about 225 feet above tide level. Toward the eastern, or Lake Washington side, the land is level for more than half its width, when it breaks off in a series of benches, terraces, and ravines, capable of the most beautiful landscape effects.

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

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

One of the main reasons urged for the dedication of this land to University purposes, was that in addition to all other needs of the institution, there could be established here a scientific arboretum for the cultivation, care, and study of all kinds of trees and plants that will thrive in this climate. There are now on the grounds large groves of the original forest trees, and many of them are being preserved. Many others have been planted and are now thriving. The management of the Seattle city parks, realizing that a beautiful University campus means another fine park for the city, has done its full share towards beautifying the grounds.

On Arbor Day, 1898, the park department presented the University with fifty assorted oaks and fifty honey locusts. These were planted, and not one of them perished. During 1899 the park department presented to the University 2200 fine trees, embracing about thirty species new to the grounds. These were all carefully planted in groves at suitable places on the grounds. They are all thriving. At this rate of progress it will be but a few years before the University will have an arboretum as fine as any possessed by colleges and universities anywhere in the world. The educational value of such an arboretum is quite apparent to anyone who comprehends the progress being made in the sciences of botany and forestry.

#### LIBRARY.

The library of the University of Washington contains 12,520 bound volumes and 12,200 pamphlets. Besides this, there are now 352 bound volumes in the Frederic

## General Information.

James Grant Memorial Library of American History and about 1.000 volumes in the library of the School of Law. Formerly the growth of the library depended on gifts and consisted mainly of United States reports. During the last five years, however, the new books have been very largely the best selected books of reference. Every department is strengthened each year by the addition of some of the most valuable books on its subject. The leading papers and magazines, foreign and American, in addition to about thirty periodicals from various parts of the state, are to be found in the library and reading room. The University library is a depository for United States government publications. The legislature at its session of 1901 enacted a law providing that bound sets of all the public documents of the state should be deposited in the University library. The library possesses a card catalogue, and is arranged according to the Dewey decimal system. The main library occupies a room of feet long and 54 feet wide, and the students are allowed free access to the shelves.

Students of the University also have all the privileges of the Seattle Public Library, which is recovering from the recent destructive fire and will soon be housed in the new building presented to the city by Mr. Carnegie.

The University has begun active work in collecting books, pamphlets, newspapers, manuscripts, and relics relating to early northwestern history. Already a number of rare documents thas been secured and friends about the northwest are solicited to co-operate.

#### THE AUDITORIUM.

The assembly hall of the University embraces what would have been the first and second floors of the wing of the ad-

-3

ministration building. A large stage and a seating capacity of 736 make this hall serviceable not only for the assembling of the University students, but also for the various entertainments that form one of the attractive features of University life. The Board of Regents has named this assembly room Denny Hall, in honor of Hon. Arthur A. Denny, who gave most of the first campus to the University when it was located at Seattle in 1861.

#### THE SMALL AUDITORIUM.

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

#### MUSEUM.

The University Museum is destined to become one of the most important adjuncts of the institution. The legislature of 1899 made it the State Museum, and provided that state, county, and other officers, while in the discharge of their duties, should save all matters of a scientific or historical value, and deposit them in this museum. At present the museum occupies a room 54 by 91 feet, well lighted, and fitted with 300 feet of upright cases and 142 feet of wall cases, besides three large table cases and two glass partitioned rooms for the exhibition of groups of larger animals. The specimens thus far accumulated represent a good beginning along the lines of geology, mineralogy, zoology, botany, and ethnology. Many additions have recently been made to the museum. The most notable is "The John R. Baker Collection of Minerals," which has been deposited indefinitely. It consists of over a thousand specimens of rare and beautiful forms of crystallization and other forms of minerals from different parts of the world, and occupies the three large tables in the centre of the museum.

A collection of more than a hundred mounted fishes, together with smaller collections of star fishes, shells, and corals, has been presented by Professor Edwin C. Starks. The Field Columbian Museum has contributed a collection of beautiful corals. Mr. P. B. Randolph has placed in the museum a collection of about ten thousand specimens of land and water shells, embracing a large number of species. This collection is rich in local forms and represents exchanges made by Mr. Randolph with all parts of the world.

A collection of fossils and archæological specimens has been donated by Dr. S. Winfield Hartt, of Port Angeles. The archæological collection is largely from southwestern United States. The fossils are from Pennsylvania, south to Georgia, and are representative of the Silurian, Devonian, and Carboniferous systems.

The ethnological section has been enriched by one of the totem poles collected by the Harriman Alaska Expedition.

Other miscellaneous articles have been added, and the collections bid fair soon to crowd their present exhibition room to its full capacity. It is the aim to make the museum especially rich in the natural history specimens of this state. This is an excellent field, for there is not another section of the Union whose natural history is so little known as that of the Northwest.

#### LABORATORIES.

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

#### Chemical.

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

Laboratory F accommodates twenty-eight students, and is devoted to a beginners' experimental course in inorganic chemistry leading up to qualitative analysis. Adjoining is a balance-room, where the finer balances and more delicate apparatus for advanced work are kept; also an acid room, where crude acids and chemicals in bulk are stored. In room F is also a large stationary copper still supplied with steam and cold water for condensing. Laboratory D, directly across the hall, accommodates twenty-one students, and is devoted to qualitative analysis. A large "hood" extends across one end of the room and removes all fumes and obnoxious gases.

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

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

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

By the opening of the school year of 1901-1902, the facilities for the study of chemistry will be increased by the addition of a large general laboratory. In this room will be desks for about one hundred and fifty students. It will have the best hoods, sinks, desks, etc. Close by will be cases for chemicals and a glass enclosed space will be reserved for rough balances. A new store room adequate for the increasing needs and supplies will also be provided.

#### Physical and Electrical.

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

The dynamos, motors, electric machines, boilers, engines

and pumps at the power house, while necessary for the proper maintenance of the institution, have also been selected with regard to their usefulness as educational adjuncts to the laboratories.

The laboratories are supplied with the most modern apparatus from American and European makers. Among the important pieces of apparatus may be mentioned-(1) an Atwood's machine with friction wheels and magnetic trip, Bertram's apparatus for the law of machines, two fine balances with suitable sets of weights, a centrifugal machine with numerous attachments, a Bianchi's air pump with accessories, a seconds mercury compensated pendulum clock with electrical connections to Morse sounder and chronograph, two standard barometers, a cathetometer, and a mercury air pump; (2) a Helmholtz double siren, two large electrically vibrated tuning forks with mirrors for producing Lissajous' curves, a set of organ pipes, a set of tuning forks, revolving mirror, and burners for studying sound by means of manometric flames; (3) Melloni's apparatus complete with thermopile, a Le Chatelier electric pyrometer, three standard thermometers, Hoffman's vapor density apparatus complete, Victor Myers' vapor density apparatus, apparatus for the determination of the expansion of metals, Beckman's apparatus; (4) a spectrogoniometer, a polarimeter, a refractometer, a direct vision spectroscope with attachments, a Fresnel's optical bench with accessories for studying interference, diffraction etc., a Lummer-Brodhun photometer with standard Amylacetate lamp, two spectrometers, a fine compound microscope with eyepiece and stage micrometers, a projection lantern with microscope, polariscope, and vertical attachment complete, reading telescopes, curved mirrors, etc.;

(5) two 10,000 ohm standard resistance boxes, four Wheatstone bridges, a Kohlrausch bridge, postoffice box pattern, Queen Acme testing set, two Thomson high resistance galvanometers, Hartman and Brau's apparatus for measuring electrolytic resistance, a Kohlrausch variometer, a standard microfarad condenser, a Thomson-Mascart electrometer, two fine D'Arsonval galvanometers, absolute tangent galvanometer, a fine set of Crookes' tubes, a Wimshurst influence machine, two induction coils, some Geissler, Pluecker, and X Ray tubes, a storage battery of 27 cells with a normal discharge rate of 15 amperes, three ammeters, three voltmeters, a standard Carhart-Clark cell, an absolute condenser, a Westinghouse motor and generator. In addition to these, there is a generator at the power house with Whitney ammeter and voltmeter and two General Electric Company motors in the fan-rooms.

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

The new equipment at the power house enables experiments to be made upon direct electrical currents up to 500 volts, and upon alternating currents, both single and two phase, up to 2,000 volts, and by means of transformers the tension may be considerably increased.

The general laboratory is supplied with elevating tables and stands, and apparatus for measuring elasticity, viscosity, friction, and moments of inertia. The general laboratory is supplied with a number of standard reference works, among which may be mentioned Wenkelmann's Handbuch, Viole's Cours de Physique, Wullner's Experimental Physik, Grey's Absolute Measurements in Electricity and Magnetism. A number of the more prominent periodicals in physics are constantly on file, such as Philosophical Magazine, Physical Review, Astrophysical Journal, Wiedemann's Annalen und Beiblætter, Journal de Physique, Nature, Science, London Electrician, and Electrical World and Engineer, American Journal of Science.

Two more laboratories for physics will be added when the biological departments are removed to the new science hall.

#### Botanical.

The botanical laboratory is situated at the north end of the administration building on the first floor immediately joining the biological lecture room. It is a room 36 by 39 feet with a semi-circular end. There are nine large windows, before each of which is placed a tapering, maple-topped table, large enough to accommodate four students. These tables are each fitted with eight drawers and are so placed that each student sits directly in front of a part of a window not used by any other, thus giving an equal distribution of light. The laboratory will therefore seat comfortably thirty-six students at one time.

In the center of the laboratory are situated two lead lined aquaria with water supply and fixtures for the propagation and study of living forms.

The laboratory is also at present equipped with nineteen compound microscopes with one-sixth and two-thirds objectives and twelve dissecting microscopes with double lenses. Several microscopes are provided with the Abbe condenser, the Abbe camera lucida,  $\frac{1}{12}$  oil immersion lenses, polarizing apparatus, and micrometer eye-pieces and scales. Naples water bath, Minot microtomes, incubator, stains, reagents, embedding material, and the glassware necessary for the study of microscopy, are provided for individual use. One of the best Zeiss microscopes is also provided for special use, fitted with mechanical stage, apochromatic objectives, 16<sup>mm</sup>, 8<sup>mm</sup>, 4<sup>mm</sup>, and 2<sup>mm</sup>, and compensating eye-pieces, 2, 4, 8, and 12, and with camera, polarizing apparatus, and other accessories.

Convenient dark rooms are provided for work in microphotography and lantern-slide making. Instruction in this line of work will be given to students who are prepared to take it.

The herbarium at present consists of specimens representing about three thousand species with forms peculiar to the Pacific coast, in addition to others obtained by exchange from the east. It is constantly being increased by specimens from the local flora and elsewhere. A small collection has been recently added from the Michigan flora.

New books and pamphlets on botany are being added to the library as fast as possible, together with periodicals and the current biological literature. Several English and two German journals now come regularly to the library.

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

The botanical laboratories will obtain larger quarters on the third floor of the new science hall, when it is completed.

#### Zoological.

The zoological laboratory occupies the basement floor in the north end of the administration building. It is semicircular in form and well lighted by large windows. Nine tables are so arranged as to accommodate thirty-six students at a sitting. The center of the room is occupied by a large lead-lined aquarium arranged to contain the living animals required for study. The laboratory is at present supplied with ten dissecting microscopes and seventeen compound microscopes, each equipped with highgrade objectives of the necessary powers. For advanced work more powerful lenses are provided together with additional eye-pieces, substages, condensers, and cameras. For the study of histology and embryology the equipment includes an incubator, parafine baths, a Minot microtome and all the necessary reagents, stains, and apparatus. Α convenient dark room is provided for micro-photography and other lines of photographic work.

The zoological laboratory is richly supplied with material both for dissection and demonstration. A great variety of marine specimens has been procured through the collection and preservation of the animal life found in Puget Sound and the waters of Alaska and other parts of the Pacific coast. The extensive lakes adjoining the campus furnish all fresh water organisms.

The collection of insects comprises many thousands of specimens obtained mostly in the State of Washington and includes a rapidly increasing series of type specimens and accurately determined representatives of the insect fauna of the Pacific coast. Material is also being accumulated to illustrate the life-histories and habits of the species found in the vicinity. An important feature of the work in zoology has been the preparation of collections of typical zoological specimens for the use of the high schools throughout the state. Assistance in the determination of specimens is also offered to teachers interested in the natural history of the state.

The library facilities are being rapidly increased by the addition of standard works of reference and the leading zoological journals in English and other languages.

During the present year the new science hall recently provided for by the state legislature will be completed and the zoological department will occupy more commodious quarters upon the second floor.

### Mineralogical and Petrographical.

This laboratory occupies one of the large basement rooms, and has accommodations for twenty-four students. It contains three tables with tile tops and with fixtures for gas; two cabinets filled with minerals for descriptive work in mineralogy; one cabinet of lithological and palæontological specimens; one cabinet of ores, arranged for use in the study of economic geology; one cabinet containing a good collection of natural crystals and wood models for the study of crystallography; one cabinet filled with the proper chemicals and reagents for use in blowpipe analysis; and two racks to hold the blowpipe outfits, which are provided for all students.

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

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

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

#### Assaying.

The assaying laboratories are now well equipped and consist of the following :

Engine Room.—This room is provided with a large coal muffle furnace built upon the same plan as those in use at the Puget Sound Reduction Company's laboratories, Hoskins' gasoline crucible and muffle furnaces, Caulkins' combination gasoline and muffle furnaces, a Koenig furnace, a gas furnace of the type used at the United States Assay Office in Seattle, and wind furnaces for the use of coke and charcoal. The student in this way becomes familiar with the use of different fuels. This is of advantage, as in some parts of the country one kind of fuel must be used, while in another part another is found more desirable.

Ore Crushing and Sampling Room.—In connection with the furnace room is the ore crushing and sampling apparatus, which consists of a Bosworth crusher, a Colorado Iron Works grinder and sampler, No. 1, and a Caulkins gyratory muller. These are driven by an electric motor, which is a great saving of time for the student and allows him much more time for the real work of assaying. There are also furnished, however, the old hand crushers and pulverizers, that the students may become familiar with their use. To the apparatus in this room there has been recently added a Brown cupel machine.

**Preparation** Room....In this room are the individual desks and here the students prepare their charges for the furnace. The room will accommodate from eighteen to twenty students and has been arranged with the idea of facilitating the students' work as far as possible.

Analytical Laboratory.—The following rooms go to make up this laboratory :

(a) A general laboratory, which is well ventilated and lighted and which is provided with desk room for 16 students. It is well supplied with hoods, self-feeding water baths, a Jewell distill, which provides the necessary distilled water, and air baths and drying ovens heated by both steam and hot water. Each desk in this laboratory is supplied with water and gas and is amply equipped in every way for the work.

(b) A bullion room, which is especially fitted up for the determination of the fineness of silver bullion by the Guy Lassac or "Wet Method," and is equipped with a good pair of coronet rolls.

(c) An electrolytical laboratory, which was planned and equipped for the electrolytic determination of the elements upon the system as outlined by Classen in his work upon "Quantitative Chemical Analysis by Electrolysis."

Connected with these laboratories are the supply and weighing rooms. The latter are equipped with pulp, button and analytical balances.

#### EQUIPMENT FOR CIVIL ENGINEERING.

The instrumental equipment for surveying is complete for all plane and topographic work. It consists of one Heller & Brightly complete engineer's transit, with stadia; one Gurley light mountain transit with solar attachment and Jones' patent latitude arc; one Gurley railroad compass; one 20-inch Gurley wye level; one Buff & Berger inverting dumpey level; one Gurley plane table with alidade containing stadia wires; sextant; hand levels; chain; tapes; level and stadia rods; transit poles and other minor but necessary articles.

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

The room for drawing is 24 by 55 feet and well lighted. It contains first-class drawing desks, lock drawers, stools, cabinet, and models. Drawing boards are furnished to all students.

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

The new science hall and power plant will provide the department with better recitation and drawing rooms, a reading room, blue print room, and laboratories.

#### 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 equatorial telescope of six inch clear aperture, furnished with a driving clock, a solar eye-piece, a filar position micrometer, and a set of positive and negative eye-pieces. The optical parts were made by Brashear, and the mountings by Warner & Swasey.

#### GYMNASIUM AND ARMORY.

The gymnasium is 45 by 80 feet, well lighted and ventilated, and equipped with all the necessary apparatus. There is a dressing room on each side, one for men and one for women, each provided with booths and lockers, a fee of fifty cents being charged for the latter. Connected with each dressing room are four shower baths, with hot and cold water.

The drill hall is 80 by 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 Associated Students of the University of Washington is an organization of the entire student body. It decides all questions arising among the students and relating to them, and controls all matters of general interest to the student community. It elects all managers of athletics, musical clubs, the book-store, debating, and oratory. The treasurer has charge of all money received as association fees or admission to games and contests of various kinds. He is required to give bond for \$3,000.

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

The 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 certain institutions of learning of the highest grade in Washington, Oregon, and Idaho. The work of maintaining this incentive to improvement in oratory has been done by a voluntary committee of the King County Bar Association, consisting of E. F. Blaine and W. S. Fulton.

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

The Crestomathian Literary Society is an organization of preparatory students. Its purpose is to give practice in addressing an audience, and to familiarize its members with parliamentary proceedings. It meets twice each month. The Physico-Mathematical Club meets bi-weekly for the presentation of papers upon the progress of investigations being made by the members. It also discusses the most recent topics in physics, mathematics, engineering, and astronomy.

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

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

The Pharmaceutical Society is an organization of the students in the School of Pharmacy. It meets bi-weekly for the purpose of discussing current literature on the subject of pharmacy.

The Electrical Engineering Society is an association composed of students in electrical engineering, for the study of technical literature and for promoting a knowledge of the applications of electricity and encouraging research. The society gives an exhibit each year, to bring before the public the latest ways in which electricity is applied in the commercial world.

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

The Modern Language Association is an organization of students and others interested in the French, German, and Spanish languages and literatures. The meetings are held

4

49

monthly. Their purpose is to enlarge upon and give variety to the work of the classroom and thus afford greater opportunity for investigation.

The W. T. Harris Club, organized January 29, 1900, is composed of teachers and students in the department of pedagogy. Its purpose is to promote and direct investigation and discussion along such lines as may from time to time be selected or that public educational policy may suggest. The regular meetings are held on the first and third Mondays of each month.

The Dramatic Club was organized in the fall of 1898 by students for the purpose of encouraging the study of the drama, for the cultivation of dramatic talent among its members, and for the purpose of giving plays from time to time.

The University Orchestra was organized in 1898 and has been doing excellent work. This organization is of great assistance, as it furnishes music for the usual programs during the University year. Other musical associations of the University include a women's glee club, and a men's glee and mandolin club. The young men made a tour of Washington and Idaho during the fall and winter of 1900– 1901. Later in the year the young women made a tour of the cities on Puget Sound.

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

Two tennis clubs among the young men of the faculty and students control good cinder courts on the campus, where the ordinary playing as well as the periodical tourna-. ments are held. The young women have recently had a cinder court built for their match games.

Three of the national Greek letter fraternities have established chapters in the University. There are also four local organizations, which expect to secure charters from national societies before long. Of the three fraternities possessing charters, only one lives in its own house, but the other two are considering plans for building in the near future. It is expected that an avenue of fine building sites will soon be opened on the highest part of the University campus for the societies which desire to erect fraternity houses.

#### EXPENSES OF STUDENTS.

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

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

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

All laboratory and locker fees, room-rent, and tuition fees in the School of Law, must be paid in advance to the Registrar of the University. The two dormitories, one for men and one for women, decrease materially the cost of living for students. Board is furnished at cost, which averages about \$11 a month. A deposit of \$15, which is returned at the end of the year, must be made with the Registrar in advance by all students desiring to board at the dormitory. The charge to each student is large enough to maintain the dormitories in a manner that will ensure comfortable rooms, wholesome food, and generally healthful surroundings. The University does not desire to make any profit from these dormitories.

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

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

#### LABORATORY FEES.

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

*Chemical.*—At the beginning of each term all students are required to make a deposit of three dollars before being assigned to a desk in any of the chemical laboratories. From the deposits of students in preparatory subjects and subjects I, II, and III, one dollar is deducted each term to defray the actual cost of chemicals, and from the remainder breakage at the actual cost of apparatus and glassware. In all the higher subjects the amounts deducted vary according to the materials that are consumed.

*Physical and Electrical.*—Students are required to make a deposit of five dollars with the Registrar, to pay for materials used and apparatus injured by them. At the end of the year the amount of the deposit due the student, if any, is refunded to him.

Botanical.—Material for dissection. stains, alcohols, and other reagents, and type-written laboratory outlines are furnished each student, for which a fee is collected as follows: For the preparatory subjects, one dollar; for other subjects having laboratory work, one dollar for each hour's credit carried through the year, except research work, where the fees are subject to the nature of the work done.

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

Zoological.—Students are required to make a deposit to cover the estimated cost of materials and reagents used.

The deposit for the preparatory subjects is one dollar; for all other subjects, three dollars.

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

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

*Pharmacy.*—All students in pharmacy are expected to make a deposit with the Registrar of three dollars a term, in addition to all other fees. From this deposit one dollar is deducted to pay for drugs used, and the remainder, less breakage and the actual cost of apparatus, is returned.

#### 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.

#### MANAGEMENT OF DORMITORIES.

The Board of Regents has placed the dormitories in charge of the President of the University, who is responsible to the Regents for their management. Subject to the President's orders are a steward, who has charge of the dining-room, and a matron, who attends to the general housekeeping. The aim of the Regents in managing the dormitories is to give the students wholesome food and a good home at cost. Professor Lyon has charge of the discipline in the Men's Hall, and in the Ladies' Hall general supervision is exercised by Professor Hansee, Dean of the Women.

#### ADDRESSES AT ASSEMBLY.

Addresses by members of the faculty and by distinguished scholars and men of affairs are frequently given before the student body in Denny Hall. By this means the work of the class-room is supplemented and the students obtain a broader outlook upon life through the light of practical experience. The following addresses were given during 1900-1901:

Sept. 12.— Address of Welcome.—President F. P. Graves. Mr. Guy Robertson upon "The Pacific Wave"; Mr. Alton Remington upon "Athletics;" Professor A. R. Priest upon "Fraternities". "Dangers That Besct a Student's Career."— Rev. W.D. Simonds.

Sept. 16.—"How to Begin College Life Aright."—Mr. S. B. Hanna. "Christianity in America."—Professor C.F. Reeves.

Sept. 18.-"Luther and Erasmus."-Rev. J. P. D. Llwyd.

Sept. 25.—"The Aim of Education, Character."—Rev. J. P. D. Llwyd.

Sept. 28.—"Charles Darwin and Abraham Lincoln."—Professor F. W. Colegrove."

Oct. 3.— "Some Characteristics of College Students in Eastern States and in Europe."—Hon. W. H. Lewis.

