10-1869

Catalogue of the Officers and Students of the State College of Agriculture and the Mechanic Arts, 1869

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CATALOGUE
OF THE
OFFICERS AND STUDENTS
OF THE
STATE COLLEGE OF AGRICULTURE
AND THE
MECHANIC ARTS,
ORONO, MAINE.
OCTOBER, 1869.

BANGOR:
PRESS OF B. A. BURR.
(Jeffersonian Office.)
1869.
DESIGN OF THE INSTITUTION.

The Maine State College of Agriculture and the Mechanic Arts proposes to give to the young men of the State who may desire it, at a moderate cost, the advantages of a thorough, liberal and practical education. It proposes to do this by means of the most approved methods of instruction, by giving to every young man who pursues the course of study, an opportunity practically to apply the lessons he learns in the class-room, and by furnishing him facilities for defraying expenses by his own labor.

By the act of Congress donating public lands for the endowment and maintenance of such Colleges, it is provided that the leading object of such an Institution shall be, "without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to Agriculture and the Mechanic Arts."

While the course of study fully meets this requisition, and is especially adapted to prepare the student for agricultural and mechanical pursuits, it is designed that it shall be also sufficiently comprehensive, and of such a character as to secure to the student the discipline of mind and practical experience necessary for entering upon other callings or professions.

CONDITIONS OF ADMISSION.

Candidates for admission to the Freshman Class must be not less than fifteen years of age, and must pass a satisfactory examination in Arithmetic, Geography, English Grammar, History of the United States, and Algebra as far as Quadratic Equations.

Candidates for advanced standing must sustain a satisfactory
examination in the preparatory branches, and in all the studies previously pursued by the class they propose to enter.*

Satisfactory testimonials of good moral character and industrious habits will be rigidly exacted.

*Note. To accommodate those wishing to join the present Freshman class at the commencement of the second term, there will be an examination on Tuesday, January 25th, 1870. Candidates proposing to enter at that time should confer at once with Professor Fernald, and learn definitely of the course of study to be pursued by the class during the fall.

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COURSE OF STUDY—FIRST YEAR.

FIRST TERM.

Algebra—Robinson.
History—Willson.
Physical Geography—Guyot.
Rhetoric—Day.

SECOND TERM.

Algebra—Robinson.
History—Willson (first half term.)
Botany—Gray (second half term.)
Physical Geography—Guyot.
Book-Keeping.
Rhetoric—Day.

THIRD TERM.

Geometry.
Botany (Analysis)—Gray.
Horticulture.
Natural Philosophy.
Rhetoric—Day.

Lectures will be given on Meteorology, Physical Geography, Natural Philosophy, Structural Botany and Practical Agriculture; and English Composition and Declamation will be regular exercises throughout the year.
SECOND YEAR.

FIRST TERM.
Geometry—Loomis.
Botany—Gray, Darlington.
Chemical Physics—Silliman.
Drainage—Waring.
Rhetoric—Day.

SECOND TERM.
Trigonometry—Loomis.
French.
Chemistry (General.)
Dairy Farming.
Rhetoric.

THIRD TERM.
Surveying and Navigation—Loomis.
French.
Chemistry (Analytical.)
Agriculture.
Rhetoric.

Lectures will be given on Botany, Chemical Physics, Drainage, Chemistry, Dairy Farming and practical Agriculture; and English Composition and Declamation will be regular Exercises throughout the year.
GENERAL STATEMENT OF THE COURSE.

The regular course will occupy four years, and there will be three terms in a year of thirteen weeks each. The essential features of the course are indicated by the following outlines of study:


The French and German languages will also form a part of the regular course.

SELECT COURSE.

A select course will be arranged in due time, that, if persons of suitable age and acquirements, who cannot avail themselves of the complete course, desire to pursue some one or more of the branches of study related to Agriculture, as Botany or Chemistry, they may be received for a less time than that required for the full course.

SPECIAL FEATURES OF THE COURSE.

The prominence given to the Natural Sciences, and the practical element associated with nearly all departments of study, cannot fail to render the course especially valuable.

Nearly a year will be devoted to Botany and Horticulture, commencing early in spring and continuing till late in autumn. This course will embrace a thorough drill in Botanical Analysis; the study of plants as to their relative importance and geographical distribution; the study of those having commercial or medical value; of those which are cultivated for orna-
ment, and also those which are detrimental, as weeds and poisonous plants. In the gardens to be provided, the student will learn practically the operations and process in the department of Horticulture.

