CATALOGUE AND CIRCULAR
OF THE
WISCONSIN STATE UNIVERSITY,
FOR THE
Year Ending September 30, 1859.
FACULTY.

HENRY BARNARD, LL.D.,
CHANCELLOR.

Professor of Ethical and Political Science.

DANIEL READ, LL.D.,
Professor of Mental Science, Logic, Rhetoric and English Literature.

JOHN W. STERLING, A.M.,
Professor of Mathematics and Natural Philosophy.

EZRA S. CARR, M.D.,
Professor of Chemistry and Natural History.

DAVID BOSWELL REID, M.D., F.R.S.E.,
Professor of Physiology, and Hygiene, and Director of Museum of Practical Science.

JAMES D. BUTLER, A.M.,
Professor of Ancient Languages and Literature.

JOSEPH C. PICKARD, A.M.,
Professor of Modern Languages and Literature.

THOMAS D. CORYELL, A.M.,
Instructor in Surveying and Engineering.

DAVID H. TULLIS,
Instructor in Commercial Calculations and Book-keeping.

O. M. CONOVER, A.M.,
Principal of Preparatory Department in Public High School.

* Vacant by the resignation of J. H. Lathrop, LL.D.
SUMMARY.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Classical</td>
<td>34</td>
</tr>
<tr>
<td>Scientific</td>
<td>81</td>
</tr>
<tr>
<td>Preparatory</td>
<td>44</td>
</tr>
<tr>
<td>Commercial</td>
<td>34</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>243</strong></td>
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CIRCULAR.

SUBJECTS OF INSTRUCTION
IN THE
DEPARTMENT OF SCIENCE, LITERATURE, AND THE ARTS.

CLASSICAL COURSE.

First Year.

First Term.—Algebra—Davies University.
  Solid Geometry—Loomis'.
  Livy—Lincoln's.
  Xenophon's Memorabilia—Robins.
  History of United States.

Second Term.—Plane Trigonometry—Loomis'.
  Mensuration, Surveying, Navigation.
  Horace—Odes.
  Homer—Iliad—Owen's.
  English Language.

Second Year.

First Term.—Analytical Geometry—Smith's.
  Horace—Satires.
  Homer—Iliad—Owen's.
  French—Fasquelle's French Course.
    " Colloquial Reader.
    " Fasquelle's Napoleon.
Second Term.—Differential Calculus—Smith's.
Integral Calculus—Smith's.
Tacitus—History.
Æschylus—Prometheus.
French—Piozola Translations into French.
Collet's Dramatic Reader.

Third Year.
First Term.—Mechanical Philosophy—Peck's.
General Physics—Lectures.
Tacitus—Germania and Agniola.
Demosthenes—De Corona.
Rhetoric.
English Literature.
Mental Philosophy.

Second Term.—Spherical Trigonometry—Loomis'.
Astronomy—Robinson's and Loomis'.
General Physics—Lectures.
Juvenal.
Plato—Gorgias.
Mental Philosophy.
Logic.

Fourth Year.
First Term.—Chemical Philosophy.
Inorganic Chemistry.
Ethics.
International Law.
Civil Polity.
History of Philosophy.
Christian Evidences.

Second Term.—Organic Chemistry.
Geology.
Botany.
Constitutional Law.
Political Economy.
History of Civilization.
Physiology of Public Hygiene.
A course of study, under the above designation, equivalent to the classical course, occupying four years, has been established by an ordinance of the Board of Regents for the benefit of such students as desire to substitute advanced scientific studies for the Latin and Greek languages. It includes all the studies of the classical course, except the ancient languages; and in addition, the German language, and the Applications of Science to Agriculture, Architecture, Mining, Surveying Engineering, Public Health, &c.

This Course will be fully set forth in the next catalogue.

