IV.—COURSE IN MECHANICAL ENGINEERING.

(Figures indicate hours of class exercises per week.)

	FALL SESSION.	WINTER SESSION.	SPRING SESSION.
FRESHMAN YEAR.	Rhetoric ..... 4 Geometry..... 5 German..... 5 *Practicum.* Woodwork 10	Geometry..... 5 General Chemistry... 5 German..... 5 *Practicum.* Mechan. Drawing....10	Advanced Algebra.... 5 General Chemistry... 5 Botany ..... 5 *Practicum.* Forging.....10
SOPHOMORE YEAR.	Plane Trigonometry..... 5 Botany ..... 5 French ..... 5 *Practicum.* Mechan. Drawing....10	Trigonometry and Analytical Geom... 5 French ..... 5 Physics ..... 5 *Practicum.* Descriptive Geom....10	Analytical Geom..... 5 General History..... 5 Physics ..... 5 *Practicum.* Drawing and Machine work 10
JUNIOR YEAR.	Physics..... 4 Calculus ..... 5 Mechanics..... 5 *Practicum.* Machine work 10	Calculus ..... 5 Astronomy..... 3 Mechanics ..... 5 Kinematics..... 3 *Practicum.* Draw. and Machin...10	Geology ..... 3 Logic ..... 4 Engi. Materials..... 5 Machine Design..... 5 *Practicum.* Drawing 10
SENIOR YEAR.	Constitutional Law.. 4 Engin. Details..... 4 Thermo-Dynamics ... 5 Power Transmission ..... 4 *Practicum.* Pattern Making and Foundry work.....10	Political Economy... 4 V. and L. Motions.... 3 Boiler Practice and Design ..... 5 Foundations ..... 2 Engineering, Lab..... 4 *Practicum.* Steam Engineering and Designing.....10	Moral Science..... 5 Engines not Steam... 5 Eng. Laboratory..... 5 *Practicum.* Thesis Work.

V.—COURSE IN ELECTRICAL ENGINEERING.

(Figures indicate hours of class exercises per week.)

	FALL SESSION.	WINTER SESSION.	SPRING SESSION.
FRESHMAN YEAR.	Rhetoric..... 5 Geometry..... 5 German..... 5 *Practicum.* Woodwork 10	Geometry..... 5 General Chemistry... 5 German..... 5 *Practicum.* Mechan. Drawing....10	Advanced Algebra... 5 General Chemistry... 5 Botany ..... 5 *Practicum.* Forging.....10
SOPHOMORE YEAR.	Plane Trigonometry..... 5 Botany ..... 5 French ..... 5 *Practicum.* Mechan. Drawing....10	Trigonometry and Analytical Geom... 5 French ..... 5 Physics..... 5 *Practicum.* Descriptive Geom.....10	Analytical Geom..... 5 General History..... 5 Physics..... 5 *Practicum.* Drawing and Machine work.....10
JUNIOR YEAR.	Physics..... 4 Calculus..... 5 Mechanics..... 5 *Practicum.* Machine work 10	Calculus..... 5 Astronomy..... 3 Mechanics..... 5 Kinematics..... 3 *Practicum.* Drawing and Machine work.....10	Geology..... 3 Logic..... 4 Engi. Materials..... 5 Machine Design..... 5 *Practicum.* Drawing.....10
SENIOR YEAR.	Constitutional Law.. 4 Power Transm'n..... 4 Thermo-Dynamics... 5 Dynamo Details and Study of Motors.... 5 *Practicum.* Foundry work, Pattern Making.....10	Political Economy... 4 Electric Lighting..... 3 Electrical Transm'n.. 5 Foundations ..... 2 Electrical Laboratory..... 4 *Practicum.* Dynamo and Electrical Machinery...10	Moral Science..... 5 Study of Motors..... 5 Electrical Laboratory..... 5 *Practicum.* Thesis work.....10

VI.—COURSE IN MILL AND HYDRAULIC ENGINEERING.

(Figures indicate hours of class exercises per week.)