A year and a half will be devoted to Chemical Physics and Chemistry, commencing with the first term of the second year. The course in Chemistry proper will include General, Analytical, and Agricultural Chemistry. Under Analytical Chemistry will be taken up General Analysis, Use of Blow-pipe, Analysis of Minerals. Analysis of Soils, Ashes of Plants, Fertilizers and Farm Products.

Each student will devote three hours a day to Analysis, under the direction of the Professor of Chemistry, thus acquiring facility in conducting experiments, and securing a practical knowledge of the methods employed in chemical investigations.

Under Agricultural Chemistry will be considered Composition of Soils, Relations of Air and Moisture to Vegetable Growth, Food of Plants, Chemical Changes during Vegetable Growth, Chemistry of Farm Processes, Methods of Improving Soils, and various other topics which may properly be treated of under this department.

Other departments of science will be studied and taught, so far as may be, with special reference to their practical bearing, or their relations to Agriculture and the useful arts.

LABOR.

It is a peculiarity of the College, that it makes provision for labor, thus combining practice with theory, manual labor with scientific culture. Students in this Institution are required to labor a certain portion of each day, not exceeding three hours, for five days in the week.

The labor is designed to be, in the fullest sense possible, educational. To illustrate, when the members of a class are pursuing Botany, they will work in the gardens and orchards, under
the direction of the Professor of Horticulture, thus rendering themselves familiar with the various forms of hand labor, and the various processes necessary for the successful prosecution of this art; and when they have become proficient in this department, their places will be supplied by others, and they will engage in some other form of labor until they have acquired skill and proficiency in the new department, when other changes will be made until every student shall become familiar with all the forms of labor upon the farm and in the gardens and workshops.

Students will learn the use of tools and acquire a fitness for mechanical pursuits, under competent instructors, in the workshops to be provided for the study and practice of the Mechanic Arts.

LOCATION.

The College has a pleasant and healthful location intermediate between the villages of Orono and Upper Stillwater, and about a mile from each. Stillwater River, a tributary of the Penobscot, flows a short distance in front of the buildings, forming the western boundary of the College farm, and adding much to the beauty of the surrounding scenery.

A little more than a mile to the west is the station of the Bangor & Oldtown Railroad, and about the same distance to the east is that of the European & North American Railway. Cars pass on these roads several times a day. The College is within nine miles of the city of Bangor, and consequently is easily accessible from all parts of the State.

FARM AND BUILDINGS.

The College Farm contains three hundred and seventy acres
of land of high natural productiveness and of great diversity of soil, and is, therefore, well adapted for the experimental purposes of the Institution.

The building already completed contains eighteen rooms, and affords excellent accommodations for thirty-six students. Some of the lower rooms, however, are now occupied for general and class purposes. The Trustees design to make arrangements within the year for a larger number of students.

The Chemical Laboratory will be finished in part, during the present autumn. When completed, it will contain an apparatus-room, a lecture-room, a cabinet, working-rooms, and all other rooms needful for the Chemical and Mineralogical departments.

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**APPARATUS.**

The College is furnished with an amount of new and valuable apparatus for the departments of Physical Geography and Natural Philosophy. During the winter vacation apparatus and chemicals will be obtained for the department of Chemistry.

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**LIBRARY.**

The small Library owned by the College, is made up quite largely of agricultural reports and public documents. It has received, however, during the past year, several private donations of other and valuable books. It is earnestly hoped that so important an auxiliary in the education of those who are to be students in the College will not be disregarded by the people of the State, but that liberal contributions will be made to it, not only of agricultural and scientific works, but also of works of interest to the general reader.
READING ROOM.

A Reading Room has been arranged for the students, and is now supplied with a limited number of newspapers and periodicals. Grateful acknowledgement is herewith made for the following named papers generously sent by the proprietors, to the College:

- The Sunrise, Presque Isle, Maine.
- The Piscataquis Observer, Dover, Maine.
- The American Sentinel, Bath, Maine.
- The Jeffersonian, Bangor, Maine.
- The Maine Farmer, Augusta, Maine.
- The Maine Standard, Augusta, Maine.

CABINET.

A room in the Chemical Laboratory will be arranged within a brief period of time for a Mineralogical Cabinet. All specimens donated to the College will be properly credited and placed on exhibition. Rocks illustrating the different geological formations, and minerals found within the State, are particularly solicited.

LITERARY SOCIETY.

A flourishing society has been organized by the students of the College, which holds weekly meetings for declamations, discussions, and other literary exercises.

PUBLIC WORSHIP.

All students are required to attend daily prayers at the Col-