The following table exhibits the subjects of study in this course for the year, arranged by terms:

<table>
<thead>
<tr>
<th>FIRST TERM.</th>
<th>SECOND TERM.</th>
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</thead>
<tbody>
<tr>
<td>Algebra.</td>
<td>Plane Trigonometry and Applications.</td>
</tr>
<tr>
<td>Analytical Geometry.</td>
<td>Spherical Trig. and Astronomy.</td>
</tr>
<tr>
<td>Mechanical Philosophy.</td>
<td>Natural Philosophy.</td>
</tr>
<tr>
<td>Natural Philosophy.</td>
<td>Organic Chemistry.</td>
</tr>
<tr>
<td>Inorganic Chemistry.</td>
<td>Geology, Botany.</td>
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<tr>
<td>History.</td>
<td>Constitutional Law.</td>
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<tr>
<td>Rhetoric.</td>
<td>Political Economy.</td>
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<tr>
<td>English Literature.</td>
<td>History of Civilization.</td>
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<tr>
<td>History of Philosophy.</td>
<td>English Language.</td>
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<tr>
<td>Christian Evidences.</td>
<td>Mental Philosophy.</td>
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<tr>
<td>Ethics.</td>
<td>Logic.</td>
</tr>
<tr>
<td>International Law.</td>
<td>Physiology, Public Hygiene, &amp;c.</td>
</tr>
<tr>
<td>Civil Polity.</td>
<td>Practical Surveying, Engineering, Drafting, &amp;c.</td>
</tr>
<tr>
<td>Practical Surveying, Engineering, Drafting, &amp;c.</td>
<td>Speaking and Composition.</td>
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<tr>
<td>Speaking and Composition.</td>
<td>French Language.</td>
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<tr>
<td>French Language.</td>
<td>German Language.</td>
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</table>

The subjects of study belonging to the Department of Science, Literature and the Arts, are discussed under the following heads; each one of which is placed under the charge of a Professor, with such assistance as may be necessary, who is responsible for the progress and attainments of the students therein.
ETHICAL AND POLITICAL SCIENCE.

[Chair vacant.]

The instructions of this chair are rendered in course, to undergraduates of the fourth year, and to such other students of the University as elect to attend. The subjects of instruction are evidently adapted to prepare the student to become a good and useful citizen of the republic, and to fit him for civil service in the same. The course occupies a year, one exercise each day, and is as follows:

Error.—Moral Obligation; Development of Moral Law; Sanctions of Moral Law; Practical applications of the Science.

The text-book, Wayland's Elements of Moral Science, is used, merely as suggesting a convenient series of topics for oral lecture, and for familiar discussion in class.

Civil Polity.—Political Ethics; Science of Government; The American Constitution; International Law; History of Civilization.

This class of subjects is taught wholly by lecture, with intermediate examination and discussion. The student is required to write out his views on each topic, and at stated periods, to read his results before the class.

Political Economy.—Production of Material Wealth; Distribution; Exchange and Consumption; Applications of the Science; Relations to Civilization.

The discussion of this subject in class, is in the order of topics suggested by Say in his Treatise on the Production, Distribution, and Consumption of Wealth.

MENTAL PHILOSOPHY, LOGIC, RHETORIC, AND ENGLISH LITERATURE.

Daniel Read, LL. D., Professor.

The instructions of this chair are rendered to undergraduates of the first, third and fourth years. An extra course on English Literature will be given annually to students not of the regular classes.

The course of instruction in Intellectual Philosophy embraces an analysis of the powers of the human mind, active and moral, as well as those denominated intellectual, the examination of these powers in reference to criticism, to teaching, to the improvement of the individual and the progress of society. It includes also, a critical review of the systems of philosophy, which have prevailed among men.

Logic is taught as to its principles and application; an outline of the laws of evidence and human belief is given; and in connection with this part of the subject, the evidences of Christianity are examined.

Rhetoric, so far as it relates to the subjects of invention and disposition, is taught by lectures, upon the basis of Quintilian and Cicero; and, as regards style and criticism, upon that of modern writers.