Oct. 10.—"The Japanese Student in America."—Mr. Frank Takasugi.

Oct. 17.—" Meteorology."—G. N. Salisbury, A. M., Section Director, United States Weather Bureau.

Oct. 23.—"The Peace Conference at the Hague."—Hon. F. W. Holls, LL. D.

Nov. 3.-"University Ideals."-President F. P. Graves.

Nov. 9.—"The Disappointed Man."—Rev. W. D. Simonds.

Nov. 18 .- "Colleges for Women."-President F. P. Graves.

Nov. 14.—"Student Temptations, the Battle Ground of College Life."—Mr. E. T. Colton.

Nov. 15.—"Students of the World United."-Mr. E. T. Colton.

Nov. 16.-" The College Student's First Law."-Mr. E. T. Colton.

Dec. 4. — Addresses by President Graves, Regent King, Senator Andrews, and Speaker Albertson.

Dec. 4.—Readings from Shakespeare and James Whitcomb Riley.—Mrs. Wilcox of Boston.

Dec. 19.—"The Needs of the University."—President F. P. Graves.

Jan. 18.—"Football."-Professor T. F. Kane.

Jan. 21.—Reading by Mr. A. J. Waterhouse of San Francisco from his own poems.

Jan. 30. — "Life's Duty and Destiny as Seen by the Minor Poets."—Rev. W. D. Simonds.

Jan. 31.--"The Passion Play of Ober-Ammergau."-Rev. Geo. Buzzelle.

Feb. 1.--- "Queen Victoria."--Professor E. S. Meany.

Feb. 4. — "John Marshall."—Chas. E. Shepard, A. B. "John Marshall and the Constitution."—Hon. Cornelius H. Hanford.

Feb. 8.-""Education and Patriotism."-Hon. John L. Wilson.

Feb. 12.— "Lincoln, the Tribune of the People."—Rev. W. D. Simonds.

Feb. 15.— Hon. Stanton Warburton, Hon. S. G. Cosgrove, Hon. C. A. Mantz, and Hon. J. R. Welty, spoke on "The University of Washington."

Feb. 17.-"Sidney Lanier."-Rev. W. D. Simonds.

March 13.—"Manitou, Pike's Peak, and the Garden of the Gods."—Professor T. E. Doubt.

March 14.--- "Walt Whitman."-Rev. W. D. Simonds.

March 18.—"St. Patrick."—Professor E. S. Meany.

March 24.- "Athletics and Christianity."-Hon. W. H. Lewis.

March 27.-" Oliver Wendall Holmes."-Rev. Arthur C. Vail.

March 31.—"That Which Wins."—T. S. Lippy.

April 22.—" The Enterprise of To-day."—Rev. E. M. Randall. April 23.—" Survival Into Modern Life of Ancient Customs."— Professor A. F. Bechdolt.

April 24.—"Executive Work as a Specialty."—President F. P. Graves.

April 25.—" Place Names."—Professor A. F. Bechdolt.

April 26 .-. "The Students' Part."-President F. P. Graves.

May 7.—" Education and the Commercial Spirit."—Professor J. Allen Smith.

May 8.-" University Loyalty."-Professor A. B. Coffey.

May 9.—"The New Star in Perseus."—Professor Arthur Ranum. May 13.—"Baron de Hirsch."—Rabbi Theodore Joseph.

May 16.-"The First State University."-Professor W. J. Meredith.

#### UNIVERSITY EXTENSION.

Members of the University faculty have held themselves ready to respond to all calls for University extension lectures. During the past year, beside the work in the teachers' institutes, they have given more than one hundred and fifty single lectures throughout the Northwest before high schools, and various societies, clubs, and assemblies. Several communities have planned series of lectures, while others have had occasional lectures for the purpose of building up the school or public libraries.

Such services are rendered cheerfully by the professors, who ask only that their expenses be paid. They believe that whatever they can do for advancing the general educational work of the state adds that much to the value and influence of the State University.

#### LECTURES AT TEACHERS' INSTITUTES.

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

#### ORGANIZATION OF THE UNIVERSITY.

The School of Law.

The courses leading to baccalaureate degrees in the College of Liberal Arts, the College of Engineering, and the School of Mines, are arranged to cover a period of four years. The course in the School of Law, is for a period of two years. The course in the School of Pharmacy covers two years, and an advanced course takes two years longer. In the Graduate School the courses leading to master's degrees are not less than one year, and to the doctorate not less than three.

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

The School of Medicine is not yet organized.

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

#### DIVISION OF THE YEAR.

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

#### ADMISSION.

The requirements for admission may be ascertained by consulting the statements under the head of Admission in the various colleges and schools.

#### REGISTRATION AND ELECTION OF STUDIES.

Registration Day is the first day of the term.

The student applies first to the Registrar, who furnishes the enrollment blanks.

A student registering in the University for the first time then submits his diploma from a high school, certificate of standing from another institution, or other, credits to the Faculty Committee on Admission, which places the student according to his certified credits.

The student next takes the report of this committee to his proper class officer (see Class Officers, p. 18), who fills out and signs the study blank for the student.

The student then presents his blank thus signed to the President of the University for his signature, and then in turn to the several professors with whom he is registered, who also sign it, the last signer retaining the blank and returning it to the Registrar.

A student who has been previously registered, instead of presenting himself to the Committee on Admission, obtains blanks from the Registrar and reports to his proper class officer and then completes his registration as above.

# THE COLLEGE OF LIBERAL ARTS.

## THE COLLEGE OF LIBERAL ARTS.

#### THE FACULTY.

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

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

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

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

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

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

> ALMON H. FULLER, C. E., Professor of Mechanics.

> THOMAS E. DOUBT, A. M., Professor of Physics.

> HOMER R. FOSTER, M. S., Professor of Botany.

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

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

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

CHARLES W. VANDER VEER, Professor of Physical Culture.

CAROLINE H. OBER, Professor of Romanic Languages.

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

DORSEY A. LYON, A. B., E. M., Professor of Mining and Metallurgy.

THOMAS F. KANE, PH. D., Professor of Latin.

TREVOR C. D. KINCAID, A. M., Professor of Zoology.

FREDERICK M. PADELFORD, PH. D., Professor of English Literature.

> ALBERT H. YODER, A. B., Professor of Pedagogy.

WILLIAM J. MEREDITH, A. B., Associate Professor of English.

JAMES E. GOULD, PH. B., Assistant Professor of Mathematics and Physics.

ALBERTA SPURCK, A. B., Assistant Professor of Physical Culture.

THOMAS W. LOUGH, A. B., Assistant Professor of Chemistry.

JAMES M. GILCHRIST, M. E. Assistant Professor of Mechanics and Mechanical Drawing.

0

DAVID KELLY, A. M., Assistant Professor of Physics.

HENRY L. REESE, A. M., Assistant Professor of Greek and Latin.

#### OTHER INSTRUCTORS.

THOMAS W. MITCHELL, A. B., Instructor in Mathematics.

BIRDIE I. BEALS, A. M., Instructor in English and History.

STIRLING B. HILL, B. S., Instructor in Mechanical Drawing.

OTTILIE G. BOETZKES, A. B., Instructor in Modern Languages.

> HENRY G. KNIGHT, Instructor in Chemistry.

GEORGE B. MOREHOUSE, Assistant in Chemistry.

#### PURPOSE.

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

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

---5

#### ADMISSION.

#### I. REGULAR ADMISSION.

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

1. Admission by examination.

- 2. Admission from an accredited school.
- 3. Admission from the Preparatory School of the University of Washington.

#### 1. Admission by Examination.

To be admitted in this way, students must pass an examination\* in one of the four groups of subjects mentioned below. These groups correspond respectively to the Classical, Literary, Scientific, and English Courses of the high schools of the state.

Full details of the ground each subject covers is found below under the head of Suggestions for Preparation.

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

Group I. (Classical.)	Group II. (Literary.)
English, 3 units.	English, 3 units.
Mathematics, 8 units.	Mathematics, 8 units.
American History ) >1 unit.	American History
Civil Government	Civil Government )
Elementary Latin, 2 units.	Elementary Latin, 2 units.
Advanced Latin, 2 units.	Advanced Latin, 2 units.
Greek, 2 units.	German or French, 2 units.
Three other units from the List for Election, which appears below. To- tal, 16 units.	Three other units from the List for Election, which appears below. To- tal, 16 units.

\* For date of examinations, see Calendar on page 9.

College of Liberal Arts.

Group III. (Scientific.)	Group IV. (English.)
English, 3 units.	English, 3 units.
Mathematics, 8 units.	Mathematics, 3 units.
American History	American History
Civil Government	Civil Government
Biology, 1 unit.†	Biology, 1 unit.*
Physics, 1 unit.	Physics, 1 unit.
German or French, 2 units.	
Five other units from the List for Elec- tion, which appears below. Total, 16 units.	Seven other units from the List for Election which appears below. To- tal, 16 units.

LIST FOR ELECTION.—Chemistry, Physical Geography, Zoology, Physiology, Mechanical Drawing, Solid Geometry and Plane Trigonometry, English History, Greek and Roman History, and any other subject not specified in the group.

\*The unit in Biology may consist of one-half unit in Botany and one-half unit in Zoology, or an entire unit in either Botany or Zoology.

#### UGGESTIONS FOR PREPARATION.

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

#### I-ENGLISH.

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

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

2. He must have a knowledge of the elements of rhetoric and composition, and will be required to write a short essay, correct in spelling, punctuation, grammar, division into paragraphs, and in expression, on a subject announced at the time of the examination.
3. He will be expected also to show a general knowledge of certain works and a thorough study of certain others. The books set for this part of the examination are stated below.

A general knowledge of the following works and their authors is required: George Eliot's Silas Marner; Pope's Homer's Iliad, books I, VI, XXII, and XXIV; the Sir Roger de Coverly papers in the Spectator; Goldsmith's Vicar of Wakefield; Scott's Ivanhoe; Shakespeare's Merchant of Venice; Cooper's Last of the Mohicans; Tennyson's Princess; Coleridge's Rime of the Ancient Mariner.

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

#### II ---- MATHEMATICS.

1. Algebra.— Acquire a thorough knowledge of the elements of algebra through quadratic equations, including simultaneous equations of the first degree, factoring, ratio and proportion, the theory of exponents (positive, negative, fractional), and radicals. Fisher and Schwatt's School 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. Milne'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.

McLaughlin's History of the American Nation; Montgomery's Student's American History; and Channing's Student's History of the United States are recommended as good works for preparation.

### 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 them assigned at the time of the examination.

#### V — BOTANY.

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

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

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

## VI.—ZOOLOGY.

The study of some standard text-book on zoology, such as Packard's Zoology or Jordan's Animal Life, accompanied as far as possible by practical laboratory work under the direction of a competent teacher.

#### VII. --- 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. Wherever it is possible, laboratory practice should accompany the study of the text.

#### VIII.-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.

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 in the style of Cæsar or Nepos, and to do so with ease and facility.

#### IX-ADVANCED LATIN.

1. Cicero.—Four of Cicero's orations. Besides the ability to translate and construe, the student should have some knowledge of Roman oratory and the law courts. 2. Vergil.—Six books of the Æneid, familiarity with , Latin prosody, and a knowledge of the syntax of poetry.

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

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

#### X-GREEK.

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

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

3. Sight-Work. - Facility in translating at sight a simple passage of Greek prose.

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

5. Iliad.--Books I, II, and III of Homer's Iliad. Prosody of Greek hexameters.

#### XI — 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.

#### XII — FRENCH.

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

#### XIII — CHEMISTRY.

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

XIV - GENERAL HISTORY.

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

#### XV - ENGLISH HISTORY.

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

XVI--GREEK AND ROMAN HISTORY.

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

### XVII --- SOLID GEOMETRY AND PLANE TRIGONOMETRY.

Books VI, VII, and VIII of Milne's Geometry, or equivalent, should be carefully read. The work should include original theorems, problems, and numerical exercises. The work in plane trigonometry should include the solution of plane triangles and logarithmic computation.

## XVIII --- PHYSICAL GEOGRAPHY.

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

#### XIX --- DRAWING.

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

## XX - PHYSIOLOGY.

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

#### 2. Admission from an Accredited School.

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

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

## List of Accredited Schools.

Until the faculty has reason to change its judgment in some way, the schools mentioned below will be considered "accredited" and their graduates admitted to the freshmen class of the College of Liberal Arts without examination.

HIGH SCHOOLS.

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

A list of the academies accredited will be sent on application.

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

## 3. Admission from the Preparatory School.

Students completing the course of the Preparatory School of the University are admitted to the freshman class of the College of Liberal Arts. The work of the Preparatory School is detailed elsewhere.

### II. ADMISSION AS SPECIAL STUDENTS.

Persons who are at least eighteen years of age and who can give satisfactory evidence of their fitness to pursue the particular courses of study which they desire to elect, will be admitted to the College of Liberal Arts without exami-

74

1.1

## College of Liberal Arts.

nation, but cannot be candidates for a degree. All such persons must show that they have a good working knowledge of English.

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

### III. ADMISSION TO ADVANCED STANDING.

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

## ELECTION OF STUDIES.

Blanks will be provided for the election of studies. Students, with the advice of their class officers, must fill out these blanks. No credit will be allowed for any course not named in the blank.

The maximum number of hours a week that a student may elect without special permission of the faculty is eighteen. Students are advised to limit the election to fifteen hours a week. which number it is necessary to complete in order to graduate in four years. Any student that desires to take more than eighteen hours a week or less than fifteen must secure permission from the Faculty Committee on Petitions. Students who have been conditioned in any examination will not be allowed to take the maximum number of hours until the condition is removed.

## COURSE OF THE COLLEGE OF LIBERAL ARTS.

The requirement for graduation from the College of Liberal Arts is the satisfactory completion of subjects aggregating one hundred and eighty "term hours," exclusive of the twelve credits in military drill or physical culture required of every student.

The unit "term hour" is used to represent one recitation for a period of one term. A subject requiring three hours a week for one term represents a requirement of three "term hours;" if it requires three hours a week for one year, it represents a requirement of nine "term hours."

#### Plan of the Course.

The general plan given below shows how the one hundred and eighty term hours are to be divided. The Roman numerals indicate various subjects in each department, which are described in full under the departmental statements, page 121 and following.

Freshman Year. Term ho	urs.
Latin. I, II, III : French, I, II, III, or VII, VIII, IX; or Spanish, I, II, III	9
Greek, I, II, III, or X, XI, XII; German, I, II, III, or VII, VIII, IX; or His-	
tory, I, II, III	9
Zoology, I, II, III; Botany, I, II, III; Geology, I, II, III; Chemistry, I, II, III, or Physica J, II, III	0
Of Physics, 1, 11, 111	0
Alleloric, 1, 14, 111	. 9
	a
Military Drill (for men); or Physical Culture (for women)	
Sophomore Year.	51
Continuation of a language taken in Freshman Year	9
English Literature, I, II, III.	9
Political Science, I. II, III; or Philosophy I. II, III	9
Elective	18
Military Drill (for men); or Physical Culture (for women)	6
Innian Vaar	51
Jumor I Car.	
Philosophy, I, II, III; or Political Science, I, II, III	9
Major Study	9
Collateral Study or Studies	9
Elective	18
Soular Vege	45
Schor rear.	
Major Study	18
Collateral Study or Studies	18
Elective	9
•	45

## College of Liberal Arts.

## Summary of the Course.

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

The course may be described as follows:

	2	Г€	r	m	. 1	Ξc	ours.
Prescribed		•	• •	•		•••	27
Elective within limits	۰.		•	•			54
Free Elective	• •		• •	•		•••	45
Major Study		••		•		• •	27
Collateral Study or Studies		•		•	• •	• •	27
Military Drill or Physical Culture							180 12
							192

#### MAJOR AND COLLATERAL STUDIES.

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

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

#### DEGREES.

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

## Degree with Honors.

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

## THE NORMAL DIPLOMA.

It is the proper function of the University, as the head of the system of public instruction, to furnish properly trained persons to act as superintendents, principals, and assistants in the larger public schools, and as instructors in high schools and academies. It is hoped that by giving instruction in the theory and art of teaching these schools may be brought into closer relations with the University.

To this end a normal diploma will be granted to students taking a baccalaureate or higher degree in the College of Liberal Arts, who shall complete the work in the department of pedagogy, provided they give satisfactory evidence of their fitness for teaching. Those who intend to make teaching their profession will be required to select pedagogy as their major subject in the junior year.

## TEACHERS' CERTIFICATES.

Under the school laws of the State of Washington this diploma entitles the holder to the following:

(1.) A first grade common school certificate, valid for a period of five years from the date of issue.

(2.) A state certificate valid for five years, when he shall file satisfactory evidence of having taught successfully twenty-seven months, at least nine of which were in the public schools of this state.

(3.) A life diploma to teach in any public school of this state, when he shall have filed with the State Board of Education satisfactory evidence that he has taught successfully for ninety months, not less than fifteen of which shall have been in the public schools of this state.

# THE COLLEGE OF ENGINEERING.

## THE COLLEGE OF ENGINEERING.

#### THE FACULTY.

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

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

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

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

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

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

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

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

CHARLES W. VANDER VEER, Professor of Physical Culture.

CAROLINE H. OBER, Professor of French and Spanish.

DORSEY A. LYON, A. B., E. M., Professor of Metallurgy.

(83)

## University of Washington.

WILLIAM J. MEREDITH, A. B., Associate Professor of Rhetoric.

JAMES E. GOULD, PH. B., Assistant Professor of Mathematics and Physics.

ALBERTA SPURCK, A. B.. Assistant Professor of Physical Culture.

THOMAS W. LOUGH, A. B., Assistant Professor of Chemistry.

JAMES M. GILCHRIST, M. E., Assistant Professor of Mechanical and Electrical Engineering

DAVID KELLY, A. M., Assistant Professor of Physics and Electrical Engineering.

#### OTHER INSTRUCTORS.

THOMAS W. MITCHELL, A. B., Instructor in Mathematics.

BIRDIE I. BEALS, A. M., Instructor in Rhetoric.

JACOB DUTTENHOEFER, Instructor in Electrical Engineering.

STIRLING B. HILL, B. S., Instructor in Civil Engineering.

OTTILIE G. BOETZKES, A. B., Instructor in Modern Languages.

> HENRY G. KNIGHT, Instructor in Chemistry.

GEORGE B. MOREHOUSE, Assistant in Chemistry.

## PURPOSE.

The College of Engineering offers three complete courses, civil, mechanical, and electrical.

The aim of this College is to impart such training as will prepare its graduates for immediate usefulness in their chosen professions. During the freshman and sophomore years there is laid a broad foundation of mathematics, physics, chemistry, English, modern languages, and drawing. Field work in surveying is required, in addition, of students in civil engineering. The last two years are devoted to work more purely professional. Particular care is taken throughout the courses to enforce the practical application of the principles taught.

## ADMISSION.

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

(1.) By passing a satisfactory examination in English, algebra, plane and solid geometry, American history, civics, physics, German or French, drawing, general or English history, and chemistry, as detailed on page 67 and following.

(2.) By completing in the Preparatory School of the University of Washington the subjects mentioned under (1).

(3.) By presenting a certificate of graduation from the English course, or any other that includes drawing, solid geometry, and a modern language, of an accredited high school of four years. (For list of accredited high schools see page 74.)

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

Special students are admitted to the College of Engineering on the same terms as to the College of Liberal Arts (see page 74.) Advanced standing may also be secured in the same way as to the College of Liberal Arts (see page 75).

## COURSES OF THE COLLEGE OF ENGINEERING.

The Roman numerals indicate various subjects in each department which are described in full under the departmental statements, page 121 and following. The Arabic numerals indicate the number of hours a week a subject is given. Where no Arabic numerals appear, 3 is understood.

1.	Course	in	Civil	Engineering.
----	--------	----	-------	--------------

Fall Term.	Winter Term.	Spring Term.
	FRESHMAN YEAR.	
Mathematics I.	Mathematics II.	Mathematics III.
Chemistry I.	Chemistry II.	Chemistry III.
Drawing I.	Drawing II.	Surveying I. 4.
German VII,	∫German VIII,	German IX,
French VII,	French VIII,	French IX,
or	or	or
(Spanish IV.	(Spanish V.	Spanish VI.
Rhetoric I.	Rhetoric II.	Rhetoric III.
	SOPHOMORE YEAR.	-1
Mathematics VII, 5.	Mathematics VIII, 5.	Mathematics IX, 5.
Chemistry VII.	Metallurgy II.	Chemistry XVI.
Physics I.	Physics II.	Physics III.
Surveying II.	Drawing IV.	Surveying III.
Descriptive Geom. I, 2.	Descriptive Geometry II, 2.	Descriptive Geom. III, 2.
· ·	JUNIOR YEAR.	4-8
Mechanics T. 4	Mechanics IT 4	Mechanics III 4
Physics IV.	Physics V	Physics VI 9
Railroads I. 4.	Railroads II.	Railroads III.
Geology I.	Geology II.	Geology III.
Political Science I.	Political Science II.	Political Science III.
		<u></u>
	SENIOR YEAR.	•
Hydraulics I, 4.	Hydraulics 11, 4.	Hydraulics III, 4.
Roofs and Bridges I.	Roofs and Bridges II.	Roofs and Bridges III
Masonry Construction I.	Masonry Construction II.	Surveying IV.
Electrical Eng. I.	Electrical Eng. II.	Electrical Eng. III.
Astronomy I, 2.	Astronomy II, 2.	Astronomy III, 2.
Thesis.	Thesis.	Thesis.

# College of Engineering.

II. C	ourse in Mechanical Engin	neering.
Fall Term.	Winter Term.	Spring Term.
	FRESHMAN YEAR.	
Mathematics I. Chemistry I. Drawing I. German VII, French VII, or Spanish IV. Rhetoric I. Shopwork I.	Mathematics II. Chemistry II. Drawing II. German VIII, French VIII, or Spanish V. Rhetoric II. Shopwork II.	Mathematics III. Chemistry III. Drawing III. German IX, French IX, or Spanish VI. Rhetoric III. Shopwork III.
	SOBROMORE VELD	•
Mathematics VII, 5. Chemistry VII. Physics I. Descriptive Geom. I. 2. Machine Design I. Shopwork IV.	Mathematics-VIII, 5, Chemistry VIII, Physics II. Descriptive Geom. II, 2. Machine Design II. Shopwork V.	Mathematics IX, 5. Chemistry IX. Physics III. Descriptive Geom. III, 2 Machine Design III. Shopwork VI.
	JUNIOR YEAR.	
Mechanics I, 4. Physics IV. Machine Design IV. Electrical Engineering I. Electrical Eng. VII. Shopwork VII. Political Science I.	Mechanics II, 4. Physics V. Machine Design V. Electrical Engineering II. Electrical Eng. VIII. Shopwork VIII. Political Science II.	Mechanics III, 4. Physics VI. Machine Design VI. Electrical Eng. III. Electrical Eng. IX. Shopwork IX. Political Science III.
•	SENIOR YEAR.	
Machine Design VII. Mechanical Laboratory I. Electrical Eng. X. Electrical Eng. XVI. Electrical Eng. XXII. Hydraulics I.	Machine Design VIII. Mechanical Laboratory II. Electrical Eng. XI. Electrical Eng. XVII. Electrical Eng. XXIII. Hydraulios II. Thesis.	Machine Design IX. Mech. Laboratory III. Electrical Eng. XII. Electrical Eng. XVIII. Electrical Eng. XXIV. Thesis.