	FALL SESSION.	WINTER SESSION.	SPRING SESSION.
FRESHMAN YEAR.	Rhetoric..... 5 Geometry..... 5 German..... 5 *Practicum.* Wood work.....10	Geometry..... 5 General Chemistry... 5 German..... 5 *Practicum.* Mechan. Drawing.....10	Advanced Algebra... 5 General Chemistry... 5 Botany..... 5 *Practicum.* Forging.....10
SOPHOMORE YEAR.	Plane Trigonometry..... 5 Botany..... 5 French..... 5 *Practicum.* Mechan. Drawing....10	Trigonometry and Analytical Geom... 5 French..... 5 Physics..... 5 *Practicum.* Descriptive Geom....10	Analytical Geom..... 5 General History..... 5 Physics..... 5 *Practicum.* Drawing and Machine work.....10
JUNIOR YEAR.	Physics..... 4 Calculus..... 5 Mechanics..... 5 *Practicum.* Mechan. Drawing....10	Calculus..... 5 Astronomy..... 3 Mechanics..... 5 Kinematics..... 3 *Practicum.* Drawing and Machine work.....10	Geology..... 3 Logic..... 4 Engi. Materials..... 5 Machine Designs..... 5 *Practicum.* Drawing.....10
SENIOR YEAR.	Constitutional Law.. 4 Power Transmission..... 4 Hydro-Dynamics..... 5 Water Motors..... 5 *Practicum.* Mill Architecture and Field work.....10	Political Economy... 4 Modes of Manufac... 5 Manufac. Economy.. 3 Foundations..... 2 Engineering, Lab..... 4 *Practicum.* Mill Designing.....10	Moral Science..... 5 Various Motors..... 5 Engineering, Lab..... 5 *Practicum.* Thesis work.

VII.—COURSE IN STEAM ENGINEERING.

(Figures indicate hours of class exercises per week.)

	FALL SESSION.	WINTER SESSION.	SPRING SESSION.
FRESHMAN YEAR.	Rhetoric..... 4 Geometry..... 5 German..... 5 *Practicum.* Wood work.....10	Geometry..... 5 General Chemistry... 5 German..... 5 *Practicum.* Mech. Drawing.....10	Advanced Algebra... 5 General Chemistry... 5 Botany..... 5 *Practicum.* Forging.....10
SOPHOMORE YEAR.	Plane Trigonometry..... 5 Botany..... 5 French..... 5 *Practicum.* Mechanical Drawing.....10	Trigonometry and Analytical Geom... 5 French..... 5 Physics..... 5 *Practicum.* Descriptive Geom....10	Analytical Geom..... 5 General History..... 5 Physics..... 5 *Practicum.* Drawing and Machine work.....10
JUNIOR YEAR.	Physics..... 5 Calculus..... 5 Mechanics..... 5 *Practicum.* Machine work.....10	Calculus..... 5 Astronomy..... 3 Mechanics..... 5 Kinematics..... 3 *Practicum.* Drawing and Machine work.....10	Geology..... 3 Logic..... 4 Eng. Materials..... 5 Machine Design..... 5 *Practicum.* Drawing.....10
SENIOR YEAR.	Constitutional Law.. 4 Power Transmission..... 4 Thermo-Dynamics... 5 Engine Details..... 5 *Practicum.* Foundry work and Pattern Making.....10	Political Economy... 4 Boiler Practice..... 5 Eng. Details, L. M..... 3 Foundations..... 2 Engineering Lab..... 4 *Practicum.* Steam Eng. Design...10	Moral Science..... 5 Engines not Steam... 5 Engineering Lab..... 5 *Practicum.* Thesis work.....10

EXPLANATORY STATEMENTS.

The first three years of the courses in this department are correspondingly alike. During the Senior year the student may take one of the prescribed courses, or, with the advice of the professor in charge, choose a general course from the three given, upon the satisfactory completion of which he shall receive the degree of Bachelor of Mechanical Engineering, and upon the completion of either of the special courses he shall receive the same degree, with the special course mentioned in his diploma. Two years after graduation, upon the receipt of a thesis and proof of professional work, the college will confer the degree of Mechanical Engineer. The work in pure mathematics, sciences, mechanics and machine designs is completed during the Junior year, thus forming a firm foundation for the more technical work of the Senior year. Lectures on ethical, psychological and civil subjects are required during the Senior year.

DRAWING.