In the course of English Literature are included the history of the English language, an examination of its elements, powers and grammar, and the history of English Literature in its various departments.

In History Webber's outlines will be used as a text-book, and a course of lectures will be given on the civil history of the United States.

The course in this department for the term beginning February 8th, will be the following:

I. Mental Philosophy,—Embracing analysis of the faculties of the human mind, active and moral, as well as those denominated intellectual; examination of these powers in reference to criticism, to teaching, to the improvement of the individual and the progress of society.

The course also embraces a critical review of the systems of Philosophy which have prevailed among men.

The instruction of the department is conduced by means of text-books (Haven) and lectures. The student is required to give orally or upon the blackboard, an analysis of every subject, as well as to prepare carefully written abstracts and dissertations upon assigned topics. Hour from 10—11 A. M.

II. Class in English,—History of English Language; its composition, grammar, structure of sentences, punctuation. History of the progress of English Literature in its various departments. Hour 11—12 A. M.

III. Speaking and Composition,—All students required to engage in these exercises. 3 P. M.

MATHMATICS AND NATURAL PHILOSOPHY.

J. W. Sterling, A. M., Professor.

COURSE OF STUDY.

FIRST YEAR.


Terms. 2. Plane Trigonometry—Loomis; Mensuration, Surveying and Navigation—Loomis.
SECOND YEAR.

Terms. 1. Analytical Geometry—Smith's. 
       2. Differential and Integral Calculus—Smith's.

THIRD YEAR.

Terms. 1. Mechanical Philosophy—Peck's; General Physics (Lectures.)
       2. Spherical Trigonometry—Loomis; Astronomy—Robinson's & Loomis'; General Physics, (Lectures.)

For admission to this course, candidates will, in future, be required to have a thorough knowledge of Arithmetic, Mental and Written; the Elements of Algebra, (Ray's) and Plane Geometry, (Loomis')

In this department there is one exercise daily for three years.

To secure thoroughness there will be frequent reviews, and written examinations on the subjects passed over.

On the various subjects of General Physics or Natural Philosophy, there will be weekly, extending throughout the year, at least two lectures accompanied by experimental illustrations. All who choose are permitted to attend these exercises. Each regular member of the class is expected to take notes of the lectures, and is frequently required to lecture on subjects previously discussed by the professor, repeating the experiments. This exercise is deemed important to cultivate in the student the habit of investigation and facility in communicating his knowledge.

Books of Reference in Natural Philosophy—Loomis, Lardner, Stillman, Olmstead, Arnott, Muller, Library of Useful Knowledge, Brewster (Optics), Herschell (Light and Sound), Jackson, (Optics.)

SURVEYING AND CIVIL ENGINEERING.

T. D. Cortely, A.M. Instructor.

This School was established by an ordinance of the Board of Regents, passed at their meeting in July, 1858. The subjects of Practical Surveying and Engineering were placed under the immediate charge of an Instructor. Since the passage of the ordinance, two terms' instruction has been rendered in this school. The proportion of students in attendance upon the course has been large, thus demonstrating that the school meets a recognized and well defined want.

In a new country like that from which the University draws the mass of its students, an increasing demand for the services of the Surveyor and Engineer may be expected, notwithstanding fluctuations in this demand, as in that for all other kinds of labor, occasioned by seasons of temporary financial embarrassment. The boundaries of landed estates are to be determined, villages and cities are to be laid out and supplied with water, shafts are to be sunk into the earth for ores, harbors and landings are to be improved, streams are to be dammed and bridged, marines to be drained, warehouses, manufactories and public edifices to be erected, and roads and railroads to be located, built and kept in repair. In the application of scientific principles required in the solution of these problems, lies the province of the Surveyor and Engineer. The continual widening of the domain of the natural sciences, and the rapidly accelerated increase of material wealth must make his work more and more indispensable, and give to the profession greater distinctness, permanence and importance.