	 Course in Electrical Eng	meering.
Term.	Winter Term.	Spring Term.
	FRESHMAN YEAR.	
cs I.	Mathematics II.	Mathematics III.
т	Chamistry II	Chamistry III

Physics II.

Rhetoric II.

Drawing II.

Shopwork II.

Mathematics I Chemistry I. Physics I. Rhetoric I. Drawing I. Shopwork I.

Fall

#### SOPHOMORE YEAR.

Mathematics VII, 5.	Mathematics VIII, 5.	Mathematics IX, 5.
Chemistry VII.	Chemistry VIII.	Chemistry IX.
Physics IV.	Physics V.	Physics VI.
Descriptive Geom. I, 2.	Descriptive Geom. II, 2.	Descriptive Geom. III, 2.
Machine Design I.	Machine Design II.	Machine Design III.
Shopwork IV.	Shopwork V.	Shopwork VI.

#### JUNIOR YEAR.

Mechanics I, 4.	Mechanics II, 4.	Mechanics III, 4.
Electrical Eng. I, 1.	Electrical Eng. II. 1.	Electrical Eng. III. 1.
Electrical Eng. 1V.	Electrical Eng. V.	Electrical Eng. VI.
Electrical Eng. VII.	Electrical Eng. VIII.	Electrical Eng. IX.
(Elective in English	(Elective in English	(Elective in English
{ Literature or	Literature or	{ Literature or
Philosophy.	Philosophy.	Philosophy.
Electrical Eng. X, 2.	Electrical Eng. XI, 2.	Électrical Eng. XII, 2

#### SENIOR YEAR.

Electrical Eng. XIII, 2. Physics X. Electrical Eng. XIX. Hydraulics I, 4. {Electives in Mathematics, Physics, or Electrical Engineering, 6.

Electrical Eng. XIV, 2. Physics XI. Electrical Eng. XX. Hydraulics II, 4. Thesis, 5. Electrical Eng. XV. 2. Physics XII. Electrical Eng. XXI. Hydraulics III, 4. Thesis, 5.

Physics III.

Rhetoric III.

Drawing III.

Shopwork III.

#### Thesis.

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

#### DEGREES.

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

#### Degree With Honors.

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

# THE SCHOOL OF MINES.

÷

## THE SCHOOL OF MINES.

## THE FACULTY.

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

DORSEV A. LVON, A. B., E. M., DEAN., Professor of Mining Engineering and Metallurgy.

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

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

> J. ALLEN SMITH, PH. D., Professor of Political Science.

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

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

THOMAS E. DOUBT, A. M., Professor of Physics.

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

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

HORACE G. BYERS, PH. D., Professor of Chemistry.: (93) CHARLES W. VANDER VEER, Professor of Physical Culture.

CAROLINE H. OBER, Professor of French and Spanish.

TREVOR C. D. KINCAID, A. M., Professor of Zoology.

WILLIAM J. MEREDITH, A. B., Associate Professor of Rhetoric.

JAMES E. GOULD, PH. B., Assistant Professor of Mathematics and Physics.

ALBERTA SPURCK, A. B., Assistant Professor of Physical Culture.

THOMAS W. LOUGH, A. B., Assistant Professor of Chemistry.

JAMES M. GILCHRIST, M. E., Assistant Professor of Mechanical Engineering.

> DAVID KELLY, A. M., Assistant Professor of Physics.

## OTHER INSTRUCTORS.

THOMAS W. MITCHELL, A. B., Instructor in Mathematics.

BIRDIE I. BEALS, A. M., Instructor in Rhetoric. STIRLING B. HILL, B. S., Instructor in Civil Engineering.

OTTILIE G. BOETZKES, A. B., Instructor in Modern Languages.

> HENRY G. KNIGHT, Instructor in Chemistry.

GEORGE B. MOREHOUSE, Assistant in Chemistry.

HON. FRED RICE ROWELL, A. B., Lecturer on Mining Law.

## PURPOSE.

The School of Mines was established to give thorough technical education to those desiring to become mining engineers, metallurgists, and geologists, and thus supply the demand for men competent to develop the resources of the state.

There are five courses: (1) Mining engineering; (2) mining engineering with geology as an alternative; (3) metallurgical engineering; (4) short course in mining engineering; (5) course in mining for prospectors.

The course in mining engineering with geology as an alternative, contains more geology, biology, and electives than the other courses. It is designed for those students who wish to fit themselves for geological surveys or for reporting upon the economic geology of mining districts.

## ADMISSION.

The requirements for admission to the four year courses are the same as for the College of Engineering (see page 85).

## COURSES OF THE SCHOOL OF MINES.

The Roman numerals indicate various subjects in each department which are described in full under the departmental statements, page 121, and following. The Arabic numerals indicate the number of hours a week a subject is given. Where no Arabic numerals appear, 3 is understood.

#### I. Course in Mining Engineering.

Fall Term.

#### Winter Term.

Spring Term.

Mathematics III.

Chemistry III.

German IX

French IX.

Geológy III.

Rhetoric III.

or

#### FRESHMAN YEAR.

Mathematics I. Chemistry I. German VII or (French VII. Geology I. Rhetoric I.

Mathematics II. Chemistry II. German VIII or French VIII. Geology II. Rhetoric II.

#### SOPHOMORE YEAR.

Mathematics VII, 5. Geology IV. Chemistry VII.	Mathematics VIII, 5. Geology V. Chemistry VIII.	Mathematics IX, 5. Geology VI. Chemistry IX.
Drawing I.	Drawing II.	Surveying I, 4.
Physics I.	Physics II.	Physics III.

#### JUNIOR YEAR.

Metallurgy IV. Mechanics I, 4. Descriptive Geom. I, 2. Railroads I, 4. Machine Design I.

Geology X. Mechanics II. 4. Descriptive Geom. II, 2. Drawing IV. Machine Design II.

#### SENIOR YEAR.

Mining II. Hydraulics I, 4. Metallurgy V. Political Science I. Shop Work I. Mining VI.

Mining III, 2. Hydraulics II, 4. Mining V, 1. Thesis. Shop Work II.

Mining I. Mechanics III, 4. Descriptive Geom. III, 2. Surveying III. Machine Design III.

Mining IV. Elective. Elective. Thesis. Shop Work III.

#### IL Course in Mining Engineering with Geological Alternative. Fall Term. Winter Term Spring Term. FRESHMAN YEAR. Mathematics I. Mathematics II. Mathematics III. Chemistry I. Chemistry II. Chemistry III. German VII German VIII German IX or or or French IX. French VII. French VIII. Geology T. Geology II. Geology III Rhetoric L Rhetoric II. Rhetoric III. SOPHOMORE YEAR. Mathematics VII. 5. Mathematics VIII. 5. Mathematics IX, 5. Geology V. Geology IV. Geology VI. Chemistry VIII. Chemistry VII. Chemistry IX. Drawing I. Drawing II. Surveying I. 4. Physics I. Physics II. Physics III. JUNIOR YEAR. Metallurgy IV. Geology X. Mining I. Geology XIII. Geology XI. Geology XII. Botany I. Botany II. Botany III. Zoology I. Zoology II. Zoology III. Descriptive Geom. III, 2. Descriptive Geom. I. 2. Descriptive Geom. II, 2. Drawing IV. SENIOR YEAR. Geology XIII. Geology XIII. Geology XIII. Mining II. Mining III. Mining IV. Metallurgy V. Mining V. Thesis. Elective. Thesis. Elective. Elective. Elective. Elective. Elective.

97

-7

University of	of 1	Washt	inaton.
---------------	------	-------	---------

Ш. С	Course in Metallurgical Ed	ngineering.
Fall Term.	Winter Term.	Spring Term.
•	FRESHMAN YEAR.	
Mathematics I.	Mathematics II.	Mathematics III.
Chemistry I.	Chemistry II.	Chemistry III.
Drawing I.	Drawing II.	Drawing III.
German IV.	German V.	German VI.
Rhetoric I.	Rhetoric II.	Rhetoric III.
Shopwork I.	Shopwork II.	Shopwork III.
	SOPHOMORE YEAR.	•
Mathematics VII, 5.	Mathematics VIII, 5.	Mathematics IX, 5.
Chemistry VII.	Chemistry VIII.	Chemistry IX.
Physics I.	Physics II.	Physics III.
Descriptive Geom. I, 2.	Descriptive Geom. II, 2.	Descriptive Geom. III, 2.
Machine Design I.	Machine Design II.	Machine Design III.
Geology I.	Geology II.	Geology III.
	JUNIOR YEAR.	
Mechanics I, 4.	Mechanics II, 4.	Mechanics III, 4.
Physics IV.	Physics V.	Physics VI.
Geology IV.	Geology V.	Geology VI.
Metallurgy IV.	Geology X.	Industrial Chemistry.
Metallurgy III.	Metallurgy IV.	Metallurgy V.
	SENIOR YEAR.	
Metallurgy VI.	Metallurgy VII.	Metallurgy VIII.
Metallurgy IX.	Metallurgy X.	Metallurgy XI.
Metallurgy XII.	Thesis.	Thesis.
Shopwork IV.	Shopwork V.	Shopwork VI.
Political Science I.	Mining III.	Elective.

#### Summer Work.

It is required of all students in mining engineering, that at the end of the junior year they spend from four to six weeks of the vacation in actual work in some mine, and that they hand in an exhaustive report of the work at the beginning of the senior year.

In the course with the geological alternative, two seasons must be spent in practical work in the field.

Students in metallurgy will be required to spend at least four weeks of the vacation, at the end of the junior and senior years, in study at some of the reduction works of the country, or at some mining or milling plant where the metals are obtained from their ores by some of the various wet processes.

### IV. Short Course in Mining Engineering.

This course is designed for students who have had a common school education, and more or less experience with mining work. It affords such persons an opportunity to take studies that will better fit them for their work.

#### FIRST YEAR. Fall Term. Winter Term. Spring Term. Algebra. Plane Geometry. Trigonometry. Geology I. Geology II. Geology III. Chemistry I. Chemistry II. Chemistry III. Drawing I. Drawing II. Surveying I. Shopwork I. Shopwork II. Mining I. SECOND YEAR. Mathematics I. Drawing IV. Surveying III. Geology IV. Geology V. Geology VI. Metallurgy IV. Chemistry IV. Metallurgy V. Mining II. Mining III. Mining IV. Physics I. Physics II. Physics III. Mining V.

#### V. Course in Mining for Prospectors.

During the winter term, from January 1st to April 1st, the instructors in mining engineering offer certain subjects for the benefit of mature persons who are interested in prospecting and mining. Admission to these subjects is without examination. The subjects are designed for those who wish sufficient information along the lines of mineralogy, geology, chemistry, and related subjects to take up practical work in the field. The instruction is given partly by lectures, but in the main consists of laboratory exercises. All of the work is made as practical and helpful as possible, and the courses are so arranged as to allow the student to return a second year, if he cares to do so, and continue the work of the first year. Students in these subjects have all the advantages of the University laboratories and libraries.

For the purely lecture subjects no fees are charged. In the laboratory subjects sufficient charges are made to cover the cost of materials actually consumed. In subject I a fee of five dollars is charged, and a deposit of five dollars is required to cover the cost of apparatus which may be broken; in subject II a fee of five dollars is charged, and a deposit of five dollars required as surety for the return of the blowpipe outfits and other apparatus loaned; in subject IV a fee of ten dollars is charged, and a deposit of ten dollars required to cover breakage of apparatus. All fees must be paid, and all deposits made, at the beginning of each subject.

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

## SUBIECTS.

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

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

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

IV. Furnace Assaying.— Lectures and laboratory work. Lectures on sampling, preparing ores for assay, reagents, furnaces, etc. A collection of ores of various metals are shown and instruction given as to the nature and quantity of fluxes. The laboratory work has to do with the preparing and testing of reagents, etc., and assaying samples of ore, furnace, and mill products. The different charges are tried and practical conclusions drawn. Special attentention is paid to the assay of gold and silver ores. [Two afternoons and one lecture a week.]

V. General Methods of Mining. — Lectures on excavating, blasting, tunneling and shaft sinking, supporting excavations, mine transportation, pumping, ventilation, and hydraulic mining. [Two times a week.]

VI. *Mining Law.*—A series of lectures on the mining laws of the United States. [Once a week.]

The following subjects are intended to supplement those given above and are offered for the benefit of those students who wish to acquaint themselves more fully with these subjects.

VII. Advanced Mineralogy.— A continuation of descriptive mineralogy with much practice in determinative work. [Prerequisite, III.]

VIII. Quantitative Analysis. — Gravimetric and Volumetric analysis. Talbot's and Hartley's Quantitative Analysis. [Two afternoons a week. Prerequisite, I.]

IX. Wet Assaying.—The assaying of bullions for fineness.

The assaying of copper by various methods. The amalgamation assay. [Prerequisite, I. To be taken with VII.]

X. *Mining.*—Ore dressing. Lectures upon the treatment of ores under ground and at surface; hand picking, crushing, sizing, separating, vanning, jigging, etc. The stamp battery and amalgamation processes. The receiving, sampling, and purchasing of ores at smelters.

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

## STATE ASSAYING.

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

Gold	\$1	00
Gold and silver	1	00
Silver		50
Lead		50
Copper	2	00
Tin	<b>2</b>	00
Zine	2	00
Qualitative analysis \$2 00 to	. 5	00
Quantitative analysis for each element determined, \$2 00 or		
a complete analysis \$5 00 to	25	00

# THE GRADUATE SCHOOL.

## THE GRADUATE SCHOOL.

## FACULTY COMMITTEE ON GRADUATE STUDIES.

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

THOMAS F. KANE, PH. D., DEAN, Professor of Latin.

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

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

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

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

FREDERICK M. PADELFORD, PH. D., Professor of English.

#### PURPOSE.

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

(105)

## ADMISSION.

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

## ADVANCED DEGREES.

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

## **REGULATIONS.**

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

## Master's Degrees.

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

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

### Doctor's Degree.

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

II. It is not intended that the doctor's degree shall be won merely by faithful and industrious work for a prescribed time in some assigned course of study, and no definite term of required residence can be specified. As a rule, three years of graduate study will be necessary, the last year of which must be spent at this University. The period of three years, however, may be shortened in the case of students who as undergraduates have pursued special studies in the direction of their proposed graduate work. III. No student will be enrolled as a candidate for the doctor's degree until he has been in residence as a graduate student for at least one year. (This rule may be waived in the case of those who come properly accredited from a graduate school of some other university, and of those who as undergraduates in this University have shown special proficiency in the line of their proposed graduate work.)

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

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

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

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

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

# THE SCHOOL OF PHARMACY.

## THE SCHOOL OF PHARMACY.

THE FACULTY.

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

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

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

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

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

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

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

CHARLES W. VANDER VEER, Professor of Physical Culture.

DORSEY A. LYON, A. B., E. M., Professor of Assaying.

THOMAS F. KANE, PH. D., Professor of Latin.

TREVOR C. D. KINCAID, A. M., Professor of Zoology.

WILLIAM J. MEREDITH, A. B., Associate Professor of Rhetoric.

(113)

## University of Washington.

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

ALBERTA SPURCK, A. B., Assistant Professor of Physical Culture.

THOMAS W. LOUCH, PH. G., A. B., Assistant Professor of Pharmacy.

> HENRY L. REESE, A. M., Assistant Professor of Latin.

#### OTHER INSTRUCTORS.

THOMAS W. MITCHELL, A. B., Instructor in Mathematics.

BIRDIE I. BEALS, A. M., Instructor in Rhetoric.

HENRY G. KNIGHT, Instructor in Chemistry.

WILLIAM C. HASTINGS, B. S., M. D., Instructor in Materia Medica and Microscopy.

> GEORGE B. MOREHOUSE, Assistant in Chemistry.

## PURPOSE,

The School of Pharmacy is designed to furnish such training as will fit the student for practical work and thus satisfy the requirement of the State Board of Pharmacy.

## ADMISSION.

Students at least seventeen years of age will be admitted to the School of Pharmacy upon the presentation of a high school diploma or evidence of equivalent mental training. If such credentials can not be presented, students may be admitted to the Preparatory School of the University.

## Advanced Standing.

Advanced standing may be secured by students of other Schools of Pharmacy upon presentation of certificates of work done.

## COURSE OF THE SCHOOL OF PHARMACY.

The Roman numerals indicate various subjects in each department which are described in full under the departmental statements, page 121 and following. The Arabic numerals indicate the number of hours a week a subject is given. Where no Arabic numerals appear, 3 is understood.

Fall Term.	Winter Term.	Spring Term.
	JUNIOR YEAR.	
Pharmacy I, 5.	Pharmacy II.	Pharmacy III.
Chemistry I, 6.	Chemistry II, 6.	Chemistry, III, 6.
Botany.	Botany.	Botany.
Physiology.	Physiology.	Physiology.
Latin.	Latin.	Latin.
	SENIOR YEAR.	
Materia Medica I.	Materia Medica II.	Materia Medica III.
Histology.	Histology.	Pharmacognosy.
Pharmacy IV.	Pharmacy V.	Pharmacy VI.
Chemistry IV.	Chemistry V.	Chemistry VI, 4.
Pharmaceutical { Jurisprudence. }	Urinary Analysis.	Toxicology.
	Advanced Course.	
	FIRST YEAR.	
Rhetoric I.	Rhetoric II.	Rhetoric III.
Materia Medica.	Materia Medica.	Materia Medica.
Physics I.	Physics II.	Physics III.
Chemistry VII.	Chemistry VIII.	Chemistry IX.
Mathematics I.	Mathematics II.	Mathematics III.
	SECOND YEAR.	
Jerman I.	German II.	German III.
History of Chemistry.	Assaying.	Water and Gas Analysis.
Jeology I.	Geology II.	Geology III.
Physiological Chemistry.	Physiological Chemistry.	Industrial Chemistry.
Dispensing.	Dispensing.	Dispensing.

¢

## Methods.

The lectures of the course are supplemented by frequent quizzes and a large amount of laboratory work. It is expected that the students will devote the whole of their time to the subject, if they desire to complete the course in two years. Students who work in drug stores or other places, will find it advisable to devote more than two years to the course.

## Degrees.

The satisfactory completion of the two years course leads to the degree of Graduate in Pharmacy (Ph. G.), provided that the other conditions for graduation mentioned below are fulfilled. The Advanced Course leads to the degree of Pharmaceutical Chemist (Ph. C.)

## GRADUATION.

To receive the degree of Graduate in Pharmacy and a diploma which shall entitle him to a certificate from the State Board of Pharmacy, a student must fulfill the following conditions:

I. He must be of good moral character.

II. He must have had one year of practical experience in pharmaceutical work, in addition to that carried on while at the University.

III. He must have completed all the subjects offered in the two year course and have passed the examinations at the close of each with a grade of not less than B (75 to 87 per cent.)

IV. If he completes the course before having had the required outside experience, he shall be granted his degree when that condition is fulfilled, provided he passes an examination in pharmacy, materia medica, and chemistry. The degree of Pharmaceutical Chemist will be conferred upon all who shall have completed the four years course.

## Degree with Honors.

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

## THE COURSES OF INSTRUCTION

IN THE

COLLEGE OF LIBERAL ARTS, COLLEGE OF EN-GINEERING, SCHOOL OF MINES, GRADUATE SCHOOL, AND SCHOOL OF PHARMACY.

ARRANGED ACCORDING TO DEPARTMENTS.

## DEPARTMENTS OF INSTRUCTION.

F

## I.- DIVISION OF LANGUAGE AND LITERATURE.

#### GREEK.

#### PROFESSOR HANSEE AND MR. REESE.

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

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

As the student advances, more attention is given to style and thought and to the life and literature of the Hellenic people. An extensive reading of Greek authors is undertaken. It is the aim of the department, however, to secure not only facility in reading, but also, as far as possible, a true appreciation of the style and spirit of the Greek writers, and an acquaintance with the wisdom and knowledge embodied in their works.

#### SUBJECTS.

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

IV, V, VI. Xenophon, Homer. Goodwin's Revised Edition of Anabasis of Xenophon, books I-III; Seymour's Iliad of Homer, books I-III; Elegiac, Lyric, and Iambic poets (selections). [Three times a week throughout the year. No credit allowed, if presented for entrance. Prerequisite, III.] VII, VIII, IX. Composition, Sight Reading. Woodruff's Greek Prose Composition; Sight Reading from Xenophon's Anabasis, IV-VII, and from Homer's Iliad, III-VI. [Three times a week, throughout the year. No credit allowed, if presented for entrance. Prerequisite, III.]

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

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

XVI, XVII, XVIII. Orators and Philosophers. Isocrates (Panegyric); Aeschines (Against Ctesiphon); Demosthenes (On the Crown); Plato (Republic); Aristotle (Ethics, Books I-IV and X.) [Three times a week throughout the year. Prerequisite, XII.]

#### LATIN.

#### PROFESSOR KANE AND MR. REESE.

The subjects announced here are planned for students who have already had four years of training in Latin. It is supposed that this preliminary training has given the student a mastery of Latin forms and inflections, a knowledge of syntax, ability to read Latin correctly, and a vocabulary sufficient to translate simple passages at sight with considerable ease. In these subjects less prominence is given to this technical training and more of the attention is given to Latin as literature and to the study of Roman life and customs.

In the freshman year, however, a systematic survey is taken of syntax and construction, together with practice in writing Latin, which serves as a review and allows a closer observation of the principles underlying syntax than is practical in the earlier work. Other special topics taken up are briefly indicated in the announcements of the subjects.

#### SUBJECTS.

I, II, III. Classical Prose. Cicero, De Senectute; Cicero, De Amicitia; Livy, Book XXI. Work in syntax, Latin writing, and sight reading. [Three times a week throughout the year.

IV, V, VI. Selected Works. Tacitus, Agricola and Germania; Horace, Odes and Epodes; Plautus, Captivi; and Terence, Andria. Roman Antiquities; Prosody and Lyric Poetry; The Roman Drama, and Archaic Forms. [Three times a week throughout the year. Prorequisite, III.]

VII, VIII, IX. Philosophy. Lucretius, De Rerum Natura; Cicero, De Natura Deorum; Seneca, Moral Treatises. Roman and Greek Philosophy; Early Latin; Silver Latin. [Three times a week throughout the year. Prerequisite, VI.]