Mechanical Drawing is begun during the Freshman year and continued intermitently, including work in Descriptive Geometry, up to the spring term of the Sophomore year. From that time on through the Junior year Drawing is taken in alternation with Machine Work. Especial attention is given to the making and reading of working drawings. During the Senior year, an original design of some structure or machine, appropriate to the course taken, is made and, as far as possible, constructed in the shops of the department.

ELECTRICAL ENGINEERING.

The technical work of this course comprises the design of various electrical machinery, the study of the problems involving the distribution of electric light and the electrical transmission of power, besides practice in a great variety of measurements, computations and tests comprised in the construction and maintenance of power and light plants. The work is so planned as to give the student completing this course familiarity with the questions most likely to confront the electrical engineer.

MILL AND HYDRAULIC ENGINEERING.

The work in this course is designed to fit the student for the profession of Mill Engineer. During the Senior year problems in the design of manufacturing plants and the development of water powers are worked out. Work is also taken in economical transmission of power, mill architecture, manufacturing economy, foundations, field work, etc.

STEAM ENGINEERING.

Students finishing this course will be especially fitted to practice that branch of Mechanical Engineering which relates to the design, manufacture and care of the steam engine and its accessory apparatus. During the Senior year a practical design of some form of steam engine is made, and additional subjects common to the other courses are taken up.

FARM, CAMPUS AND BUILDINGS.

The College farm contains *two hundred acres.* It is located directly east and adjoining the campus, consists of valley, table and hill side land, and is well adapted for experimentation with cereals, fruit, forestry and grazing.

The soil is deep, a sedimentary deposit of volcanic origin, and is well supplied with those elements necessary to sustain plant life.

The entire farm is under cultivation; experiments are in progress with wheat and other cereals; fruit culture, gardening and forestry are also carried on successfully. The farm is supplied with dwelling house, stock barn and poultry house; also with the best of live stock, machinery and farm implements.

The *campus* contains about thirty acres, situated directly west of the College farm and adjoining the city limits of Pullman. It is beautifully located, and affords an excellent opportunity to lay out drives and otherwise decorate the grounds.

COLLEGE HALL.

This is a three-story frame building, containing class rooms, laboratories and offices. A new administration building is now in process of construction, to be built of stone and brick. This will contain twelve class rooms, chemical and physical laboratories, assembly hall, gymnasium and complete suite of offices for the President and Business Manager.

COLLEGE DORMITORY.

This is a brick structure, one hundred and four feet in length, with a frontage of fifty-seven feet. It is heated with steam and lighted by electricity. In the basement is a large and commodious dining hall, a complete kitchen with pantries, china closets and cold storage room. The four other stories are devoted to dormitory purposes, and will accommodate one hundred and thirty students with comfortable study and sleeping rooms.

LABORATORIES.

A brick building, thirty-six by sixty feet, is devoted to laboratories for agricultural experiment station officers. The other laboratories are *Biological:*

This is fitted up with the necessary tables, sinks, etc., and will accommodate about twenty students at a time. It contains *fifteen* R. & Q. Beck's "*Star*" microscopes, and all necessary accessories, both for Botanical and Zoölogical investigations.

The laboratory also contains a considerable number of standard works of reference. The *museum* is well supplied with specimens of the different plants of the Northwest, a large collection of insects, and a beginning has been made for a zoölogical collection. Students have free access to all of these.

The Chemical Laboratory is temporarily located in the basement of the College hall.

It is well equipped with chemical apparatus and table space for 32 students; also a private working laboratory for the professor.

SHOPS.

A shop twenty-eight feet by forty is now fitted up for carpentry work and an engine room furnished with a twenty-five horse power Atlas engine; a dynamo and electrical apparatus are used for experimental purposes and for lighting the College buildings. A new mechanical engineering building is now in process of construction, and has already been described.

METEOROLOGICAL INSTRUMENTS.

These consist of a mercurial barometer, maximum and minimum thermometer, rain gauges and wind vanes. It is the intention of the College authorities to enlarge this department and to make it more serviceable to the people of the locality and the entire state.

LIBRARY.

This is located in a comfortable part of the College hall and is well supplied with works of reference needed in all departments of the institution, except that some technical books constantly needed in the different laboratories are kept there. There is also a reading room in connection with the library well supplied with papers, periodicals and magazines.