Without attempting to cover the whole ground in every department of Surveying and Engineering, it is the object of the University Engineering School to impart to the student the best professional knowledge, and the greatest amount of it possible, in the time allotted him. The facilities which it affords are not intended to confer upon him that readiness of skill gained in actual practice—a thing which it is not necessary any school should do—but a sufficient number of practical exercises are required to familiarize the principles taught.

The course of instruction in this department extends over a period of two years, beginning with the first term of the year.

Candidates for admission to this course are required to have a knowledge of Algebra and Synthetic Geometry, for acquiring which ample facilities are given in connection with the chair of Mathematics.

The instruction is rendered by the use of text-books and by lectures, accompanied by frequent and thorough reviews and examinations.

Special attention is given to the theory and use of the most approved forms of the Surveyor's Compass, the Level and the Transit.

Portions of the class are detailed in turn for field exercises, when the weather is fair, and at the more favorable seasons of the year, excursions are taken into the country for the purpose of familiarizing the student still further with the best methods of executing actual surveys.

The General Principles of Construction, and their applications to particular works, are made subjects of study, and are explained and illustrated by reference to existing structures.

The materials and the machinery employed under the direction of the Engineer, are also treated of.

Drafting is required throughout the entire course.

The subject of study for the term commencing on the 9th of February, 1860, embraces Surveys of U. S. Public Lands, and the method of Execut-
CHEMISTRY, NATURAL HISTORY AND THEIR APPLICATIONS.

EDNA S. CARP, A. M., M. D., Professor.

The instruction in this department is given by lectures and demonstrations on the part of the professor and students, together with examinations.

The recitation of the student consists in his giving a lecture, illustrated with experiments and demonstrations on the same subject and after the manner of the Professor, that not only necessarily acquiring an intimate knowledge of the subject discussed, but at the same time the faculty of communicating his knowledge.

The subjects discussed embrace a full illustration of all the topics of theoretical or practical importance, and their applications to the useful arts, the processes of common life, agriculture, philosophy, &c.

FIRST TERM.

Chemical Philosophy, Chemistry of the Non-Metallic Elements, Fuel, Heating, Lighting, Ventilation, &c.

SECOND TERM.

Chemistry of the Metals and Metallurgy, Organic Chemistry, including the Chemistry of Animal and Vegetable Life; the Preparation, Preservation, Uses of Food, &c.

BOTANY.—The Plant being first considered as an individual in reference to the nature and processes of vegetable life; Second, its relation to other plants, or the Vegetable Kingdom; Third, its use.

GEOLOGY.—Considered especially in relation to the uses of rocks, and their relations to useful minerals.

TEXT BOOKS.


PHYSIOLOGY AND HYGIENE.

D. B. RAW, M. D., F. R., S. S., Professor.

This department comprises an exposition of the Structure and Functions of the Human Frame, and of the mutual relation of internal and external causes in promoting health, strength, and length of life.

The origin and prevention of disease; the varied temperament of individual men; the effect of climate, habit, occupation and recreation; the Hygiene Questions associated with the construction of public and private buildings, including all classes of habitations in cities, populous districts and isolated localities, as well as the sources of improvement and decay in different Nations and Races, are included in considering the laws that regulate the preservation of health.

The improvement of Architecture, more especially in connection with acoustics, drainage, heating, lighting, ventilating and fireproofing is a special object of attention.

The course is intended for all classes of students, particularly as a guide in making known the nature of the living frame, and in unfolding the most prevalent causes of preventible disease and death. It is also arranged with the view of affording instruction to those who may intend to study medicine, or to enter any service where they are expected to have a knowledge of sanitary improvement. Students of Agriculture, Architecture, Engineering, Arts and Manufactures have their attention directed to the varied sources of efficient and economic Sanitary Improvement that are connected with these subjects.
ANCIEN LAngUAUES AND LITERATURE.