X, XI, XII. History. Tacitus, Annals; Suetonius; Velleius Paterculus; Tacitus, Histories. Tacitus' syntax and style; Life of Tiberius; Roman Historians. [Three times a week throughout the year. Prerequisite, IX.]

XIII. Teachers' Course. Methods of teaching high school Latin. [Three times a week, spring term.]

XIV, XV, XVI. Oratory. Cicero's Brutus; Tacitus' Dialogus; Quintilian's Institutiones, X and XI. Also as outside reading with reports in class, Cicero's De Oratore, Orator, and De Inventione; and ad Herrenium. Independent investigation, one subject each term for every student, with thesis at the end of the year. [For graduate students; three times a week throughout the year. This work is changed each year.]

#### GERMAN.

#### PROFESSOR REEVES.

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

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

#### SUBJECTS.

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

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

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

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

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

(XVI, XVII, XVIII. Goethe. Faust, Part II; selections from Goethe's prose.)

Subjects XIII, XIV, XV, and XVI, XVII, XVIII are given alternate years. Subjects XIII, XIV, XV will be offered in 1901-1902.

#### ROMANIC LANGUAGES.

#### PROFESSOR OBER.

#### FRENCH.

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

#### SUBJECTS.

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

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

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

X, XI, XII. Advanced Study of the Literature. History of French literature; copious readings from various authors, especially from the plays of Corneille, Racine, and Moliere. [Two times a week throughout the year. Prerequisite, XII.]

XIII, XIV, XV. Romantic Movement. Lyrics. The history of the Romantic movement; selections from Victor Hugo and other writers; French lyrics. [Two times a week throughout the year. Prerequisite, IX.]

XVI. Scientific. Selections on scientific subjects and in modern magazines. [Three times a week; winter term. Prerequisite, IX.]

#### SPANISH.

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

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

#### SUBJECTS.

I, II, III. Elementary. Lessons in Spanish on everyday topics; training of the ear and tongue. Essentials of Spanish grammar; reading from some modern Spanish author, Valera, Alarcon, or Pardo Bazan. [Three times a week throughout the year.]

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

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

Subjects IV, V, VI and VII, VIII, IX are given alternate years.

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

## ENGLISH.

PROFESSORS PRIEST AND PADELFORD, ASSOCIATE PROFESSOR MEREDITH, AND MISS BEALS.

#### RHETORIC AND ORATORY.

#### PROFESSOR PRIEST AND ASSOCIATE PROFESSOR MEREDITH.

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

SUBJECTS.

I, II, III. English Composition. Elements of effective writing in prose, based on practical composition. Required of fresh-

.

men in all courses. [Four sections; three times a week/throughout the year.]

IV. Oral Expression. Reading and declamation with particular reference to the analysis of emphasis, and to the interpretation of thought and feeling by voice and gesture. [Three times a week; fall term. Prerequisite, III.]

✓ V. Oratorical Delivery. A continuation of course IV, with special reference to the demands of public speaking. [Three times a week; winter term. Prerequisite, IV.]

VI. Dramatic Reading. Interpretative readings from Hamlet and Macbeth. [Three times a week; spring term. Prerequisite, IV.]

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

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

XIII, XIV, XV. Oratorical Seminary. [Once a week throughout the year. Prorequisite, V.]

#### ENGLISH LITERATURE.

#### PROFESSOR PADELFORD AND MISS BEALS.

The instruction in literature lays emphasis rather more upon forms, such as the drama, the epic, the lyric, than upon periods; these forms are studied through their most successful exponents. The work in language is designed to give a knowledge of the growth of the language.

#### SUBJECTS.

I, II, III. Shakespeare. Critical study of a few plays. Special attention to the laws and technique of the drama. [Three times a week throughout the year. Prerequisite, Rhetoric III.]

IV. Sixteenth and Seventeenth Century Lyrics. Study of the poems of a few representative lyrists. Special attention to the nature of the lyric. [Three times a week; fall term. Prerequisite, III.] V, VI. The Poetry of Browning and Tennyson. Study of selected poems, supplemented by comparison with poems of Wordsworth, Shelley, and Keats. [Three times a week; winter and spring terms. Prerequisite, IV.]

VII. The Poetry of Milton. Paradise Lost is studied throughout the entire term. Special attention to the nature of epic poetry. [Three times a week; fall term. Prerequisite, III.]

VIII, IX. The English Novel. An historical course beginning with the story writers of the Elizabethan period, and following the development of the novel through the eighteenth and the early part of the nineteenth century. [Three times a week; winter and spring terms. Prerequisite, VII.]

X. Eighteenth Century Essayists. The writings of a few of the representative essayists are considered. Special attention to the nature and purpose of the essay. [Two times a week; fall term. Prerequisite, III.]

XI, XII. Nineteenth Century Essayists. The writings of a few of the representative essayists are considered. [Two times a week; winter and spring terms. Prerequisite, X.]

XIII, XIV. Old English. Lectures and recitations upon the language, with readings of selections from prose and poetry. Special attention to the development of the language. [Three times a week; fall and winter terms. Prerequisite, III.]

XV. Middle English. Lectures and recitations upon the language, with readings of selections from prose and poetry. Special study of Chaucer. [Three times a week; spring term. Prerequisite, XIV.]

## II.-DIVISION OF PHILOSOPHICAL SCIENCES.

### PHILOSOPHY.

#### PROFESSOR COLEGROVE.

The aim in the department of philosophy is to secure accurate scholarship, to train the student to think, and to stimulate a desire for investigation and original research. Attention is given to experimental psychology, and the results of the latest investigation are carefully studied. The work in logic consists of a thorough drill in inductive and deductive reasoning, and the purpose is to enable the student to detect fallacies readily.

A critical knowledge of the history of philosophy is made a basis for discussions of the present trend and modes of thought.

The leading ethical theories are considered in the light of scientific principles, and of their application to individual and social morality.

#### SUBJECTS.

I, II, III. Elementary Psychology and Logic. James's Briefer Psychology; lectures upon the physiology of the senses; experiments. Logic, Jevons-Hill; supplementary discussions and analysis of arguments. [Three times a week throughout the year.]

IV, V, VI. Advanced Psychology. Memories; evolution; heredity; instinct; imaginations; individual psychology; hypnotism; telepathy; study of childhood and adolescence. Lectures. [Three times a week throughout the year. Prerequisite, III.]

VII, VIII, IX. Advanced Psychology and Ethics. Psychiatry; ethical theories and their application; comparative and genetic psychology. [Three times a week throughout the year. Prerequisite, III.]

X, XI, XII. History of Philosophy. Lectures and text-book (Weber). [Three times a week throughout the year. Prerequisite, III.]

XIII, XIV, XV. Modern Psychology. Lectures upon German psychology; a review of the life and writings of Charles Darwin; required reading in French and German of current psychological

--9

literature. [Three times a week throughout the year. Prerequisite, III.]

#### PEDAGOGY.

#### PROFESSOR YODER.

The aim of this department is an analytical and comprehensive view of those forces which have wrought the intellectual, ethical, and social evolution of the race, the basic principles underlying each radical or slow-wrought change, and the application of those principles and the husbanding of those forces in the daily work of the class-room.

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

#### SUBJECTS.

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

IV, V, VI. Child Study. Original investigation upon a scientific and systematic basis, and a careful study of such data as may be collected from correspondence with teachers, such facts being sought as shall reveal the real content of the child mind, and the reason for such being true; also of the change wrought by youth and varying environment, by school and street, and by change of teacher and parent. Lectures and assigned readings. [Three times a week throughout the year. Prerequisite, III.] VII, VIII, IX. History of Civilization. A study of the interdependence of society, church and state, and educational progress; of such writings of Socrates, Plato, Luther, Fenelon, Comenius, Pestalozzi, Rousseau, and others as shall give a comprehensive knowledge of the doctrines advanced by leaders of thought prior to our own time; and of current educational thought, as found in standard journals and magazines. Lectures and assigned reading. [Two times a week throughout the year. Prerequisite, VI.]

X. XI, XII. History of Education. A study of the methods by which different peoples, tribes, and nations have sought to instruct their children in what has been thought essential or desirable; the evolution of education and educational methods; a survey of the educational systems of Europe, and of the several states of the United States, especially during the growth of 19th century ideas, in all of which the comparative merits are determined by the study of such original documents as may possibly be secured; a study of the system in vogue to-day as represented by the various institutions, courses of study, with their scope and ultimate purpose, technical schools, specialization, and liberal education. Lectures and assigned reading [Three times a week throughout the year. Prerequisite, IX.]

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

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

XVII. School Management. The proper organization of the school, beginning with the entrance of the teacher into the district, and followed by his meeting the children on the first day, classification or grading of the school, the arrangement of the program, and control and discipline, whether within the classroom, upon the grounds, or upon the road to and from school. Lectures. [Two times a week; winter term.]

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

XIX. Seminary in Education. A comparative study of school systems, especial stress being placed upon the systems in the United States; the fundamental principles which should determine the system; individualistic and socialistic requirements and possibilities of students, and the requirements and obligations of state; and the proper means by which the wrong may be corrected and the right strengthened. [Once a week; winter and spring terms.]

## POLITICAL AND SOCIAL SCIENCE. PROFESSOR SMITH.

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

#### SUBJECTS.

I. Elements of Political Economy. Lectures. [Three times a week; fall term].

II, III. Economic Theory. Marshall's Principles of Economics, volume I. [Three times a week; winter and spring terms. Prerequisite, I.]

IV, V, VI. Industrial Problems. Competition; labor; monopolies and trusts; socialism; taxation. Lectures. [Three times a week throughout the year. Prerequisite, I.]

VII. Elements of Sociology. Lectures. [Three times a week; fall term.]

VIII. Money and Banking. Lectures. [Three times a week; winter term. Prerequisite, I.]

IX. Seminary in Economics. [Time and credit to be arranged; spring term.]

X, XI, XII. Constitutional Government. A comparative study of the American government, federal, state and municipal; its origin, spirit, and relation to the democratic movement of modern times. Lectures. [Three times a week throughout the year.]

#### HISTORY.

#### PROFESSOR MEANY.

Stress is laid upon the use of the best authorities, and upon frequent reference to historical sources, whenever available. The library is being constantly enriched in the lines of history. A special library, known as the Frederic James Grant Memorial Library of American History, has been greatly increased within the last year. Students are also trained in methods of history, receiving practice in the collection and use of materials for local history, as well as in the preparation of theses in the broader fields.

#### SUBJECTS.

I. The American Colonies. Discussion of the period from 1492 to 1750. Collateral reading and frequent papers required. Lectures. The Colonies, by Reuben Gold Thwaites, used as a guide. [Three times a week; fall term.]

II. American Revolution and Constitution. Discussion of the period from 1750 to 1829. Collateral reading and frequent papers required. Lectures. Formation of the Union, by Albert Bushnell Hart, used as a guide. [Three times a week; winter term.] III. Slavery and Civil War. Discussion of the period from 1829 to 1889. Collateral reading and frequent papers required. Lectures. Division and Reunion, by Woodrow Wilson, used as a guide. [Three times a week; spring term.]

IV, V, VI. English People. From prehistoric times to the close of Victoria's reign. Collateral reading, papers, and lectures. Text: Ransome's Advanced History of England. [Three times a week throughout the year.]

VII, VIII. Europe in the Middle Ages. Emerton's Introduction to the Middle Ages and Medieval Europe are used as a basis. [Three times a week; fall and winter terms.]

IX. Modern Europe. Schwill's Modern Europe as a basis. [Three times a week; spring term.]

X. XI. English Constitution. Macy as text, with collateral readings and reports. [Three times a week; fall and winter terms. Prerequisite, VI.]

XII. French Revolution. Lectures, collateral reading, and theses. Gardiner used as a guide. [Three times a week; spring term. Prerequisites, VII, VIII, IX.]

XIII, XIV, XV. Northwestern History. From the earliest voyages of discovery to the settlement and organization of the territories. Lectures. Theses on assigned topics. [Two times a week throughout the year.]

XVI. Methods in History. Langlois and Seignobos used as a guide. Lectures and theses. [Three times a week; spring term. Prerequisites, VI, VIII, IX.]

XVII. Spain in America. A study of the rise and fall of Spanish power in the new world and an outline of the history of the Spanish-American republics. Lectures and theses. [Three times a week; fall term.]

XVIII, XIX. Development of the Pacific. History of the countries bordering upon the Pacific ocean, with special reference to the changes now in process of development. Lectures, collateral reading, and theses. [Two times a week; fall and winter terms.]

XX. Makers of the Nation. Lectures on the lives of Washington, Franklin, Jefferson, Jackson, Clay, Webster, Lincoln,

Grant, Lee, and others. [Open to all students, but without credit. Upper classmen may obtain credit by arranging work with the instructor. Two times a week; spring term.]

XXI. Seminary in Development of the Pacific States. This seminary embraces studies of the political, economic, historical, and legal development of the Pacific group of states. [Conducted jointly by Professor Smith, Dean Condon, and Professor Meany. Open to juniors, seniors, and graduate students. Time and credit to be arranged with the instructors.]

## III. - DIVISION OF PURE SCIENCE.

#### CHEMISTRY.

PROFESSOR BYERS, ASSISTANT PROFESSOR LOUGH, MR. KNIGHT, AND MR. MOREHOUSE.

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

#### SUBJECTS.

I, II, III. General Inorganic. Experimental lectures; laboratory work on selected illustrative experiments, leading to qualitative analysis during winter and spring terms. Remsen's Advanced Course; Smith's Laboratory Manual; Notes on Qualitative Analysis. [Two lectures and four laboratory hours a week throughout the year. Credit, three term hours. Prerequisite, high school course in chemistry from accredited high school.]

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

IV, V, VI. Organic. A study of the typical compounds of carbon; organic preparations and practical study of important compounds. Remsen's Organic Chemistry, Orndorff's Laboratory Manual. [Two lectures and four laboratory hours a week through the fall and winter terms. Credit, three term hours. During spring term three lectures and four laboratory hours. Credit, four term hours. Prerequisite, III.]

PROFESSOR BYERS AND ASSISTANT PROFESSOR LOUGH.

VII. Qualitative Analysis. Lectures on theory of solution, and laboratory work in acid analysis and systematic qualitative work. [Six laboratory hours and one lecture a week; fall term. Credit, three term hours,]

PROFESSOR BYERS AND MR. KNIGHT.

VIII, IX. Quantitative Analysis. Gravimetric and volumetric; Talbot's Quantitative Analysis. [Six laboratory hours and one lecture a week; winter and spring terms. Credit, three term hours. Prerequisite, VII.]

PROFESSOR BYERS AND ASSISTANT PROFESSOR LOUGH.

X, XI, XII. Advanced Organic. Organic analysis and preparations. Gatterman's Practical Methods. [Nine laboratory hours a week throughout the year. Prerequisite, VI. Credit, three term hours.]

PROFESSOR BYERS.

XIII, XIV, XV. Advanced Quantitative Analysis. Complete analysis of ores. [Nine laboratory hours a week throughout the year. Prerequisite, IX. Credit, three term hours.]

PROFESSOR BYERS.

XVI. Industrial. Lectures and recitations on the processes of the chemical arts and industries. [Three lectures a week; spring term. Prerequisite, III. Crédit, three term hours.]

PROFESSOR LYON.

XVII. Original Investigation. Accompanied by lectures on theoretical chemistry. [Open only to students who have followed both organic and inorganic subjects for at least three years. Credit to be arranged.]

PROFESSOR BYERS.

XVIII. History. Lectures on the history of the development of chemistry with assigned readings. [Given only on alternate years and open to those in or having completed their third year in chemistry. Three lectures a week during the fall term. Credit, three term hours.]

PROFESSOR BYERS.

#### PHYSICS.

#### PROFESSOR DOUBT AND ASSISTANT PROFESSORS KELLY AND GOULD.

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

The method is largely experimental. The student is expected to devote about half of his time to obtaining experimental results in the laboratory. The remainder of his time for the first two courses is occupied in attending lectures upon demonstration experiments and the theory of the subject and in mastering principles in text-book and lecture.

#### SUBJECTS.

I, II, III. General and Experimental Physics. Heat, mechanics, sound, light, electricity, and magnetism. This course is fundamental and is designed to meet the needs of students preparing for the applications of physics as well as those students who desire a general training in the subject. [Two lectures and two periods in the laboratory a week throughout the year. Three credits a term. Open to all students who have taken preparatory physics and have a working knowledge of algebra and trigonometry.]

IV, V, VI. General and Experimental Physics. Supplementing I, II, III by greater detail in experimental study and philosophical explanation. [Two lectures and two laboratory periods a week throughout the year. Three credits a term.]

VII, VIII, IX. Advanced Experimental Physics. This work is intended to familiarize the student with the better class of measurements. [Nine hours in the laboratory a week throughout the year. Three credits a term.]

X, XI, XII. Theoretical Physics. Elements of mechanics, hydrodynamics, elasticity, capillarity, kinetic theory of gases, heat, conduction, wave motion, sound, light, electricity, and magnetism. [Three times a week throughout the year. Prerequisite, a knowledge of calculus.]

XIII. Light. Lectures upon the wave theory, diffraction, interference, polarization, etc. [Three lectures a week; fall term.]

XIV. Heat. A series of lectures upon the theory of heat, including the principal phenomena and the elements of thermodynamics, for students wishing a more advanced course than is given in general physics. [Three lectures a week; winter term.].

XV. Molecular Physics. Kinetic theory of gases, liquids and solids, elasticity, capillarity, theory of crystalline formation, etc. [Three lectures a week; spring term.]

XVI. Investigation. Some special problem in experimental physics. Fifteen hours in the laboratory. Credit, five term hours.

## GENERAL BIOLOGY.

#### SUBJECT.

I. Evidences and Factors of Organic Evolution. Illustrated lectures dealing with the subject from the standpoints of paleontology, comparative anatomy, classification, and distribution. No technical knowlege of biology is required and the purpose of the course is to set forth a few of the simple yet forcible evidences on which a belief in the laws of organic evolution is founded. [Once a week; spring term.]

PROFESSORS FOSTER, LANDES, KINCAID, AND COLEGROVE.

#### BOTANY.

#### PROFESSOR FOSTER.

As introductory to other subjects in botany, all students are advised to take subjects I, II, and III in botany, and I, II, and III in zoology. These may conveniently be taken at the same time, so that at the end of a year the student will have completed sufficient work to enable him to take up more special study. Students desiring to make a specialty of botany should plan, if possible, to take these subjects in their freshman or sophomore year. They may be taken, however, to good advantage at any time by the student who wants only a general course in biology.

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

#### SUBJECTS.

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

Ia, IIa, IIIa. Lectures, quizzes, and laboratory work on types supplementary to I, II, III. [Throughout the year. Credit to be arranged.]

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

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

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

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

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

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

•

X, XI. Morphology of Spermaphytes. A study of the tissues, and life bistory of a spermaphyte. [Lectures and laboratory work; fall and winter terms; credit to be arranged.]

XII. Reproduction and Embryology in Spermaphytes. [Lectures and laboratory work; spring term; credit to be arranged.]

XIII. History of Botany. Biography; lectures on the development of theories and problems in the science of botany. [Spring term. Credit, one term hour.]

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

XV, XVI, XVII. Journal Club. Important papers in the current literature of botany are reviewed and discussed by the instructors and advanced students. [Credit, given to advanced students only, one term hour. One meeting a week.]

#### FORESTRY.

#### PROFESSOR MEANY.

I, II, III. History and progress of forestry as a science; sylva culture and uses of trees; problems presented for solution in the Pacific Northwest. Lectures, theses, and field work. [Two times a week throughout the year.]

#### ZOOLOGY.

#### PROFESSOR KINCAID.

In this department the more elementary courses are designed with especial reference to the place of zoology in the general scheme of education. By means of the laboratory method they bring the student in direct contact with the fundamental principles of animal life. They thus pave the way for a more thorough understanding of the related sciences in which biological principles play an important part, such as sociology, psychology, and paleontology.

The advanced courses are more technical in character and are designed for those intending to specialize to a greater or less extent in biology, or for students preparing for the medical profession.

#### SUBJECTS.

I, II, III. Elements of Zoology. A general review of the animal kingdom, with especial reference to the structure, classification, and bionomics of the several groups. Stress is laid upon the facts of zoology as bearing upon the current theories of biology. Representative types of the principal groups of animals are thoroughly investigated in the laboratory and field. [Lecture, quiz, and five laboratory hours a week throughout the year. Credit, three term hours.]

IV. Comparative Anatomy of Vertebrates. Comparative morphology of the principal types of vertebrates with particular reference to the skeleton and nervous system. [Lecture, quiz, and five laboratory hours a week; fall term. Credit, three term hours.]

V. Histology. A study of cells and tissues, involving the technique of modern microscopy; sectioning, staining, and the use of other reagents. [Lecture, quiz, and five laboratory hours a week; winter term. Credit, three term hours.]

VI. Vertebrate Embryology. A comparative investigation of the developmental history of the vertebrates, based upon the embryonic development of the chick, with supplementary work upon other vertebrate forms. [Lecture, quiz, and five laboratory hours a week; spring term. Credit, three term hours.]

VII, VIII, IX. Physiology. Physiological activities of the human body, especially digestion, circulation, and respiration. [Three lectures a week throughout the year, with occasional substitution of laboratory exercises. Credit, three term hours.]

X, XI. XII. Entomology. The structure, classification, and natural history of insects; the preservation and identification of the various orders of insects in the vicinity. [Three times a week throughout the year.]

XIII. History. Lectures upon the historical development of zoology, including the rise of its more important theories, and the life work of representative naturalists. [One lecture a week; winter term. Credit, one term hour.]

XIV. Besearch. Designed for advanced students who are capable of undertaking researches under the direction of the instructor in charge. This work may take the form of either morphological or systematic investigation. [Any term. Credit to be arranged.]

## GEOLOGY.

#### PROFESSOR LANDES.

In this department about one-half of the subjects offered may be styled general subjects and are such as might be taken by any student as a part of a liberal education. The remaining subjects are more technical and are designed for those who wish to engage in mining or advanced geological work. In all subjects enough time is given to ensure absolute thoroughness, and every precaution is taken that the student may be well-grounded. The method of instruction is in the main by lectures and laboratory work, but in every subject a certain amount of reading is required. Lantern slides, photographs, maps, models, etc., are used extensively in a majority of the subjects as an important means of illustration. There are good collections of minerals and rocks at the disposal of the classes in mineralogy and petrography. There is a fairly complete set of natural crystals and wood models for the study of crystallography. A fine microscope, with lathe for cutting and grinding rock-sections, is provided for petrography. The country contiguous to the University is a rich field for all kinds of fieldwork in geology; while the University library has in it all of the government publications pertaining to the work of the department. besides most of the general literature on geology.