Many of these are donated by the publishers, and are gratefully acknowledged: Seattle Daily Telegraph, Spokane Review, Walla Walla Daily Journal, Washington Independent, Morning Olympian-Tribune, Walla Walla Statesman, Sprague Herald, Washington Economist, Columbia Chronicle, Tacoma Daily News, Goldendale Sentinel, Pullman Tribune, Garfield Enterprise, Washington

Farmer, Montesano Vidette, Chehalis Bee, Puget Sound Mail, Colton News Letter, Astoria Sentinel, Waitesburg Times, Aberdeen Herald, Goldendale Courier, Pullman Herald, Farmington Forum, Pacific Journal, Hamilton Herald, Snohomish Eye, Ocosta Pioneer, Aberdeen Bulletin, Sumas News, Palouse Gazette, Colfax Commoner, Stock Grower and Farmer, Southwestern Stockman, Wisconsin Farmer, Texas Farm and Ranch, Farmers' Home Journal, Florida Agriculturist, Press and Horticulturist, Northwest and Pacific Farmer, Texas Farmer, American Horse Breeder, Farmer's Home, Industrial World, Agriculturist, Orange County Farmer, Summerside Journal, American Farmer, Hoard's Dairyman, Farm and Home, Ohio Farmer, Orange Judd Farmer, Science, Live Stock Indicator, Fargo Forum, American Bee Journal, Farm and Fireside, Metropolitan and Rural Home, Northwestern Live Stock Journal, Industrial Journal, American Agriculturist, Home and Farm, Farmer's Home Journal, Rural Spirit, Breeder's Gazette, Farmer's Review, Indiana Farmer, California Fruit Grower, Farm, Field and Stockman, Nebraska Farmer, Kansas Farmer, Homestead, Dakota Ruralist, Stock Journal, Colorado Farmer, The Husbandman, Prairie Farmer, Farm, Stock and Home, American Cultivator, Northwestern Agriculturist, Dakota Huronite, Farmer's Friend, American Poultry Journal, Toledo News, Mirror and Farmer, Iowa Farmer and Breeder, Rural Northwest, Dakota Farmer, Western Stockman and Cultivator, Wisconsin Agriculturist, Journal of Agriculture, Gleanings in Bee Culture, Southern Farm,

Farm Journal, Fruit Growers' Journal, Poultry Monthly, Vick's Illustrated Magazine, Orchard and Garden, Farmer's Voice, Green's Fruit Grower, University Record, American Grange Bulletin, Jersey Bulletin, Connecticut Farmer, Pennsylvania Farmer, Regents' Bulletins of University of New York.

LIST OF STUDENTS.

SENIOR CLASS.

NAME.	RESIDENCE.	COURSE.
Steine, Thomas O.,	Brookings, N. D.,	Agricultural.

SOPHOMORES.

Cosand, Daise,	Latah,	Scientific.
Hungate, Jessie E.,	Pullman,	Scientific.
Hardwick, Emma,	Pullman,	Scientific.
Johnson, Mary C.,	Pullman,	Scientific.
McKay, Graham J.,	Guy,	Scientific.
Prichard, Minnie V.,	Rosalia,	Scientific.
Wallace, Irwin S.,	LaConner,	Scientific.

FRESHMEN.

Ausman, George N.,	Asotin,	Scientific.
Busbey, Cleo,	Pullman,	Scientific.
Barkhuff, William D.,	Colton,	Agricultural.
Crocker, Marie G.,	Johnson,	Scientific.
Chapman, Walter S.,	Wilbur, Or.,	Scientific.
Clothier, Arthur W.,	New Whatcom,	Scientific.
Chilberg, Eugene,	Seattle,	Scientific.
Estby, Carl,	Norman,	Mech. Eng.
Eastman, Claude,	Pullman,	Scientific.
Foy, Burdette N.,	Seattle,	Elec. Eng.
Gilbreath, Susie E.,	Dayton,	Scientific.
Gilbreath, Rose,	Dayton,	Scientific.
Grimmette, Winnie,	Custer,	Scientific.
Goodin, Effie I.,	Johnson,	Scientific.
Hungate, James W.,	Pullman,	Scientific.

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