JAMES D. BUTLER, A. M., Professor.

Course of study.

First Year.

Latin.

Terms.
1. Livy.

Greek.

Terms.

Second Year.

Latin.

Terms.
1. Horace—Satires.
2. Tacitus—History.

Greek.

Terms.
1. Homer—Iliad.
2. Eschylus—Prometheus.

Third Year.

Latin.

Terms.
1. Tacitus—Germania and Agricola.
2. Juvenal.

Greek.

Terms.
1. Demosthenes de Corona.
2. Plato—Gorgias.

The grammars used, are Crosby for Greek, and Andrews' (Revised Ed.) for Latin. For all but the most advanced students, the new Latin Dictionary by Crooks and Schem is recommended as by far the best.

Classical Geography will be illustrated by Kiepert's mural maps, the whole series of which hangs in the class-room. The light always radiating from words upon things, as on religion, art, philosophy, nationality, and the whole manner of ancient life, will be daily traced. No pains will be spared to make the classical languages elucidate our own vernacular. Throughout the curriculum, the study will be an exercise, not of mere verbal memory, but of philosophical memory, of discrimination, of rendering reasons, and of research concerning things, no less than words.

The time needful for completing this course will vary with the diligence and previous attainments of students.

Among the reference books which it is desirable that philological students should have on their tables—in addition to the grammars, of Crosby for Greek, and Andrews for Latin, and the lexicons of Andrews for Latin, and Liddell and Scott for Greek, may be mentioned:

Rich's Companion to the Latin Dictionary and Greek Lexicon.
Smith's Dictionary of Greek and Roman Geography, Biography, Mythology and Antiquities. 6 vols. 8vo.
Doeplerlein's, or Ramshorn's Latin Synonyms.
Finlay's Classical Atlas.
Becker's Gallos and Charicles.

MODERN LANGUAGES AND LITERATURE.

JOSEPH C. PICKARD, A. M., Professor.

The instructions of this Chair will embrace,
1st. The French and German Languages and their Literature.
2d. Comparative Philology and the principles of the Science of Language.

There are two classes in German, one for beginners, the other for more advanced students.

Extra instruction will be given, when desired, in Italian and Spanish, and in the English in its Anglo-Saxon forms.

FRENCH.

First Term.—Pasquelle's French Course.

" " Colloquial Reader.

Second Term.—Pasquelle's Course, continued.

" " Napoleon.

Picciola.

Third Term.—Translations into French.

Collot's Dramatic French Reader.

GERMAN.

First Year.

First Term.—Woodbury's Method, and Reader.

Second Term.—do Schiller's 30 Years War.

Third Term.—Translations into German ; Adler's Handbook.
UNIVERSITY SCHOOLS.

The foregoing chairs belong to the Department of Science, Literature, and the Arts, and are arranged by ordinance of the Board, into the following schools, namely:

SCHOOL OF PHILOSOPHY.

Henry Barnard, LL. D., Chancellor.

Daniel Read, LL. D.,
Professor of Mental Philosophy, Logic, Rhetoric, and English Literature.

* J. H. Lathrop, LL. D.,
Professor of Biblical Philosophy.

The subjects of study in this school are Mental Science, Logic, History, Aesthetics, and English Literature.

SCHOOL OF PHILOLOGY.

Henry Barnard, LL. D., Chancellor.

James D. Butler, A. M.,
Professor of Ancient Languages and Literature.

Joseph O. Pickard, A. M.,
Professor of Modern Languages and Literature.

Daniel Read, LL. D.,
Professor of English Literature.

The subjects of study in this school are Ancient Languages and Literature—Modern Languages and Literature.

SCHOOL OF POLITY.

Henry Barnard, LL. D., Chancellor.

* John H. Lathrop, LL. D.,
Professor of Biblical and Political Science.

Daniel Read, LL. D.,
Professor of Natural History.