#### SUBJECTS.

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

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

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

VIII. Oceanography. A course of lectures upon the ocean, dealing with such features as form, composition, temperature, waves, currents, tides, and life. [Two times a week; winter term.]

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

(VII, VIII, and IX constitute an advanced or college course in physical geography. This course is recommended for those who are preparing to teach in the public schools.)

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

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

XIII. Field-work and Research. Instruction and practice in the methods of geologic field-work; investigation of special problems in geology. [To be taken<sup>\*</sup>only by special permission. Any term. Credit to be arranged.]

#### ASTRONOMY.

#### PROFESSOR RANUM AND MR. MITCHELL.

The work of this department is directed toward two ends—(1) to widen the intellectual horizon by a comprehensive view of the structure of the material universe in its larger aspects; (2) to make

practical use of astronomical theory for the purposes of engineering.

#### SUBJECTS.

I, II. General Astronomy. Outline of fundamental facts in regard to the solar system and the stellar universe. The observatory is used for illustrative purposes. Young's Elements of Astronomy. [Two times a week; fall and winter terms. Prerequisites, Mathematics I and Preparatory Physics.]

III. Practical Astronomy. Use of instruments and the determination of time, latitude, and longitude. Campbell's Practical Astronomy, 2nd Edition. [Two times a week; spring term. Prerequisites, II and Mathematics X.]

## IV.- DIVISION OF MATHEMATICS AND APPLIED SCIENCE.

١

#### MATHEMATICS.

PROFESSOR RANUM AND ASSISTANT PROFESSOR GOULD.

The instruction offered by this department is intended to meet the wants of three classes of students—(1) general students, who pursue the study of mathematics principally as a means of culture and mental discipline; (2) students of engineering or physics, who require a thorough grounding in the methods of calculus and related subjects; (3) students who intend to specialize in mathematics.

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

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

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

144

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

#### SUBJECTS.

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

PROFESSOR RANUM AND ASSISTANT PROFESSOR GOULD. II, III. Higher Algebra. Binomial theorem ; infinite series ;

permutations and combinations; probabilities; complex numbers; and related subjects. Text-book, Wentworth's College Algebra. [Three times a week; winter and spring terms. Prorequisite, I.] PROFESSOR RANUM AND ASSISTANT PROFESSOR GOULD.

IV, V, VI. Solid Geometry. Milne's Solid Geometry. [Two times a week throughout the year. Supplementary subjects to I, II, III.]

ASSISTANT PROFESSOR GOULD.

VII. Analytic Geometry. Conic sections, the general equation of the second degree. Text-book, Nichols's Analytic Geometry. [Five times a week; fall term. Prerequisite, III.]

PROFESSOR RANUM.

VIII, IX. Calculus. Elementary course in differential and integral calculus, with applications to geometry and mechanics. Text-book, Osborne's Calculus. [Five times a week; winter and spring terms. Prerequisite, VII.]

PROFESSOR RANUM.

X. Spherical Trigonometry. Solution of spherical triangles and applications to astronomy and navigation. [Once a week; winter term. Prerequisite, I.]

PROFESSOR RANUM.

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

XI. Advanced Calculus. [Three times a week; fall term. Prerequisites, VI and IX.]

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

-10

XIV, XV. Solid Analytic Geometry. Advanced course. Text-book, Aldis' Solid Analytic Geometry. [Two times a week; fall and winter terms. Prerequisites, VI and IX.]

XVI. Least Squares. Theory of errors of observation and their adjustment. [Three times a week; spring term. Prerequisites, VI and IX.]

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

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

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

## CIVIL ENGINEERING.

PROFESSOR FULLER, ASSISTANT PROFESSOR GILCHRIST, AND MR. HILL.

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

#### DRAWING.

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

#### SUBJECTS.

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

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

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

#### DESCRIPTIVE GEOMETRY.

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

#### SUBJECTS.

I, II, III. Descriptive Geometry. Shades, shadows, and linear perspective. [Credit, two term hours; throughout the year. Prerequisite, Drawing II, and Mathematics III. At present given only alternate years.]

#### SURVEYING.

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

#### SUBJECTS.

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

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

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

IV. Elements of Geodesy. General study of the figure of the earth and of the methods and instruments used in precise surveys over large areas; field work. [Spring term. Credit, three term hours. Prerequisites, III, and Astronomy I. Preceded or accompanied by Astronomy II.]

#### RAILROADS.

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

#### SUBJECTS.

I, II, III. **Bailway Location, Construction, and Economics.** Theory of curves; field work; maps; profiles; earth work computation; economics. [Credit, four term hours, fall term; three term hours, winter and spring terms. Prerequisites, Surveying III and Mathematics IX.]

#### MECHANICS.

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

I, II, III. Statics, Dynamics, Mechanics of Materials. Lectures and recitations throughout the year. [Credit, four term hours. Prerequisites, Mathematics IX, Physics III, and preceded or accompanied by Physics IV, V, and VI.]

### HYDRAULICS.

Under the head of hydraulics are: Theoretic hydraulics, including hydrostatics, hydrodynamics, and elementary thermodynamics; hydraulic motors and the steam engine; experimental work, including a study of the flow of water through orifices and pipes and over weirs, and the testing of water motors and meters; water supply; irrigation and sewage disposal. Each student is required to design an imaginary system under one of the last three heads, making drawings, bills of material, and estimate of cost.

### SUBJECTS.

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

### ROOFS AND BRIDGES.

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

### SUBJECTS.

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

### MASONRY CONSTRUCTION.

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

#### SUBJECT.

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

### ELECTRICAL ENGINEERING.

### PROFESSOR DOUBT, ASSISTANT PROFESSORS GILCHRIST AND KELLY, AND MR. DUTTENHOEFER.

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

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

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

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

### SUBJECTS.

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

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

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

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

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

\*

XVI, XVII, XVIII. Electrical Design. Problems in designing switches, electro-magnets, and mechanisms. A complete working drawing of some constant current dynamo to be made. [Six hours a week throughout the year. Credit, two term hours.]

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

XXII, XXIII. Steam Engineering. Study of types of boilers and engines; steam pumps, condensers, and heaters that are used in the application of steam power. [Three lectures a week; fall and winter terms. Prerequisites, Physics III and VI, and Calculus.]

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

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

### MINING ENGINEERING.

PROFESSORS LANDES AND LYON, ASSISTED BY HON. FRED RICE ROWELL AND OTHER SPECIAL LECTURERS.

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

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

The location of the University is such as to allow frequent visits to mining districts, where the practical workings of mines may be studied.

### SUBJECTS.

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

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

III. Ore Dressing and Milling. Treatment of ores under ground and at surface; hand picking, crushing, sizing, separating, vanning, jigging, stamp battery and amalgamation processes. Receiving, sampling, and purchasing of ores at smelters. [Two times a week; winter term. Mining students are expected to take subject V in connection with this.]

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

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

VI. Summer School. Required of all students in mining at the end of junior year. Four to six weeks of the vacation are spent in actual work in some mine, and an exhaustive report handed in at the beginning of the senior year. It is recommended that all mining students spend part of the vacation following freshman and sophomore years in such work. All students must consult with Professor Lyon as to arrangement of details.

### METALLURGY.

### PROFESSOR LYON.

The object of the instruction in this department is to offer a preliminary training of a practical as well as a theoretical nature to students who are preparing to enter any of the various branches of metallurgy.

The work consists of lectures upon metallurgical subjects, illustrated by drawings and photographs. This work is supplemented by required readings and investigation of literature bearing upon metallurgy. The laboratory work covers the physical properties of metals, the influence of foreign elements, fire assaying, wet assaying, and work on metallurgical problems, especially such as are met with in the wet methods of extracting metals from their ores.

Near Seattle are well equipped reduction works, to which the students are expected to make frequent visits.

### SUBJECTS.

I. Introductory. (a) Lectures upon the physical properties of metals, alloys, fuels, furnaces, typical metallurgical processes, etc. The lectures are illustrated with ores of all the most important metals and samples of all furnace products. The student is directed to analyze sectional drawings of furnaces in regard to number, shape, and dimensions of parts.

(b) Laboratory work in which a study is made of the influence of small quantities of negative elements upon the physical properties of metals, alloys, etc. [Two lectures and three hours of laboratory work a week. Prerequisite, Chemistry III.]

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

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

IV. Fire Assaying. Lectures, recitations, and laboratory work. This course comprises: The preparing and testing of reagents; the sampling of ores, furnace, and mill products; the assaying by crucible and scorification methods of ordinary ores, copper concentrates, and of copper ores for gold and silver; assaying of lead and zinc ores. Particular attention is paid to preparing and sampling ores. It is also the aim to give the student as much practice as possible on as many different kinds of ore as can be had, which carry gold and silver, in order to acquaint him with the handling of ores that contain large percentages of the base metals. Likewise, in order that he may understand the difficulties and losses which are inherent in the methods, artificial mixtures, which have been carefully prepared, are also given the student to work upon. [One lecture and two afternoons of laboratory work a week. Prerequisites, Geology VI and Chemistry III.]

V. Wet Assaying. The assaying of bullions for fineness; of copper by various methods. The amalgamation assay. [Pre-requisite, Chemistry IX, or to be taken with that subject. Three afternoons of laboratory work a week.]

VI, VII, VIII. Metallurgical Analysis. The determination by rapid methods of sulphur, phosphorus, carbon, arsenic, and antimony, in ores, iron, steel, and other metallurgical products. The estimation of lead, tin. copper, iron, zinc, nickel, and cobalt. This subject is especially intended for those who wish to fit themselves for smelter chemists. [Six laboratory hours a week throughout the year. Prerequisites, II, and Chemistry III, IX, and XVI.]

IX, X, XI. Metallurgical Experimentation. Advanced work upon metallurgical subjects. Among others which the students take up may be mentioned:

(1) Comparative tests on the extraction of gold and silver from its ores by amalgamation, chlorination, and cyanidation.

(2) Electrolysis of ores or secondary products.

(3) The influence of small quantities of negative elements upon the physical properties of metals and metallic alloys.

(4) Microscopic study of metals and alloys.

XII. Summer School. A study and exhaustive report on some metallurgical plant. During the vacation at the end of the sophomore and junior years, all students in metallurgy will be required to spend at least four weeks in study at some of the reduction works of the country, or at some mining and milling plant where the metals are obtained from their ores by some of the various wet processes. This subject can be taken only by special permission. All students taking this work will consult with Professor Lyon as to arrangement of details.

### PHARMACY.

### PROFESSORS BYERS AND FOSTER, ASSISTANT PROFESSOR LOUGH, AND DR. HASTINGS.

The object of this department is to fit the student for practical work as a pharmacist. The various operations of pharmacy are discussed from both the theoretical and the practical standpoint. All official preparations of the United States Pharmacopœia, and many which are unofficial, are discussed according to their relative importance. The subject of prescription filling and that of incompatibility receive special consideration. In the laboratory many of the preparations are manufactured and much prescription work done.

Materia medica is presented in a thorough course of lectures and the organic and inorganic drugs taken up according to derivation and classification.

The work in urinary analysis and toxicology is intended to give thorough training in the analysis of normal and pathological urine and in the detection and estimation of common poisons.

I, II, III. Theory and Practice. Lectures and laboratory work in the theory and practice of the operations of pharmacy; typical preparations manufactured by the student. Coblentz's Pharmacy. [Three lectures and six laboratory hours a week during fall term and two lectures and four laboratory hours during the winter and spring terms.]

ASSISTANT PROFESSOR LOUGH.

IV, V, VI. Preparations. Lectures and laboratory work on more advanced preparations, including theory and practice of extemporaneous pharmacy. [One lecture and four laboratory hours a week throughout the year.] ASSISTANT PROFESSOR LOUCH.

VII, VIII, IX. Materia Medica. Lectures and monthly examinations' on inorganic, vegetable, and animal drugs, with reference to their source, physiological and therapeutic action, dose, etc. [Two lectures a week throughout the year.]

DR. HASTINGS.

X, XI. Urinary Analysis. Toxicology. A thorough drill in practical work, and lectures on the chemical relations involved. Two lectures and four laboratory hours a week; winter and spring terms.

### PROFESSOR BYERS.

XII. Morphology and Classification of Phænogams. A study of the flowering plants from the standpoint of their gross anatomy and relationship. Typical plants are studied to present the characteristic features of their respective orders. [One lecture, one quiz, and five laboratory hours a week; winter and spring terms. Credit, three term hours.]

PROFESSOR FOSTER.

XIII. Vegetable Histology. The histology of seeds, leaves, roots, stems, etc. The methods of staining and the preparation of slides for study. Special attention is given to the finer structures of food substances and crude drugs, and the detection of adulterations. [One lecture, one quiz, and five laboratory hours a week; fall and winter terms. Credit, three term hours.]

PROFESSOR FOSTER.

XIV. Pharmacognosy. Study of the origin of drugs; description of method of preparation; chemical composition and exercises in identification of dried samples. Maisch's Materia Medica. [Two hours a week through winter and spring terms.] ASSISTANT PROFESSOR LOUGH.

### V. DIVISION OF PHYSICAL AND MILITARY TRAINING.

### PHYSICAL CULTURE AND HYGIENE.

PROFESSOR VANDER VEER AND ASSISTANT PROFESSOR SPURCK.

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

Unless excused, all students who do not take the work in the department of military science and tactics are required to take work in the department of physical culture and hygiene during the first two years of their college residence.

In order to graduate, each student must have at least twelve credits in either the department of military science and tactics or the department of physical culture and hygiene, in addition to the one hundred and eighty credits required in other departments.

### SUBJECTS.

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

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

### MILITARY SCIENCE AND TACTICS.

### PROFESSOR GOULD. CADET MAJOR W. V. REINHART.

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.

All male undergraduate students not physically disqualified are required to enroll themselves in the department of military science and tactics during the first two years of their University residence. Students physically disqualified are expected to place themselves under the care of the department of physical culture and hygiene.

In order to graduate, each student must have at least twelve credits in either the department of military science and tactics or the department of physical culture and hygiene. Preparatory students can register in the department of military science and tactics only by special permission.

The following regulations govern the department:

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

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

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

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

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

(a) Coat—Regulation West Point fatigue coat, gray, singlebreasted, 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 tops 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.

<sup>\*</sup> No army officers can be detailed by the War Department until the war closes. During 1900-1901 the work was conducted by Cadet Major William V. Reinhart, under the supervision of Professor Charles W.Vander Veer. James E. Gould, Ph. B., Principal of the Preparatory School, will act as Commandant in 1901-1902.

(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 Commandant.

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

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

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

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

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

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

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

### SUBJECTS.

I, II, III. Practical and Theoretical. Infantry exercises in the school of the soldier, company, and battalion; extended order movements, target practice, duties of a sentinel, and ceremonies. Lectures and recitations on the drill regulations of the United States Army, the preparation of the usual reports and returns pertaining to a company and battalion, and the supply and discipline of the company. [Drill two hours a week; lectures, one hour a week throughout the year. Credit, two term hours.]

IV, V, VI. Advanced. Minor field operations, formations for advance guards, rear guards, and outposts. Military signaling with flag, torch, and heliograph. Castrametation. Lectures on military law, field works, preparation for war, the staff, tactics of the three arms, grand tactics, logistics, strategy, military history, material of war and engineering. [Drill two hours a week, lectures one hour a week, throughout the year. Credit, two term hours.]

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.

--11

# THE SCHOOL OF LAW.

### THE SCHOOL OF LAW.

THE FACULTY.

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

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

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

EDMOND S. MEANY, M. S., Professor of Constitutional History.

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

JUNIUS ROCHESTER, A. M., Associate Professor of Law.

### LECTURERS.

HON. CORNELIUS H. HANFORD, Judge of the United States Circuit and District Courts, Lecturer on the Law of Admiralty.

HON. THEODORE L. STILES, A. M., Ex-Justice of Supreme Court of Washington, Lecturer on the Law of Insurance.

> HON. GEORGE H. KING, Of the Seattle Bar, Lecturer on Admiralty. (165)

HON. JAMES HAMILTON LEWIS, Ex-Member of Congress, Lecturer on Criminal Law and Jury Trials.

EDWARD WHITSON, Of the North Yakima Bar, Lecturer on Irrigation and Water Rights.

TWYMAN O. ABBOTT, Of the Tacoma Bar, Lecturer on Wills and Administration of Estates.

CHARLES E. SHEPARD, A. B., LL. B., Of the Seattle Bar, Lecturer on the Law of Patents, Trade Marks, and Copyrights.

> GEORGE E. WRIGHT, A. B., LL. B., Of the Seattle Bar, Lecturer on the Law of Real Property.

> > JOHN ARTHUR, Of the Seattle Bar. Lecturer on Public Land Law.

### PURPOSE.

The design of the School of Law is, by a special course, to prepare students for practice in any state in the Union, and to give a thorough, practical, and scientific education in the principles of the law.

### ADMISSION.

All persons, irrespective of sex, are allowed to matriculate in the School of Law.

If, however, the person applying for admission intends to be a candidate for a degree at the end of the course, he must not be less than eighteen years of age, and must pass such examination in respect to general education as shall satisfy the faculty that his educational attainments will justify his entering upon the practice of law when his legal studies are completed.

Examinations for admission will be held at 2 P. M., on September 29 and 30, 1901.

The examination on the first of these days will have reference to general education, and will be on the subjects hereinafter named. The examination on the succeeding day will have reference to legal education, and is confined to candidates for advanced standing. Applicants for advanced standing are required to be present at both of these examinations.

Candidates are required to present themselves on these days, as they are expected to be present on the first day of the term, at which time the regular course of instruction will begin. To provide for cases in which it is absolutely impossible for the candidate to be present at this time, supplementary examinations will be held at such times as may be determined upon by the faculty, but no excuse, except of an urgent character, will be accepted for failure to appear at the first examination.

Graduates of colleges and accredited high schools will be admitted without preliminary examination, upon presentation of their diplomas.

No student who does not present such diploma will be admitted as a candidate for a degree, until he has passed a satisfactory examination in arithmetic, algebra, geography, orthography, English composition, and the outlines of the history of the United States and England. The examination will be conducted in writing, and the papers submitted by the applicants must evince a competent knowledge of English grammar and rhetoric.

Candidates for advanced standing in law will be examined in whatever subjects they may request, the examination not being restricted to the subjects included in the junior year, but being allowed as well on the subjects embraced in the senior year.

This examination is not final on the subjects taken, but the candidate must satisfy the faculty that he has made sufficient progress in his study of the law to justify his admission to the senior class. Before graduation every student is required to pass satisfactory examinations on all subjects included in the course.

Candidates for advanced standing are required to be present at the beginning of the year, as the degree will not be conferred upon any one who has not spent at least one full college year in this School of Law.

### SPECIAL STUDENTS.

There are two classes of special students—those who are candidates for a degree, and those who are not.

Persons not desiring to be candidates for a degree may take one or more courses as special students, provided they are qualified to pursue such courses to advantage to themselves and without disadvantage to the school. They will receive a certificate of all work done, and they may at any time enter as candidates for a degree if they are qualified under the above requirements. Persons who are candidates for a degree, but who for some reason take other than the regular work of any one year, are registered as "special students, candidates for a degree."

### **REGISTRATION.**

Before admission to examination every student is required to present to the Dean of the School of Law the Registrar's receipt for payment of the annual fee. It is essential, therefore, that a candidate for examination should apply first to the Registrar of the University at his office in the administration building, register his name as student in the School of Law, and pay his fees. He is then entitled to apply for admission to examination, and in case of rejection, the money paid preliminary to such examination will be refunded by the Registrar.

### COURSE OF STUDY.

The course of instruction is a graded one, and extends through two years of nine months each. The instruction is not confined to any one of the various systems of legal Believing that a thorough knowledge of the education. jural relations arising and existing between men, and of the rights and their correlative obligations and duties springing therefrom lies at the basis of legal education, it is the aim of this school to employ the best in all systems of legal education, to the end that the student may gain a thorough knowledge of the fundamental rights, obligations, To accomplish this end, if the subject in hand and duties. is one that requires historical research for a complete understanding of it, the historical method is employed, tracing the growth and development of the subject and giving its application to the body of the law as it exists at the present day. If the subject is one which can be thoroughly understood from a study of well written text-books, advantage is taken of the experience of years of work of the legal profession as crystalized in such works. If the subject is

곀

one, as many are, in which no safe generalizations can be made, the inductive method is pursued by means of a study of the cases, in connection with some well written compendium or text-book upon the subject.

Since such a large body of our law is defined and construed by the decisions of the courts of last resort, the student is afforded an early opportunity of understanding the scientific basis of case law by means of a course of lectures on the subject.

During the entire course the student has, in lecture and text-book work and in the study of cases, at least fifteen hours a week of class-room work.

The following is a statement of the subjects upon which instruction is given:

COURSE OF STUDY.

### FIRST YEAR.

	First term.	Second term.	Third term.
	Hours.	Hours.	Hours.
Elementary Law	2		
Contracts	2	3	8
Torts	2	2`	
Quasi-Contracts			2
Property	2	2	2
Criminal Law	2	2	
Bailments and Carriers		2	
Domestic Relations	2		
Agency		1	1
Statutory Interpretation			$\overline{2}$
Private International Law			$\overline{2}$
Moot Court Work	3	3	3
Private International Law	3	3	

170

ê

### SECOND YEAR.

	First term.	Second term.	Third term.
· · · · · · · · · · · · · · · · · · ·	Hours.	Hours.	Hours.
Pleading	2	2	2
Evidence	2	2	l
Property	2	2	1
Community Property		1	1
Equity Jurisprudence	2	2	
Partnership	2	1	
Private Corporations	1	2	
Municipal Corporations		l	2
Negotiable Instruments	2		
Attachment and Garnishment	· · · · · · ·	1	
Wills			2
Constitutional Law		1	2
Mining Law		1	<del>.</del>
Federal Jurisnrudence		<b>.</b>	• 1
Admiralty			1 ī
Washington Statutory Law			î
Moot Court Work	8	3	3

### SPECIAL SUBJECTS.

Irrigation Law. Medical Jurisprudence.

### Thesis.

It is the desire of the faculty to encourage original investigation and research by the students. Each candidate for a degree is required to prepare and deposit with the Dean of the School of Law, before the commencement of the spring term of his senior year, a thesis of not less than forty folios in length, upon some legal topic selected by the student and approved by the faculty. The student will be examined by the faculty upon his thesis. It must be printed or typewritten, and securely bound, and is to be kept permanently in the School of Law.

### The Practice Court.

The practice court is a part of the School of Law and is presided over by a competent instructor, while the other members of the faculty co-operate in conducting it. The court is provided with a full corps of officers, including the member of the faculty who shall sit from time to time as presiding judge, a clerk, a sheriff, and the necessary deputies. It meets every Saturday.

### Elocution and Oratory.

It is important to those who study the law with the view of becoming advocates, that they should give attention to the subject of public speaking, in order to equip themselves for the performance of their duties as advocates.

The junior class receives instruction in vocal culture, articulation, and pronunciation; position and gesture; quality and force of voice. An advanced course in forensics and oratory is arranged for the senior class.

### Constitutional History and Political Science.

It is believed that the students of the School of Law may derive great benefit from the instruction given on kindred subjects in the College of Liberal Arts.

Students who first obtain permission from the Dean of the School of Law and make application to the Dean of the College of Liberal Arts are allowed to attend lectures and recitations in that school, free of charge. But the Dean of the School of Law reserves the right to require such students to give up any or all studies they may be pursuing in the College of Liberal Arts whenever it appears that the pursuit of these studies is attended with an unsatisfactory performance of the duties required in the School of Law.

### EXAMINATIONS.

The members of both classes are examined daily throughout the year in their studies. At the end of the first year the members of the junior class are subjected to an oral and written examination on the lectures delivered during the year, and their promotion to the senior class is dependent on the manner in which they pass such examinations. The examinations of the junior class at the end of the first year are final on the subjects of that year.

At the end of the second year the members of the senior class are required to pass satisfactory oral and written examinations on the subjects of the lectures during the senior year. Satisfactory examinations must also be passed by the members of both classes on the text books and cases used for the purpose of instruction.

### DEGREE.

The degree of Bachelor of Laws (LL. B.) will be conferred upon such students as pursue the full course of two years in the School of Law of the University of Washington and pass an approved oral and written examination. It will also be conferred upon those who, having attended another approved law school for a period equal to one year of the course of this School of Law, or having practiced law for one year under a license from the highest court of general jurisdiction in any state where the requirements for admission to the bar are equal to those in Washington, or having passed a satisfactory examination for advanced standing, also pursue one year's course in this school and pass like examinations.

### FEES:

Fees are payable in advance. The tuition fee is twentyfive dollars a year, if paid in advance for the whole year; and ten dollars a term, if paid in advance for each term.

For any single course the fee is five dollars, payable at the beginning of the course.

For further particulars apply to

JOHN T. CONDON, LL. M., Dean of the School of Law, University of Washington, Seattle, Wash.

# THE PREPARATORY SCHOOL.

## THE PREPARATORY SCHOOL.

JAMES E. GOULD, PH. B., PRINCIPAL.

### PURPOSE.

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

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

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

The first year of the Preparatory School will be abolished in 1901-2 and the second year in 1902-3.

### GOVERNMENT.

The work of the Preparatory School is under the supervision of a principal, who is assisted by a regular corps of instructors.

-12

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

### ADMISSION.

Students who have been graduated from schools accredited for twelve grades may enter the freshman year of the college department upon presentation of their diplomas. Those who have been graduated from schools accredited for eleven, ten, or nine grades may complete their entrance credits in the Preparatory School.

All schools satisfactorily carrying out the state course of study will be accredited in the subjects which their course covers.

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

### SUBJECTS OFFERED.

The following subjects are offered in the Preparatory School of the University. Students are required to consult with the Principal of the school before making out their course.

### ENGLISH COMPOSITION AND RHETORIC.

(a) Composition. Buehler's Practical Exercises in English. [Three times a week throughout the year.]

(b) Rhetoric. Scott and Denney's Composition-Rhetoric. Constant work in the art of composition is carried on. [Three times a week throughout the year.]

### ENGLISH LITERATURE.

(a) English Literature. Pancoast's Introduction to English Literature. The study of the text is accompanied by the reading of Pope's Homer's Iliad, Books I, VI, XXII, and XXIV; The Sir Roger de Coverly Papers; Silas Marner; Vicar of Wakefield; Merchant of Venice; and the Rime of the Ancient Mariner. There is also made a close study of Shakespeare's Macbeth and Milton's L'Allegro, Il Penseroso, Comus, and Lycidas. [Five times a week; fall and winter terms.]

(b) American Literature. Pancoast's Introduction to American Literature. This is accompanied by the reading of Tennyson's Princess, Scott's Ivanhoe, and Cooper's Last of the Mohicans; and the close study of Burke's Speech on Conciliation with America, and Macaulay's Essays on Milton and Addison. [Five times a week; spring term.]

### MATHEMATICS.

(a) Algebra. Fisher and Schwatt's Algebra. Elementary algebra is a prerequisite for entrance to this subject. [Five times a week; fall term.]

(b) Plane Geometry. Milne's Plane Geometry. Original demonstrations and solutions by the student are essential features. [Five times a week; winter and spring terms.]

(c) Solid Geometry. Milne's Plane and Solid Geometry. [Two times a week throughout the year.]

(d) Plane Trigonometry. The solution of triangles; use of logarithms. Wells's Plane Trigonometry. [Three times a week, 'all term.]

### HISTORY.

(a) American. Montgomery's Leading Facts of American History is used as text. Collateral readings and research on assigned topics are required. [Five times a week; spring term.]

(b) English. Montgomery's Leading Facts of English History as text, with required readings and reports from other sources. [Three times a week, fall and winter terms.]

(c) Ancient. Myers's Ancient History. [Two times a week throughout the year.]

(d) European. Myers's Mediaeval and Modern History. [Three times a week throughout the year.]

### CIVICS.

Fiske's Civil Government in the United States. Lectures, recitations, and practical illustrations. [Five times a week; fall term.]

### BIOLOGY.

(a) Zoology. An elementary study of animal life, as an introduction to the general features of zoological science. [One lecture and five laboratory hours a week; first half year.]

( $\delta$ ) Botany. A study of the flowering plants from the standpoint of their gross anatomy and relationship. Typical plants are studied to present the characteristic features of their respective orders. [One lecture, five laboratory hours, and one quiz a week; second half year.]

(c) Physiology. An elementary study of the human body, including the study of the special senses, in addition to that of the vegetative functions. [Three times a week; winter term.]

### PHYSICS.

Lectures, recitations, and laboratory work. The subject must be preceded by algebra to quadratic equations, and by plane geometry. [Three lectures and four laboratory hours a week throughout the year.]

### LATIN.

(a) Cæsær. Harper and Tolman's Cæsær; Latin Prose Composition. [Daily throughout the year.]

(b) Cicero. Allen and Greenough's Cicero; Latin Prose Composition. [Daily throughout the year.]

(c) Vergil. Greenough and Kittredge's Vergil; Latin Prose Composition; Review of Cicero. [Daily throughout the year.]

### GREEK.

(a) Beginning. Graves and Hawes's A First Book in Greek. Drill in Greek inflections and constructions. Exercises in translating English into Greek. Xenophon's Anabasis, book I. [Three times a week throughout the year.]

(b) Xenophon, Homer. Goodwin's Revised Edition of Xenophon's Anabasis, books I-III; Seymour's Iliad of Homer, books I-III. [Three times a week throughout the year.]

.

(c) Composition, Sight Reading. Woodruff's Greek Prose Composition; Sight Reading from Xenophon's Anabasis, IV-VII; and from Homer's Iliad, IV-VI. [Three times a week throughout the year.]

### GERMAN.

(a) Beginning. Outline of grammar; practice in pronunciation; composition; 150 pages of easy prose; Schiller's Wilhelm Tell. [Three times a week throughout the year.]

(b) Supplementary. Covering work along the same lines as(a). [Two times a week throughout the year.]

### FRENCH.

(a) Beginning. Outline of essentials in French grammar; exercises in pronunciation; translations from French into English and English into French; reading of easy prose selections, and later of moderately difficult selections from representative writers. [Three times a week throughout the year.]

 $(\delta)$  Supplementary. Dictation and composition; reading at sight; practice in pronunciation. [Two times a week throughout the year.]

### CHEMISTRY.

Experimental lectures and quizzes with laboratory work on experiments selected from Smith's Manual. Remsen's Briefer Course. This course is intended to duplicate the courses offered by the accredited high schools. [Two lectures and four laboratory hours a week throughout the year.]

### PHYSICAL GEOGRAPHY.

Recitations, lectures, and some field work. Lantern slides are largely used to illustrate the text, Davis's Physical Geography. [Five times a week; fall and winter terms.]

### PREPARATORY LAW COURSE.

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

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

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

Fall Term.	Winter Term.	Spring Term.
Composit'n and Rhetoric.	Composit'n and Rhetoric.	Composit'n and Rhetoric.
Beginning Latin.	Beginning Latin.	Cæsar,
Civics.	Cæsar.	Latin Composition.
American History.	American History.	American History.

### FIRST YEAR.

#### SECOND YEAR.

English Literature. Cæsar and Cicero.	English Literature. Cicero and Latin Compo- sition	American Literature. Cicero and Latin Compo- sition
English History.	English History.	English History.
French or German.	French or German.	French or German.

### PREPARATORY MEDICAL COURSE.

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

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

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

# Preparatory School.

### FIRST YEAR.

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

### SECOND YEAR.

Cæsar and Cicero.	Cicero and Latin Compo- sition.	Cicero and Latin Compo- sition.
Chemistry.	Chemistry.	Chemical Laboratory.
Physiology.	Physiology.	Physiology.
French or German.	French or German.	French or German.

۰

# THE COMMENCEMENT OF 1900, THE REGISTER OF STUDENTS FOR 1900-1901,

## AND

# THE ALUMNI ASSOCIATION.

Ð

### COMMENCEMENT, MAY 31, 1900.

### DEGREES IN COURSE.\*

GRADUATE SCHOOL.

MASTERS OF ARTS.

Luella M. Dean, A. B. Elizabeth H. Frye, A. B. Thomas M. Gunn, A. B. George E. St. John, A. B.

### COLLEGE OF LIBERAL ARTS.

BACHELORS OF ARTS.

Ella B. Allen.JanTony Marvin Barlow.KaMyra B. Clark, Ped. B.EmElla R. Dougan.ThLulu Fuller.OWilliam W. Gillette.Gr.Robert H. Hopkins.HaAubrey Levy (with honors in<br/>Modern Languages).ThWilliam J. Meredith.AnThomas W. Mitchell (with honors<br/>in Political Science).JohFrances C. Sylvester.BeEthel B. White.h

James Barkley. Kathryn E. Case. Emma E. Crueger. Thomas T. Edmunds (with honors in English Literature). Grace Glasgow. Hans M. Korstad. Thomas W. Lough, Ph. G. (with honors in Chemistry). Annie Mitchell. Walter F. Morrison. John C. Storey. Bella Weretnikove (with honors in German).

\*No honorary degrees are granted by the University of Washington.

(187)

### BACHELORS OF SCIENCE.

Harold J. M. Baker (with honors	Jessie Barlow (with honors in
in Physics).	Political Science).
Nathaniel L. Gardner (with	Climie E. Hill.
honors in Biology).	Stirling B. Hill.
Ernest W.	Schoder.

### SCHOOL OF PEDAGOGY.

### BACHELORS OF PEDAGOGY.

Ella B. Allen (with honors).	Jessie Barlow.
James Barkley.	Kathryn E. Case (with
Emma E. Crueger.	honors).
Ella R. Dougan.	Lulu Fuller.
William W. Gillette.	Elizabeth M. Herren (with
Mary Helen Huntoon.	honors).
Hans M. Korstad.	Ella E. Lewis.
Winifred H. Megrath (with	William J. Meredith.
honors).	Alice M. Porter (with
Francis C. Sylvester (with honors).	honors).
Bella Weretnikove.	Ethel B. White.

### SCHOOL OF MINES.

BACHELOR OF SCIENCE IN MINING. Ernest W. Schoder, B. S.

ß

## THE REGISTER OF STUDENTS FOR 1900-1901.

### GRADUATE SCHOOL.

NAME.	RESIDENCE.
Allen, Jessie, A. B	Ravenna.
Baker, Harold J. M., B. S.	Port Townsend
Benson, Henry K., A. B.	Kent.
Carpenter, Ina L., A. B	Eagle Harbor.
Case, Kathryn, A. B	University Station.
Douglas, John F., A. B., LL. B	Seattle.
Edmunds, C. Elizabeth, A. B	Chelan.
Edmunds, Thomas T., A. B	Columbia.
Frye, Elizabeth H., A. M	Seattle.
Gillette, William W., A. B.	Cheney.
Goodman, Cora L., B. S	Puyallup.
Gould. James E., A. B.	Seattle.
Hill, Climie, B. S	Seattle.
Hill, Stirling B., B. S.	Seattle.
Horton, Caroline, A. B	Seattle.
Kelly, David, B. S	Seattle.
Korstad, Hans M., A. B.	Cheney.
Lough, Thomas W., Ph. G., A. B	Fremont.
McMahon, Theresa S., Ph. B	South Park.
Meredith, William J., A. B	University Station.
Mitchell, Thomas W., A. B	New Whatcom.
Parker, Adel A., A. B.	Kent.
Prosch, Edith G	Seattle.
Reese, Henry L., A. B.	Olympia.
Richardson, Harry L, Ph. G., Ph. B	South Park.
Souder, Audrey B., A. B	University Station.
Storey, John C., A. B	Fremont.
Wallace, Herbert M., A. B	Champaign, Ill.
Williams, Augusta, A. B.	Seattle.

(189)

10F 14M

•
# COLLEGE OF LIBERAL ARTS.

### SENIOR CLASS.

NAME.	RESIDENCE.
Boetzkes, Ottilie G	New York, N. Y.
Caulkins, Glenn W	New Whatcom.
Evans, Goldie I	Snohomish.
Gaches, Charles E	La Conner.
Hopkins, Paul	Ballard.
Hubert, Anna	Seattle.
Johnson, Ralph M	Acme.
Kincaid, Zoe R	Olympia.
Leavitt, Mattie R., Ph. B	Molalla, Ore.
LeSourd, Luther	Coupeville.
Lindbery, Charles A	New Whatcom.
McCann, Charles	Everett.
McDonald, Clarence	Sprague.
Millett, Daniel A	Chehalis.
Page, George R., Jr.	Seattle.
Prosch, Edith G	Seattle.
Reeves, Carl H	University Station.
Robertson, Guy H	University Station.
Rowell, Stephen P	Seattle.
Ruddy, Charles A	Everett.
Thompson, May	Seattle.
Trout, Glen H	Garfield.
Vail, Arthur C	Centralia.
Wright, Edgar J	
24	

## JUNIOR CLASS.

Bethel, Sylvester	Olympia.
Blain, William W	Seattle.
Blodgett, Charlotte A	Seattle.
Brown, Ruby L.	Everett.
Ceis, Fred J.	Seattle.
Chesnut, Fred D	Fremont.
Corson, William H.	Issaquah.
Cosgrove, Howard G	Pomeroy.
2.6 FM	-

NAME.	RESIDENCE.
Fahs, Helen M	Evanston, Ill.
Fleischer, Amanda F	Seattle.
Gardiner, Alice	Everett.
Griggs, Urbane S	Lynden.
Greene, Grace E	University Station
Hastings, Albert C	Van Wert, O.
Herndon, Verona	Chehalis.
Knight, Henry G	Leland.
Landes, Charles	Carroll, Ind.
Laube, William T	New Whatcom.
McGlinn, J. Garfield	La Conner.
McPherson, Kenneth A	Wasco, Ore.
Minkler, Garfield A	Lyman.
Porter, Alice M	Seattle.
Pratt, Ruth P	New Whatcom.
Reinhart, William W	Olympia.
Remington, Alton D	Seattle.
Robertson, Edna E	Olympia.
Shepard, Mabel	Seattle.
Shoudy, Loyal E	Ellensburg.
Sumner, Emily W	Everett.
Thayer, L. Elanson	Everett.
Winsor, Blanche L	Ballard.
01	

### ----31

ſ

# SOPHOMORE CLASS.

Allen, Riley	Ravenna.
Becker, Meta V	Fremont.
Bovey, J. Elmer	Sedro-Woolley.
Bredes, Flora A	Seattle.
Brightman, Frank E	Fairhaven.
Brintnall, Estella	Brooklyn.
Caithness, Jeanne	Everett.
Crueger, Minnie S	Snohomish.
Crueger, Otta B	Snohomish.
Dean, J. Foster	New Whatcom.
Dodson, Ava E	Fairhaven.
Edmunds, James A	Ballard.
Eshelman, Carl D	Tacoma.

171 19M

•

۰ ·

đ

· · --- 1

NAME.	RESIDENCE.
Ewing, Robert L	Arcola, Ill.
Fadden, Gordon G	New Whatcom.
Farnsworth, Aimee	Seattle.
Grantham, Winfred	Fremont.
Hancock, Elizabeth B	Grand Haven, Mich.
Hanson, Howard A	Christopher.
Huntoon, Richard W	Fairhaven.
Joyce, Emma M	Seattle.
Latimer, Thomas E	North Yakima.
Littlefield, W. Percy	Visalia, Cal.
McDonald, Donald	Green Lake.
McDonnell, E. Pearl	University Station.
McDonnell, Elizabeth T	University Station.
Morgan, Adelle J	Waitsburg.
Pratt, Alida G	New Whatcom.
Rathbun, Chauncey B	Olympia.
Reeves, Sara C.	University Station.
Schricker, Hilda	La Conner.
Sohns, George W	Seattle.
Stadelman, Pearllita	New Whatcom.
Stevens, Edwin B	Olympia.
Underwood, Julia	Loomis.
Walton, Chester	North Yakima.
Woody, William W	Winlock.

# FRESHMAN CLASS.

Beatty, Margaret	.Custer.
Bird, Joseph	.Snohomish.
Blodgett, Elanor	Seattle.
Boyce, Ernest P	Portland, Ore.
Brickey, Willard V	Avon.
Brown, Mabel L	Custer.
Brown, Mildred	Custer.
Bryden, A. Wales	. Centralia.
Burgess, Edith	.Seattle.
Burroughs, Benjamin L	Pendleton, Ore.
Burroughs, Clare	Pendleton, Ore.
Burwell, William T	Norfolk, Va.
154	•
$9_{I_{M} \times \mathbb{Z}}$	

192

Э

NAME.	RESIDENCE.
Campbell, Wilbert	Seattle.
Carpenter, L. Ross	Vashon.
Carstens, Nellie	Medford, Wis.
Clary, Emily S	Seattle.
Coffman, Marion	Chehalis.
Coleman, John	Chehalis.
Crosno, May F	Ahtanum.
Crosno, Ollie V	Ahtanum.
Crouch, Katherine	Oquawka, Ill.
Demond, Ernest A.	Cleveland.
Earl, Edwin F	Paxton, Ill.
Elliott, William E	Portland, Ore.
Emerson, Raffe	Philadelphia, Pa.
Esmond, Julia F	Montesano.
Fallis, Lewis D	Centralia.
Foglesong, William A	Centralia.
Friese, Lena M	Snohomish.
Gabel, Tipton	Chehalis.
Giles, Gertrude M	Fremont.
Giles, Alfred R	Fremont.
Green, Elmer C	Centralia.
Greene, Mary R	University Station.
Gruwell, Maude W	South Bend.
Hardman, Max	Seattle.
Hartshorn, Ernest G	Seattle.
Hastings, Fred W	Van Wert, Ohio.
Hayek, Frank	Portland, Ore.
Heffner, Bertha L	Snohomish.
Hicks, Ethel D	Seattle.
Hilditch, Muriel	Council Bluffs, Iowa.
Hopkins, Maud	Ballard.
Iffland, Jennie E	Port Townsend.
Johnson, Aylette N	New Whatcom.
Johnson, Joel M	Everett.
Kellogg, James Y. C	Seattle.
Knisell, Juanita	University Station.
Le Gate, Maude	Seattle.
Le Sourd, Charles L	Coupeville.
—13	

NF

NAME.	RESIDENCE.
Lough, Jacob W	Fremont.
Ludden, Jessie	Spokane.
Lynch, Mabel	Seattle.
Mann, Viola	Ballard.
McElmon, Fred	New Whatcom.
McIntosh, Vera E	Morenci, Mich.
McKay, Amelia	Albuquerque, N. M.
McKinnon, Charles	Ross.
McMillan, Annie L	Ballard.
McMillan, Ida	Ballard.
Mehner, Albert	Tacoma.
Messegee, Cassandra	Olympia.
Mittelstadt, Agnes	Sumner.
Nakamura, Yoshitar	Tacoma.
Olney, Myrtle	Minneapolis, Minn.
Pearson, Elorence	Starbuck.
Pearson, Robert G	Starbuck.
Perry, Helen J	Seattle.
Phillips, William W	Seattle.
Pielow, Myra S	Seattle.
Pratt, Hattie E	New Whatcom.
Prosch, Arthur M	Seattle.
Randell, George C	Seattle.
Raser, Carrie B	Seattle.
Reid, John L	New Whatcom.
Reinhart, Anna	Olympia.
Robertson, Mildred L	
Rogers, Roy C	New Whatcom.
Rowell, Ralph R	So. Thomaston, Me.
Saliger, Alois B	Chebalis
Saylor, Ella	North Yakima.
Scroggs, Maurice D	Eureka, Kas.
Sherman, Clyde	Randolph, Neb.
Sherrick, Florence	Puyallup.
Sherwood, Frank H	Everett.
Shoup, Arthur G	Juneau, Alaska.
Sinclair, A. Margerita	Portland, Ore.
Slattery. John R	Fairhaven.
149	
171	
ng <sup>A</sup> K	•

NAME.	RESIDENCE.
Smith, Marvin W	Everett.
Smith, Phene	Lowell.
Sorenson, Beatrice	Everett.
Souder, Winifred	University Station.
Spencer, Frank	Everett.
Stevens, Frederick	Seattle.
Stuth, William R	Olympia.
Taylor, Bertha M	Rice Lake, Wis.
Taylor, Frank V	Olympia.
Teats, Roscoe	Tacoma.
Terpenning, A. Roy	Olympia.
Twitchell, Dalbert	Spokane.
Tyler, Katherine	Seattle.
Urquhart, James A	Chehalis.
Vestal, Webley	Snohomish.
Waite, Jennie	Puyallup.
Wald, Rosa E	Seattle.
Wetzel, Helen M	Spokane.
Wheeler, Mabel E	Seattle.
Williams, Lena R.	Mt. Vernon.
Woody, Ozro H	New Whatcom.
Wright, Merrill A	Bonner's Ferry, Ida
110	•

#### -110

### UNCLASSIFIED.

Adams, Norma E	Seattle.
Anderson, Mary L.	Seattle.
Ballaine, Anna F	University Heights.
Banks, David, Jr	Henderson, Ky.
Barnes, Charles G	Goldendale.
Beard, Edward E	New Whatcom.
Bimrose, Thomas E	Seattle.
Blomquist. John M	Tacoma.
Brunn, Sidney	.Seattle.
Callis, George T	Santa Barbara, Cal.
Callis, George T Cleveland, Ernest A	Santa Barbara, Cal. Vancouver, B. C.
Callis, George T Cleveland, Ernest A Cobb, William L	Santa Barbara, Cal. Vancouver, B. C. Spokane.
Callis, George T Cleveland, Ernest A Cobb, William L Corbet, Lucy B	Santa Barbara, Cal. Vancouver, B. C. Spokane. Seattle.
Callis, George T Cleveland, Ernest A Cobb, William L Corbet, Lucy B Crocker, Porter T	Santa Barbara, Cal. Vancouver, B. C. Spokane. Seattle. Walla Walla.
Callis, George T Cleveland, Ernest A Cobb, William L Corbet, Lucy B Crocker, Porter T 134 43 M	Santa Barbara, Cal. Vancouver, B. C. Spokane. Seattle. Walla Walla.