David H. Tullis,
Instructor in Commercial Science.

The subjects of instruction in this school are General Ethics, Political Science, Constitutional Law, International Law, Political Economy, and History of Civilization.

* Resigned.

SCHOOL OF NATURAL SCIENCE.

Henry Barnard, LL. D., Chancellor.

Ezra S. Case, M. D.,
Professor of Chemistry and Natural History.

David Boswell Reid, M. D., F. R. S. S.,
Professor of Physiology, Hygiene, &c.

John W. Sterling, A. M.,
Professor of Natural Philosophy and Mathematics.

* John H. Lathrop, LL. D.,
Professor of Biblical and Political Science.

Daniel Read, LL. D.,
Professor of Mental Philosophy, Logic, Rhetoric and English Literature.

Joseph O. Pickard, A. M.,
Professor of Modern Languages and Literature.

The subjects of study in the school of Natural Science are Chemistry and its applications, Natural History, General Physics, Mathematics, Physiology, and Hygiene, Ethics, Aesthetics, English Language and Literature, and Modern Languages and Literature.

SCHOOL OF CIVIL AND MECHANICAL ENGINEERING.

Henry Barnard, LL. D., Chancellor.

John W. Sterling, A. M.,
Professor of Mathematics and Natural Philosophy.

T. D. Coitwell, A. M.,
Professor of Surveying and Engineering.

Ezra S. Case, M. D.,
Professor of Chemistry and Natural History.

David Boswell Reid, M. D., F. R. S. S.,
Professor of Physiology and Hygiene, and Director of Museum of Practical Sciences.

Daniel Read, LL. D.,
Professor of Mental Philosophy, Logic, Rhetoric and English Literature.

James D. Butler, A. M.,
Professor of Ancient Languages and Literature.

Joseph O. Pickard, A. M.,
Professor of Modern Languages and Literature.

The subjects of study in this School are Mathematics, and Practical Engineering, Architecture and Drawing, Natural History, General Phys-
Special attention is given to the theory and use of the most approved forms of the Surveyor's Compass, the Level, and the Transit. In fair weather, portions of each class are detailed in turn for field exercise, and excursions are taken into the country, to acquaint the student with the best methods of executing actual surveys. The apparatus thus far supplied is a full set of Surveyor's instruments, including one of the best of the Guryey's Transits.

The instruction is rendered by lecture and by use of text-books, accompanied by reviews and frequent examinations. It is a constant aim, to conduct all the exercises in a manner best suited to secure mental discipline.

The whole course extends over a period of two years, beginning with each full term. Candidates for admission to this course are required to possess a knowledge of Algebra and Synthetical Geometry, for which ample facilities are afforded in connection with the Chair of Mathematics.

The subjects of study for the term beginning on the 8th of February, 1859, and extending over a term of twenty weeks, embrace:

- Surveys of the U.S. Public Lands, and the method of executing and recording County Surveys, including the Subdivision of the Section, taught by lecture, Gillespie's, Davie's and Robinson's Surveying, used as books of reference.
- Leveling—taught by lecture.
- The Location of Tangents, and Curves in Railroad Surveying, Side Staking, etc., Hencke's Field Book, used as a text-book.
- Drafting—Mahan's Industrial Drawing, used as a text-book.

SCHOOL OF AGRICULTURE.

The Board of Regents, at their meeting in July, 1858, resolved to open this University School, as soon as the clear income of the University Fund, applicable to instruction, should reach $15,000 per annum; or sooner, if a full Professorship of Agricultural Science should be endowed from other sources. In the meantime, the application of Science to Agriculture and the useful Arts, will be taught in the School of Natural Science.

The subjects of study in this School are: Theory and Practice of Agriculture, Chemistry and its Applications, Natural History, General Physics, Physiology and Hygiene, Mathematics, English Language and Literature, Ethics and Political Economy, Rural Economy and Veterinary Art.