Ì

	NAME.	RESIDENCE.
	Crocker, Sewall R	.Walla Walla.
	Demond, Alice	.Cleveland.
	De Moss, Rose E	.Ballard.
	Densmore, J. Worth	.Fremont.
	Eells, Chester	.Union.
	Elliott, Orlistus A	.Orting.
	Evans, Robert H	.Blaine.
	Fleming, Dora	.Spokane.
	Fletcher, Rufus	.Latona.
	Green, Henry B.	South Park.
	Habenicht, Kuno A	.Braunschweig, Ger.
	Haley, Charlotte	.Seattle.
	Hall, Myrtle J	Latona.
	Hastie, Walter A	.Seattle.
	Hope, Frances	.Seattle.
	Johnson, France D	.Nome, Alaska.
	Kiehn, Minnie	.Seattle.
	Knapp, May A	.Seattle.
	Lane, Winnie V	. Waterville, Me.
	Larson, Lillie	.Yankton, S. D.
×/	Livengood, Edith	.Seattle.
Y.	Marriner, Mary	.Seattle.
	Maxfield, Herbert F	. Seattle.
	McCloy, Lee H	.Seattle.
	McKay, Ethelyn	.Seattle.
	McManus, John	.Everett.
	Miller, H. Livingstone	.Seattle.
	Mitchell, Alexa M	.Seattle.
	Moore, Everell C	.Spokane.
	Nichols, Clara	.Spokane.
	Nichols, Louise	Seattle.
	Oleson, Beulah V	.Tacoma.
	Parrish, Ruth M	Grand Haven, Mich.
	Prather, Alfred M	. Seattle.
	Ranum, Louise C	. Seattle.
	кун, Jules	KOSS.
	Schuck, ITed U	.Elkader, lowa.
	Schram, Kuth	.seattle.
	ZOF	
	AN.	
	I	

196

>

NAME.	RESIDENCE.
Selleck, William H	.Seattle.
Sengfelder, Fred H	.Skagway, Alaska.
Sexton, Leo L	.Fern Hill.
Smith, Carrie F	. Waverly, Iowa.
Snively, J. Howard	Prosser.
Stephens, Adaline A	.Seattle.
Stephens, Eva R	.Seattle.
Taylor, Harley A	.Kalama.
Taylor, Marvin W	Lincoln, Neb.
Tracy, George R	.Seattle.
Vreeland, Carl C	.San Francisco, Cal.
Wiestling, Virginia	.Seattle.
Wiswell, Thomas C	.University Heights

# COLLEGE OF ENGINEERING.

	SENIOR CL.	ASS.
NAME.	COURSE.	RESIDENCE.
Hill, Stirling, B. S	Civ.	Seattle.
Johnson, Ralph M	El.	Acme.
·	JUNIOR CL.	ASS.
Ames, G. Walcott	El.	Fairhaven.
Duffy, Edward A	El.	Seattle.
Lindbery, Charles A	El.	New Whatcom.
Reeves, Carl H	El.	University Station.
Rowell, S. Parker	El.	Seattle.
Story, John C., A. B	Civ.	Fremont.
Trout, Glen H	Civ.	Garfield.
	SOPHOMORE	CLASS.
Duckering, William E.	El.	Olympia.
Field, Frank	El.	Snohomish.
Harris, Charles W	Civ.	Boisfort.
Hawes, Edward M	El.	Olympia.
Jackson, Jessie A	Civ.	Green Lake.
Johnson, Carl A	El.	Ballard.
Rathbun, John C	El.	Olympia.
Ross, John D	El.	Seattle.
11F		
SIN	\	
Q.↓.		

197

### FRESHMAN CLASS.

NAME.	COURSE.	RESIDENCE.
Allfoll, Barney	El.	New Whatcom.
Brooks, Edward M	El.	Fremont.
Dana, Don W	El.	Dunlap.
Dunbar, Glendower	El.	Seattle.
Frisbee, Leroy W	El.	Ellensburg.
Geary, John W	El.	Seattle.
Haskins, Eugene	Civ.	Fairhaven.
Hill, William R	El.	Seattle.
Lantz, Clinton	El.	Centralia.
Loomis, Hubert D	El.	Snohomish.
McFarland, Kenneth C	Civ.	Sumner.
Metskes, Charles F	Mech.	Winlock.
Norma, Satohara	El.	Tokio, Japan.
Reasoner, Frank M	Mech.	New Whatcom.
Reynolds, H. Homer	El.	Chehalis.
Richardson, Fred H	Mech.	Seattle.
Speidel, William C	Mech.	Chicago, Ill.
Van Kuran, Carl E	El.	Portland, Ore.
Walker, J. Frank	Ci v.	Seattle.
Wilson, Eugene G	Civ.	Tacoma.
UNCLASSIFIED.		
Hitchcock, Roscoe	Civ.	Ballard.
Lee, George N	Civ.	Pontiac.
McClellan Fred A	Mech	Seattle

McClellan, Fred A Mech.	Seattle.
Poulson, Ralph WEl.	Seattle.
Rockfellow, Don ECiv.	Shaniko, Ore.
Rogers, Clarence BEl.	Minneapolis, Minn.
Schneider, Hugo HMech.	Snohomish.

# SCHOOL OF MINES.

## SENIOR CLASS.

Hill, Climie, B. S	Seattle.
Lane, Alton W	Seattle.
Tiedeman, Walter H	Ballard.
0F.	
ZON	
, <b>)</b> ••	

## JUNIOR CLASS.

NAME.	RESIDENCE.
Corbet, Galbraith H. I	.Seattle.
Gaches, Charles E	. La Conner.
Gordon, Oliver M Metall	.Spokane.
Harper, Paul C	.Seattle.
Ryan, Lewis DGeol. Alt	.Sumner.
SOPHOMORE CLASS.	
Boetzkes, Harry	.New York, N. Y.
Calhoun, Arthur P	.Seattle.
Morehouse, George B	Skagway, Alaska.
Parker. I. Curtis	.Seattle.
Rohlfs. Otto D	.Seattle.
Sargent, Archie E.	.Eugene, Oregon.
Treen. Shirley	.Skagway, Alaska.
FRESHMAN CLASS	
Clark Miles E	Seattle
Callison James G	Chebalis
Dunlan James W. P	Seattle
Fenton, Eugene A	Seattle
Hulce Edgar M	Sumner
Littlefield E Earle	Visalia Cal
Livingstone Gilbert T	Seattle
Lindig Herry J	Juneau Alaska
Miles W Leslie Motall	Tacoma
Pratt I Norman	Custer
Richardson Samuel H	Seattle
Canton Frank W	Tan Angolog Cal
Cap Alfred B	This Angeles, Cal.
Debroy Charles	Son Francisco Col
Debuey, Charles	San Francisco, Car.
Keen William C	South Deals
Runkol Frederick H	Noilleville Wie
INURGI, Freuerick A	.140111341116, 4418.
SHORT COURSE.	D1.1.1.1.1.
Alvord, Albert S	. Plaischie.
Smith, Russell B	. Kavenna.

Spear, Leonard P.....Ravenna.

1F 31M

ø

# PROSPECTORS' COURSE.

NAME.	RESIDENCE.
Benzon, Charles J	Nome, Alaska.
Bradley, Fred T	Skagway, Alaska.
Donnelly, Edward J	Seattle.
Felch, Charles W	Fairhaven.
Huntley, Herbert B	Seattle.
McDonald, Donald F	Ft. Wrangle, Alaska

# SCHOOL OF PEDAGOGY.

### SECOND YEAR.

NAME.	RESIDENCE.
Bovey, J. Elmer	Sedro-Woolley.
Chilberg, Mabel	Seattle.
Farnsworth, Aimee	Seattle.
Gow, Ida H	Seattle.
Gow, Margaret E	Seattle.
Hall, Ivy	Seattle.
Heppenstall, Minerva	Seattle.
Howard, Sara R	Seattle.
Knight, Lillian B	Seattle.
Larimer, Bessie	Seattle.
McDonnell, E. Pearl	University Station
Meagher, Ella F	Coupeville.
Meagher, Maie E	Snohomish.
Peterson, Sophie D	Port Townsend.
Wiley, Linnie W	Ballard.

#### IRREGULAR.

Albert, Grace L	Seattle.
Calhoun, Gertrude	Hillhurst.
Carlson, Hildore M	Willapa.
Fleming, Dora	Spokane.
Parsons, Georgia	Hutchinson, Minn
Settle, Maude	Kelso.
Settle. Phœbe	Kelso.

200

# SCHOOL OF PHARMACY.

### SECOND YEAR.

NAME.	RESIDENCE.
Bridenstine, Manfred J	Ballard.
Dill, Joseph	Sedro-Woolley.
Fetterman, Glenn R.	Ellensburg.
Gray, Charles M	Salt Lake, Utah.
Jennings, Helen F	La Conner.
Kellogg, Sarah B	Seattle.
Swift, George W	Coupeville.
Wanamaker, Allison	Coupeville.

### FIRST YEAR.

Benedict, Bert C	Oakesdale.
Benham, Arthur L	Portland, Ore.
Boatman, I. Maude	Seattle.
Calhoun, H. Spurgeon	Ballard.
Cameron, Hayden S	Columbia.
Carter, Theora	Ballard.
Ellis, Daniel D	Fremont.
Lacey, Martin J	Auburn.
McKinnon, Charles	.Ross.
Prigmore, George D	Pe Ell.
Prouty, John A	.New Whatcom.
Smith, Joseph H	.Hoquiam.
Speidel, William C	.Chicago, Ill.
Sullivan, Gerry T	.Butte, Mont.
Wade, Ralph B	Pendleton, Ore.
Weed, Bert	.Seattle.

# SCHOOL OF LAW.

## SENIOR CLASS.

NAME,	RESIDENCE.
Beals, Walter B	Fairhaven.
Bell, William S	Seattle.
Brinker, Otis W	Port Townsend
HE	
J.M.	

201

and with

RESIDENCE.
Seattle.
Seattle.
Seattle.
Olympia.
Centralia.
Olympia.
Snohomish.
Seattle.
Eau Claire, Wis.
Tacoma.
Seattle.
Waterville.
Seattle.
Seattle.
Seattle.
Renton.

# JUNIOR CLASS.

Austin, William M	Seattle.
Aya, Alfred T	Eugene, Oregon.
Brunn, Sidney	Seattle.
Bunch, Alban F	Seattle.
Cantonwine, Fred	Walla Walla
Crist, John	Seattle.
Devecmore, George W	Seattle.
Dryfoos, Louise	Seattle.
Edwards, Marion, A. B	Seattle.
Ganaway, George H	Seattle.
/ Geary, Edward H	Seattle.
Grant, Robert J	Seattle.
Higgins, John C., A. B	Seattle.
Hubbard, H. Frank	Guy.
Kenworthy, Leon B., A. B	Dayton.
Levy, Aubrey, A. B	Seattle.
McCann, Charles, A. B	Everett.
McMahon, William F	Farmington.
Mitchell, Grace E	Seattle.
Osborn, Walter S	Seattle.
5F	
· /) /	

NAME.	RESIDENCE.
Parker, Adella M., A. B	Seattle.
Pelletier, Leroy	Seattle.
Pettijohn, Clive A	North Forks, B. C.
Philbrick, Edgar R	Hoquiam.
Retzlow, Carl O	San Francisco, Cal.
Revelle, Thomas P., A. B	Seattle.
Sayre, Frank B	Seattle.
Steffen, Charles H	Seattle.
Tennant, Alfred J	Seattle.
Tennant, George R	Seattle.
Thayer, Robert A	Chewelah.
Thomas, James	Seattle.
Toellner, August	Van Asselt.
Tucker, Orville A	Fremont.
Walthew, Harry M	Seattle.
Wilson, Willard A	Seattle.
Yager, Benjamin W	Seattle.
Yamashita, Taku	Tokio, Japan.

# PREPARATORY SCHOOL.

NAME.	RESIDENCE.
Adams, A. Webster	
Allen, Eva	
Allen, Herman	Pe Ell.
Anderson, Alice J	Bothell.
Anderson, L. Bliss	Bothell.
Anderson, Mina	Prescott.
Andrews, Aminyer	Fremont.
Bangs, Walter	Duluth, Minn.
Bash, Clementine	Columbia.
Best, William C	Port Gamble.
Bothell, Clara M	Bothell.
Boyd, Mildred M	Sumner.
Brackett, George G	Skagway, Alaska
Brintnall, Bert W	Ahtanum.
Brooke, Bessie	Langley.
3FN 25M	

203

15 STAND

NAME.	RESIDENCE.
Brygger, Anna	Ballard.
Buchanan, Madge S	Issaquah.
Buland, Mabel	Castle Rock
Cales. Tony	Bucoda.
Churchill, Veva	Star Lake.
Coates, Irving	South Park.
Conley, Robert	Ballard.
Corson, Mae E	Issaquah.
Crossley, Camelia	Issaquah.
Crossley, Jasmine	Issaquah.
Dana, Jay	Dunlap.
Dana, Lee H	Dunlap.
Davis, Albert E	Van Asselt.
Davis, Lela	Van Asselt.
Davidson, William E	Dunlap.
Denny, Arthur J	Everett.
Drylie, Elizabeth.	Issaquah.
Duncan, Allene	Dungeness.
Dwyer, Grace	Tacoma.
Estlick, May	Issaquah.
Evenson, Karl I	Kent.
Fleming, Andrew	Spokane.
Fletcher, James G	Latona.
Flynn, Robert	Columbia.
Fogh, Edgar	Roslyn.
Ford, Guy	Arlington.
Gaches, Henry W	LaConner.
Gaches, Hilda	LaConner.
Gardiner, Alexander	North Bend.
Gauntlett, Clinton W	Unalaska, Alaska.
Gauntlett, George	Unalaska, Alaska.
Gauntlett, James	Unalaska, Alaska.
Gibson, A. Earl	Issaquah.
Gifford, Mabel	South Park.
Goff, Hattie	Houghton.
Gotchey, Angeline	Bothell.
Hale, Richard C	Baker City, Oregon
Hamlin, Milton W	Seattle.
15 F.M.	
v	

204

•

NAME.	RÉSIDENCE.
Hamlitt, Charles W	.Unalaska, Alaska.
Hanson, Selma	Enumclaw.
Harn, Marguerite E	.Orillia.
Hellenthal, Joseph, Jr	.Columbia.
Hewitt, Charles T	.Green Lake.
Hopkins, John	.Ballard.
Horner, Charles R	.Belle Plain, Kas.
Horrocks, Sarah	.Issaquah.
Horton, Howard D	.Duwamish.
Jabush, Leo W	.South Park.
Johnson, Elma	.Ehrlich
Jones, Frank P	.Edmunds.
Jones, William T.	.Edmunds.
Keane, Margaret E	.Edmunds.
Kelly, Eben	South Park.
Kelly, Leah	.South Park.
Kelsey, Robert W	.O'Brien.
Kerwood, Henry	.Ballard.
Knoph, Allo	.Dungeness.
Longfellow, Charles	.West Seattle.
Loomis, Ola	.Bucoda.
Mackie, Albert	.Ballard.
Mackie, Donald	.Ballard.
Mason, Arthur R	.Port Angeles.
McCallister, Olive	.South Park.
McGee, Etta L	.West Seattle.
McLean, Walter G	.Duwamish.
Messegee, Herndon L	.Olympia.
Mills, Ada	.Snohomish.
Minkler, Birdsey	.Lyman.
Montgomery, Winifred	.Fort Smith, Ark.
Mortell, Thomas, Jr	.Port Gamble.
Murphy, Frank D	.Elk Garden, W. Va.
Nelson, Roy	. Marysville.
Olsen, Otto A., Jr	South Park.
O'Meara, Mary G	. Union, Oregon.
Oulette, Kittie	.O'Brien.
Paschall, Nathaniel	.snonomish.

M

205

NANE.	RESIDENCE.
Pearson, Joseph N	Starbuck.
Peterson, Paul W	El Campo, Tex.
Pettijohn, Lucy	Minneapolis, Minn.
Polley, Elnora	Issaquah.
Pratton, Gail	Edmunds.
Raiff; Frances	Tacoma.
Reeves, Ella	Columbia
Roberts, Braden	Kalama.
Schultz, Matilda E. M	McMurray.
Sharpe, Arthur R	Des Moines, Ia.
Shelton, Celia D	. Brisbane.
Sherrick, Arthur	Puyallup.
Shoudy, Winifred	Ellensburg.
Simpson, Bessie A	Kalama.
Sinclair, Charles	Ritzville.
Sinclair, Mark	Ritzville.
Smart, Myrtle	Genoa, Nev.
Smith, Claude M	Endicott.
Smith, Lucy J. P	Neodsha, Kas.
Snoke, R. Percy	Puyallup.
Snow, Montgomery A	Juneau, Alaska.
Stadelman, Mary	Spokane.
Stapp, Robert	West Seattle.
Starrett, Alfred	Ravenna.
Strauss, Alfred	Colville.
Sutherland, John	Charleston.
Sutherland, Kate	$\dots$ Charleston.
Thomas, Sarah	Black Diamond.
Thorp, John	South Park.
Underwood, Lewis H	Port Gamble.
Walrath, Ellis	Sumas.
Walter, George E	Fremont.
Wasson, Charles	Sauk Centre, Minn
Watkins, Amelia R	La Conner.
Waugh, Rachel K	Mt. Vernon.
Wheeler, Roy M	Fremont.
Whitfield, Wilmot G	Fremont.
Wood, Winfield S. H	Port Angeles.

16FM

206 `

٠

## PREPARATORY FOR MEDICINE.

NAME. RESIDENCE. Street, Alys M......Edmunds.

PREPARATORY FOR LAW.

Dootson,	James		 Bucoda.
McMillan	, Marshall	J	 Walla Walla.

# SUMMARY OF ENROLLMENT.

College of Liberal Arts. .267   College of Engineering. 42   School of Mines. 41   School of Pedagogy. 22   School of Pharmacy 24   School of Law. 57   Preparatory School. 132   614 10   Total. .604	Graduate School	29
College of Engineering 42   School of Mines 41   School of Pedagogy 22   School of Pharmacy 24   School of Law 57   Preparatory School 132   614 614   Names repeated 10   Total 604	College of Liberal Arts	67
School of Mines	College of Engineering	42
School of Pedagogy	School of Mines	41
School of Pharmacy   24     School of Law   57     Preparatory School   132     614   614     Names repeated   10     Total   604	School of Pedagogy	22
School of Law   57     Preparatory School   132     614   614     Names repeated   10     Total   604	School of Pharmacy	24
Preparatory School	School of Law	57
614     Names repeated     10     Total	Preparatory School1	32
614 Names repeated10 Total		
Names repeated   10     Total   604	6	14
	Names repeated	10
10081	. — — — — — — — — — — — — — — — — — — —	14
	10641	VŦ

31

1.

# THE ALUMNI ASSOCIATION.

OFFICERS FOR THE YEAR 1901-1902.

President, EARL ROBINSON JENNER, A. B., 1895. Vice President, OTHILIA GERTRUDE CARROLL, LL. B., 1901. Secretary, DAVID KELLY, B. S., 1899. Treasurer, AUBREY LEVY, A. B., 1900. Historian, ADELLA M. PARKER, A. B., 1893.

EXECUTIVE BOARD.

JAMES EDWARD GOULD, Ph. B., 1896, *Chairman*. MARION EDWARDS, A. B., 1898. GEORGE A. COLEMAN, B. S., 1882. RALPH DAY NICHOLS, Ph. B., 1896. JOHN JACKOL, B. S., 1897.

COMMITTEE ON STUDENT AFFAIRS.

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

### ALUMNI.

1876.

Clara (McCarthy) Wilt, B. S. 1326 E St., Tacoma.

1881.

Helen I. (Hall) Wayland, B. S. Seattle. Edith (Sanderson) Redfield, B. S. 802 Minor Ave., Seattle.

1882.

Louis F. Anderson, A. B., A. M., Professor of Greek Language and Literature. Whitman College, Walla Walla, Washington.

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

. George H. Judson, B. S. (died May 18, 1891). Lelia A. (Shorey) Kilbourne, B. S. 1203 Summit Ave., Seattle.

1883.

H. O. Chipman, B. S. (died March 4, 1887.) Carrie V. (Palmer) Denny, B. S. (died December 17, 1891.)

1884.

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

#### 1885.

Agnes M. (Greene) Veazie, B. S. 695 Hoyt St., Portland, Oregon. Louise M. (Root) Dement, B. S. Astoria, Oregon.

Hettie Louise (Greene) Camp, B. S. 515 Bell St., Seattle.

Charles Vancouver Piper, B. S., M. S., Professor of Biology. Washington Agricultural College and School of Science, Pullman, Washington.

Edmond Stephen Meany, B. S., M. S., Professor of History and Instructor in Forestry. University of Washington, Seattle.

John Huntington, B. S., M. D., physician. Starbuck, Washington.

1886.

Elisha H. Alvord, A. B. 811 Second Ave., Seattle.

E. Emma (Clarke) Pratt, A. B., A. M. Woodinville, Washington.

James F. McElroy, B. S., attorney at law. 2008 Fifth Ave., Seattle.

Matthew H. Gormly, B. S., Deputy City Treasurer. 211 Taylor Ave., Seattle.

1887.

Edwin Victor Bigelow, A. B., A. M., pastor of the Congregational Church. Cohassett, Massachusetts.

Nellie E. (Powell) Drumheller, A. B. Spokane.

Florence M. Adams, A. B., teacher. 115 Twenty-eighth Ave., Seattle.

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

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

Anna (McDiarmid) McLerman, B. S. Seattle.

-14

#### 1888.

Morris E. Adams, B. S. (died June 8, 1890.)

Charles A. Kinnear, B. S., attorney at law. 809 Queen Anne Ave., Seattle.

Ida (Soule) Kuhn, B. S., M. S., teacher. Hoquiam, Washington. Depalmer G. Wakefield, B. S. Lowell, Washington.

Anna E. (Willard) Hines, B. S. Seattle.

#### 1889.

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

Royal T. Hawley, A. B., Post-Intelligencer office. 1619 Nob Hill Ave., Seattle.

Charles Clarence Ward, B. S., United States Geological Survey. San Jose, California.

Fanny L. (Churchill) Furber, B. S. 501 Roy St., Seattle.

### 1891.

Francis A. Noble, B. S., attorney at law. 210 Taylor St., Seattle.

#### 1892.

Maude L. Parker, A. B., Instructor in Science, Seattle High School. 1011 Pine St., Seattle.

Daniel Ellis Douty, B. S., Ph. D., (Clark University), 1901. Worcester, Mass.

John A. Kellogg, B. S., attorney at law. Northport, Wash.

Adelaide G. Nickels, B. S., B. P., teacher. 702 Minor Ave., Seattle.

Minnie J. Pelton, B. S., M. S., teacher. Garfield and Fifth Aves., North Seattle.

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

#### 1893.

Winnifred (Ewing) Johnson, A. B., B. P. Seattle.

Grace Gatch, A. B. Corvallis, Oregon.

Beatrice A. (Karr) McNeil, A. B., B. P., 1894. Aberdeen, Wash.

Adella M. Parker, A. B., Instructor in Zoology, Seattle High School. 1011 Pine St., Seattle.

F. Otto Collings. New York City.

1894.

Roger Sherman Greene, jr., A. B., B. P. Dawson, N. W. T. Adelbert Ernest Pierce, A. B. Berkeley, California.

Albert Roderick Sprague, A. B., journalist. Skagway, Alaska. Helen May (Anthony) Corey, B. S., Ph. G., 1896. Northport, Wash.

Mettie (Heaton) Durham, B. S. North Bend, Wash.

Merrit Ernest Durham, B. S., Principal of Schools. North Bend, Wash.

Annie Jennie Pelton, B. S., B. P., teacher. Garfield and Fifth Avenues, North Seattle.

John Edwin Porter, B. S., Superintendent of Chelan County Schools. Wenatchee, Wash.

Horace Amos Turner, B. S. Seattle.

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

1895.

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

Anne Rayfield (Parsons) Williams, A. B. San Francisco, Cal.

Earl Robinson Jenner, A. B., Clerk of Superior Court. Seattle.

Erastus Phillips Dearborn, A. B., with the Hambach Co., Seattle.

Isaac Phillips Morrison, A. B., with W. D. Hoffius, agent of the Illinois Steel Company. 1315 Terry Ave., Seattle.

Harriet Alice Howell, B. P., Instructor in Elocution. University of Nebraska, Lincoln, Neb.

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

Charlotte Ruth Karr, B. P., A. B., 1896, A. M., 1898, Instructor in Ancient Languages. Puget Sound Academy, Snohomish, Wash.

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

Bartie Reginald McElreath, B. P., teacher. Principal of Schools. South Seattle.

Martha Wiley, B. P.

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

1896.

Tom Marie Alderson, A. B., student, Stanford University. Mayfield, Cal.

· . . .

George Merritt Allen, A. B., editor of Klondike Nugget. Dawson, N. W. T.

William Henry Beatty, A. B. Dawson City, N. W. T.

Frederick Richie Bechdolt, A. B., reporter for Post Intelligencer. Seattle.

Albert Seldon Burrows, A. B., Instructor in Latin. Seattle High School, Seattle.

Harry Farmer Giles, A. B., A. M., teacher. Ballard, Wash.

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

John Chisholm Dickson, B. S., Superintendent of Schools. Ballard, Wash.

John Hoegh Graff, B. S., Northern Pacific Railway Survey in Idaho. King St. and 22nd Ave., South Seattle.

John Haan, B. S., (died March 1, 1898.)

Robert Wesley Jones, B. S., engineer, Great Northern Railway Construction. Tunnel, Wash.

Ina Irena Pratt, B. S., teacher. Whatcom High School, Whatcom, Wash.

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

Arthur Joseph Collins, A. B., Ph. B., Principal of Schools. Shelton, Wash.

James Edward Gould, Ph. B., Instructor in Chemistry, Seattle High School. North Seattle. Principal-elect of the Preparatory School, University of Washington.

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

Ralph Day Nichols, Ph. B., attorney at law in Seattle. Columbia City.

Agnes (Ward) Lively, Ph. B., Portland, Oregon.

#### 1897.

Arthur Manvel Dailey, Ph. B., Principal of Schools. South Park.

Martin Harrais, Ph. B. Dawson, N. W. T.

Arthur Howard Hutchison, A. B., merchant. Second Ave. and Union St., Seattle.

Frank Dean Frazer, B. S., A. M. (Princeton, 1898), graduate student. University of Chicago, Chicago, Ill.

Ruth Harrington, B. S., Instructor in Modern Languages. Everett High School, Everett, Wash.

John Jackol, B. S., Superintendent of Schools. Aberdeen, Wash.

Theodore Martel Jenner, B. S., miner. 1009 Seventh Ave., North Seattle.

Theodore Johnson Ludlow, B. S., graduate student. University of California, Berkeley, Cal.

Oscar Albert Piper, B. S., United States Coast Survey. Seattle.

Walter Scott Wheeler, B. S., City Engineer's Office, Seattle. Columbia City.

#### 1898.

Clara Josephine Bailey, Ph. B. Died 1899.

Birdie Ira Beals, Ph. B., Principal of High School, Sedro-Woolly, Wash. Instructor-elect in History and English, University of Washington.

Mary Rathbun Button, A. B., Instructor in Latin. Seattle High School, Seattle.

Edward Adolph Crueger, B. S., teacher. Mt. Vernon, Wash.

Marion Edwards, A. B., attorney at law. Dexter-Horton Bldg., Seattle.

Cora Lena Goodman, B. S., teacher. Puyallup, Wash.

William Hay Karr, B. S., farmer. Hoquiam, Wash.

Warner Melvin Karshner, B. S., Instructor in Sciences. Everett High School, Everett, Wash.

Laura Dell (McFarland) Tripp, Ph. B. Seattle.

Edward McMahon, Ph. B., Principal of Schools. Van Asselt, Wash.

Thomas Floyd Murphine, Ph. B., farmer. Stanwood, Wash.

Bettie Parsons, A. B. McLean Hospital, San Francisco, Cal.

James Smith Sheafe, B. S., graduate student. Massachusetts Institute of Technology, Boston, Mass.

Mary Agnes Skinner, Ph. B., teacher. Seattle.

Charles Wood Sutton, B. S., engineer. Seattle.

Helen Pack Wilson, Ph. B. Seattle.

Heartie Wood, A. B. 2015 Ninth Ave., Seattle.

. A William State State

#### 1899.

Jessie B. Allen, A. B., A. M., graduate student. University of Washington, Seattle.

Arthur C. Ballard, A. B., teacher. Auburn, Wash.

Anna C. Boyd, A. B., teacher at Kirkland, Wash. 1007 Seventh avenue, Seattle.

Blanche Brooks, A. B., teacher. Fremont, Wash.

Ina L. Carpenter, A. B., A. M., teacher. Ballard, Wash.

Harry C. Coffman, A. B., Librarian. University of Washington, Seattle.

Ross E. Chestnut, A. B., mining broker. Rossland, B. C.

Jackson B. Corbet, Jr., A. B., reporter for Post-Intelligencer. Seattle.

Arthur C. Crookall, A. B., medical student. San Francisco, Cal.

Luella M. Dean, A. B. 2306 Fifth avenue, Seattle.

Charles A. Fowler, A. B., reporter for Argus. Seattle.

Elizabeth H. Frye, A. B., A. M., graduate student. University of Washington, Seattle.

Mae R. Goodman, A. B., teacher. Blaine, Wash.

Frank P. Giles, A. B., druggist. Ninth avenue and Jackson street, Seattle, Wash.

Jacob L. Gottstein, A. B., with M. & K. Gottstein, wholesalers. 108 W. Yesler Way, Seattle, Wash.

Walter S. Griswold, A. B., medical student. University of California Medical School, San Francisco, Cal.

Thomas M. Gunn, A. B, draughtsman. Pioneer Bldg., Seattle.

Henry R. Harriman, A. B., law student. University of Washington, Seattle.

Caroline E. Horton, A. B., A. M., graduate student. University of Washington, Seattle.

Louise A. Iffland, A. B., Instructor in Port Townsend High School. Port Townsend, Wash.

Eunice V. Karr, A. B. Hoquiam, Wash.

Clarence M. Larson, A. B., graduate student. University of Wisconsin, Madison, Wis.

Ethel M. Leake, A. B., teacher. Seattle.

Verna L. Leeman, A. B., teacher. Everett, Wash.

Elizabeth Metcalf, A. B., teacher. Snoqualmie, Wash. Don H. Palmer, A. B., student. Rush Medical College, Chicago, Ill. Olivia C. Peck, A. B., teacher. La Conner, Wash. Agnes L. Reagh, A. B., teacher in Stevens county, Wash. Rossland, B. C. Henry L. Reese, A. B., A. M., Assistant Professor of Latin. University of Washington, Seattle. Harry L. Richardson, A. B., student. Conservatory of Music, Ithaca, N.Y. Emma B. Roll, A. B., Assistant Principal. Fairhaven High School, Fairhaven, Wash. Audrey B. Souder, A. B., graduate student. University of Washington, Seattle. Theresa (Schmid) McMahon, A. B., A. M., teacher. South Park, Wash. Annie A. Sloan, A. B., teacher. South Park, Wash. Permilla (Thomas) Alderson, A. B. Mayfield, Cal. Lucius O. Veser, A. B., clerk. Moore Machine Co., Seattle. Mable Ward, A. B., teacher. Seattle. Sarah L. Waughop, A. B., teacher. 116 Twenty-third avenue, Seattle. Cyrus A. Whipple, A. B. U.S. Coast and Geodetic Survey. 2013 Second avenue, Seattle. Sara A. Williams, A. B. 402 Highland Drive, Seattle. Anne C. Winters, A. B. Teacher, Van Asselt. 1113 Ninth avenue, Seattle. Jinta Yamaguchi, A. B., A. M. Secretary to Postmaster General of Japan. Albert M. Anderson, B. S. Atlin, B. C. Walter R. Coffman, B. S., student. Cooper Medical College, San Francisco, Cal. David Kelly, B.S., A. M., Assistant Professor of Physics. University of Washington, Seattle. Trevor C. D. Kincaid, B. S., Professor of Zoology. University of Washington, Seattle.

Burke Smith, B. S., Instructor in Mathematics. Northwestern University, Evanston, Ill.

and the state of the

1

William G. Turnbull, B. S., lumberman, Kent, Wash.

Arthur S. Wilson, B. S., Professor of Mathematics. Puget Sound University, Tacoma.

Isadore R. Singerman, B. S., with Toklas & Singerman, Seattle.

#### 1900.

Ella B. Allen, A. B., teacher. Auburn, Wash.

Harold J. M. Baker, A. B., graduate student. University of Washington, Seattle.

James Barkley, A. B., graduate student. University of California. Berkeley, Cal.

Jessie Barlow, A. B., teacher. Tacoma, Wash.

## j<sup>ij Aulta</sup> Tony M. Barlow, A. B., engineer, Cape Bellingham Railway. Fairhaven, Wash.

Kathryn E. Case, A. B., teacher. Everett, Wash.

Myra B. Clark, A. B., teacher. 1110 James St., Seattle.

Emma E. Crueger, A. B., teacher. Snohomish, Wash.

Aobeno<sup>2</sup> Ella R. Dougan, A. B., assistant, Public Library. 702 Pike St., Seattle.

Jampson Thomas T. Edmunds, A. B. Ballard.

Lulu Fuller, A. B., teacher. Snohomish, Wash.

- Nathaniel L. Gardner, A. B., Assistant in Botany. University of California, Berkeley, Cal.
- wallaz William W. Gillette, A. B., A. M., graduate student. University of Washington, Seattle.
  - Grace Glasgow, A. B. 132 N. Broadway, Seattle.

Climie E. Hill, A. B., graduate student. University of Washington, Seattle.

Rymant Stirling B. Hill, A. B., Instructor in Civil Engineering. University of Washington, Seattle.

Nerry Robert H. Hopkins, A. B. Ballard.

gin

mertunuto Hans M. Korstad, A. B., A. M., graduate student. University of Washington, Seattle.

Aubrey Levy, A. B., student in Law School, University of Washington. 1104 Minor ave., Seattle.

u) (the two setting of Washington, Seattle.

William J. Meredith, A.B., Registrar and Associate Professor of English. University of Washington, Seattle. Thomas W. Mitchell, A. B., Instructor in Mathematics. University of Washington, Seattle. Fellow-elect, University of Wisconsin.

Walter F. Morrison, A. B. Hyde Block, Spokane, Wash.

Ernest W. Schoder, A. B., graduate student. Cornell University, Ithaca, N. Y.

John C. Storey, A. B., Engineering Department, Northern Pacific Railway. Seattle.

or or Frances C. Sylvester, A. B., Assistant Principal. Klickitat Academy, Goldendale, Wash.

Bella Weretinkove, A. B., student. Law School, University of Washington, Seattle.

First Ethel B. White, A. B., teacher in Fairhaven High School. Fairhaven, Wash.

George E. St. John, A. B., A. M., Superintendent of City Schools. Everett, Wash.

### NORMAL GRADUATES.

#### 1880.

Adda L. George. Albany, Oregon. Clara E. (Lombard) Colkett. Seattle, Wash. Luella J. (Wittenmyer) Hurd. Juanita, Wash.

#### 1881.

Flora A. (Phelps) Beeman. Lynden, Wash. Mattie S. (Wade) Kyes. Kent, Wash.

#### 1882.

Lizzie S. (Anderson) Davis. Tacoma. Addie J. (Plummer) Mathiewson. Lodi, California.

#### 1884.

Louise M. (Root) Dement, B. S., 1885. Astoria, Oregon.

1885.

Fannie E. Emery. Seattle.

Iva J. (Jones) Kendrick. 3846 Clay Street, San Francisco, Cal.

Hessie E. (Cox) Hastings. Seattle.

Sarah Elizabeth (Ward) Meany. Seattle.

#### 1886.

Hattie M. Kellogg, teacher. Seattle. Colinta Cabanski. Seattle:

#### 1887.

Anna L. Cristopher, teacher. Marion, Oregon. Florence A. (Ledger) Whitford. Seattle. Gladys Austin, teacher. New Whatcom. Thomas Hayton, merchant. La Conner. Albert W. Buddress, attorney at law. Port Townsend.

#### 1888.

Nellie (Clayton) Sands. Tacoma.

Jay D. Dean, editor of The Washingtonian. Hoquiam, Wash. Rehecca (Gaines) James. Sonoma, Cal.

Josie Jackling, teacher. Seattle.

Alice A. ( Parker ) Carter. Honolulu, H. I.

Ida (Soule) Kuhn, B. S., 1888, M. S., 1895, teacher. Hoquiam, Wash.

### 1889.

Louise H. (Monro) Walton. Tacoma. Agnes M. (Goddard) Gordon. Seattle.

#### 1890.

Beatrice A. (Karr) McNeil, A. B., 1893, B. P., 1894. Aberdeen, Wash.

Lulu J. Thompson. Eagle City, Alaska.

#### 1891.

Isabel R. (Dikeman) Pear. Sprague, Wash.

Isabel (McDiarmid) Winter. Hoodsport, Wash.

Helen E. Taylor. Seattle.

#### 1892.

Marguerite A. Baldwin, student. Cooper Medical College, San Francisco, Cal.

Vesta M. Baldwin, teacher. Seattle.

Harriet P. Griswold. Seattle.

Maude L. Parker, A. B., 1892, Instructor in the Sciences, Seattle High School. 1011 Pine St., Seattle.

## Alumni.

Minnie J. Pelton, B. S., 1892, M. S., 1895, teacher. Garfield and Fifth Aves., North Seattle

Lillian (Keen) Le Ballister. Seattle.

#### 1894.

Carrie Grimes Davis, teacher. Kent, Wash.

Olive May Hubbard, teacher in Sumner School. Puyallup.

James Frank Medearis, Lieutenant Colonel of Arkansas Volunteers, United States Army.

#### 1895.

Ingie Marie Lee, teacher. Everett, Wash.

Rena Bee Talmadge, teacher. Denny-Fuhrman Addition, Seattle.

Clara May Talmadge, teacher. Denny-Fuhrman Addition, Seattle.

Alice Penfield, teacher. Eighth and Pine Streets, Seattle.

Charlotte Ruth Karr, B. P., 1895, A. B., 1896, A. M., 1898, Instructor in Ancient Languages. Puget Sound Academy, Snohomish, Wash.

### 1896.

Lois Medora Adams, teacher. Snohomish, Wash.

Albert Selden Burrows, A. B., 1896, teacher in Seattle High School.

Margaret Ellen Crane, teacher. Seattle.

Ollie Doke (Davis) Shoudy. Roslyn, Wash.

John Chisholm Dickson, B. S., 1896, Superintendent of Schools. Ballard, Wash.

Madison Monroe Moss, Ph. B., 1896, Instructor in English and Rhetoric. Seattle High School, Seattle, Wash.

Ina Irene Pratt, B. S., 1896, Instructor in Whatcom High School, Whatcom, Wash.

Francis Ell Burnham Smith, B. S., 1896. Dawson, N. W. T.

Agnes (Ward) Lively, Ph. B., 1896. Portland, Oregon.

Sarah Prince Warren, teacher. Seattle.

#### 1897.

Arthur Manvel Dailey, Ph. B., Principal of Schools. South Park, Wash.

Grace Gatch, A. B., 1893. Corvallis, Oregon.

î

University of Washington.

.....h Harrington, B. S., 1897, Instructor in Modern Languages. Everett High School, Everett, Wash.

John Edwin Porter, B. S., Superintendent of Schools for Chelan County. Wenatchee, Wash.

1898.

Clara Josephine Bailey, Ph. B., 1898. Died 1899.

Birdie Ira Beals, Ph. B., 1898, Principal of Sedro-Woolley High School. Instructor-elect in English and History, University of Washington.

Marion Edwards, A. B., 1898, attorney-at-law. Seattle.

Cora Lena Goodman, B. S., 1898, teacher. Puyallup, Wash.

Warner Melvin Karshner, B. S., 1898, Instructor in Sciences. Everett High School, Everett, Wash.

Laura Dell (McFarland) Tripp, Ph. B., 1898. Seattle.

Mary Agnes Skinner, Ph. B., 1898, teacher in public schools. Seattle.

James Edward Gould, Ph. B., 1896, Instructor in Chemistry, High School, Seattle. Principal-elect of Preparatory School, University of Washington.

#### 1899.

Jessie B. Allen, A. B., graduate student. University of Washington, Seattle.

Anna C. Boyd, A. B., teacher, Kirkland. 1007 Seventh Ave., Seattle.

Blanche Brooks, A. B., teacher. Fremont.

Thomas F. Brownscombe, A. M., teacher. Los Angeles, Cal.

Ina L. Carpenter, A. B., teacher. Ballard.

Luella M. Dean, A. B. 2306 Fifth Ave., Seattle.

Elizabeth H. Frye, A. B., graduate student. University of Washington, Seattle.

Mae R. Goodman, A. B., teacher. Blaine.

Louise A. Iffland, A. B., teacher. Port Townsend High School, Port Townsend, Wash.

Eunice V. Karr, A.B. Hoquiam.

Į

Clarence M. Larson, A. B., graduate student. University of Wisconsin, Madison, Wisconsin.

Verna L. Leeman, A. B., teacher. Everett.

Ethel M. Leake, A. B., teacher, Seattle. Elizabeth Metcalf, A. B., teacher. Snoqualmie. Don H. Palmer, A. B., student. Rush Medical Col Chicago, Illinois. Qlivia C. Peck, A. B., teacher. La Conner. Henry L. Reese, A. B., Assistant Professor of Latin, Unive of Washington. Farry L. Richardson, A. B., student. Conservatory of M Jihaca, New York. Emma B. Roll, A. B., Assistant Principal of High Sc Fairhaven. Anna A. Sloan, A. B., teacher. South Park. Permilla (Thomas) Alderson, A. B. Mayfield, California. Sarah L. Waughop, A. B., teacher. Seattle. Cyrus A. Whipple, A. B., United States Coast and Geo Survey. Seattle. Anna C. Winters, A. B., teacher, Van Asselt. Seattle. 1900. Ella B. Allen, A. B. Auburn. Jessie Barlow, A. B., teacher. Tacoma. James Barkley, A. B., graduate student. University of ornia, Berkeley, Cal. Kathryn E. Case, A. B., teacher. Everett. Etima E. Crueger, A. B., teacher. Snohomish. The Ry Dougan, A. B., assistant, Public Library. 710 Pik utile. Loin Fuller, A. B., teacher. Snohomish. William W. Gillette, A. B., A. M., graduate student, staity of Washington. Spokane. Elizabeth M. Herren, teacher. Seattle. Mary H. Huntoon, teacher, Queen Anne School. Seattle. Hans M. Korstad, A. B., graduate student. University of V gton Seattle. M. Louis Billa E. Lewis, teacher. Seattle. William J. Meredith, A. B., Registrar and Associate Pro (Applied. University of Washington, Seattle. Wintred H. Megrath, teacher. Sedro-Woolley, Wash. Alice M. Porter, student. University of Washington, Se 11: UnigerseUniversity of Washington.

Thill

ances C. Sylvester, A. B., Assistant Principal. Klickitat demy, Goldendale.

ella Weretnikove, A. B., student. Law Schoool, University of shington, Seattle.

thel B. White, A. B., Instructor in High School, Fairbayen.

8

Second an

0 WJ 18110

Elis E

9111 4

GRADUATES IN PHARMACY.

1896.

Ielen May (Anthony) Corey, B. S., 1894, Ph. G. Northport, sh.

Eva Maud Campbell, Ph. G. Seattle.

Arthur Clifton Crookall, Ph. G., A. B., 1899; student in Cooper lical Institute. San Francisco, Cal.

/irginia Mackay Elder, Ph. G., druggist. Chelan, Wash.

Charles Sumner Leas, Ph. G. Honolulu, H. I.

Chomas Warner Lough, Ph. G., Assistant Professor of Chemisand Pharmacy. University of Washington, Seattle.

ames Miller McMurry, Ph. G., photographer. Port Towns-, Wash.

Iarry Lowther Richardson, Ph. G., A. B., 1899, student servatory of Music, Ithaca, N. Y.

Lugust Christian Rosenveldt, Ph. G., pharmacist. lison Avenues, Seattle.

Valter Rutz, Ph. G., proprietor of Lawrence Street Phatona t Townsend, Wash.

larold Walter Walton, Ph. G., druggist. Leadville Colorki

#### 1897.

rthur Willis Barton, Ph. G. Seattle

osamonde Lucile Crane, Ph. G. Seauthan

rank Price Giles, Ph. G., A. B., 1899, druggit Nin nue and Jackson Street, Seattle, Wash.

#### 1899.

'alter R. Coffman, B. S., student. Cooper Medical College Francisco, Cal.

4