11-1870

Catalogue of the Officers and Students of the State College of Agriculture and the Mechanic Arts, 1870

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MAINE STATE COLLEGE

OF

Agriculture and the Mechanic Arts

NOVEMBER, 1870.
CATALOGUE
OF THE
OFFICERS AND STUDENTS
OF THE
STATE COLLEGE OF AGRICULTURE
AND THE
MECHANIC ARTS,
ORONO, MAINE,
NOVEMBER, 1870.

BANGOR:
PRESS OF B. A. BURR.
1870.
Trustees.

Hon. ABNER COBURN, Skowhegan,
President.

Hon. WILLIAM P. WINGATE, Bangor.
Hon. SAMUEL F. PERLEY, Naples.
Hon. JAMES C. MADIGAN, Houlton.
Hon. THOMAS S. LANG, Augusta.
Hon. LYNDON OAK, Garland.
Rev. SAMUEL F. DIKE, Bath.
Hon. STEPHEN L. GOODALE, Saco,
Secretary Maine Board of Agriculture, and ex-officio
Member of Board of Trustees.

SAMUEL JOHNSON, A. M., Orono,
Secretary.

Hon. ISAIAH STETSON, Bangor,
Treasurer.

Executive Committee.

Hon. WILLIAM P. WINGATE,
Hon. LYNDON OAK,
Hon. THOMAS S. LANG.

Examining Committee:

Hon. SIDNEY PERHAM,
Hon. WARREN JOHNSON,
Rev. SAMUEL F. DIKE.


Faculty.

MERRITT C. FERNALD, A. M.,
Acting President and Professor of Mathematics and Physics.
SAMUEL JOHNSON, A. M.,
Farm Superintendent and Instructor in Agriculture.
STEPHEN F. PECKHAM, A. M.,
Professor of Chemistry.
JOHN SWIFT, B. S.,
Instructor in Botany and Horticulture.
MRS. MARY L. FERNALD,
Instructor in French and German.
CALVIN CUTTER, M. D.,
Lecturer on Anatomy, Physiology and Hygiene.
CORYDON B. LAKIN,
(Principal of Commercial College, Bangor.)
Instructor in Book-keeping and Commercial Forms.
X. A. WILLARD, A. M.,
Lecturer on Dairy Farming.
A. S. PACKARD, Jr., M. D.,
Lecturer on Useful and Injurious Insects.
JAMES J. H. GREGORY, A. M.,
Lecturer on Market Farming and Gardening.
Prof. E. S. MORSE,
Lecturer on Comparative Anatomy and Zoology.

Students.

Junior Class.

George, William Harvey, - - - Orrington.
Hammond, George Everett, - - - Eliot.
Haskell, Edwin James, - - - Saccarappa.
Hilliard, Heddle, - - - - Oldtown.
Sargent, Oren Shaw, - - - - Milo.
Thomas, Eber Davis, - - - - Brownville.
Watson, Benjamin Franklin, - - - - Levant.
Weston, George Osmer, - - - - Madison.

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CATALOGUE OF THE MAIN

SOPHOMORE CLASS.

Clark, Joseph Eliot Payson, - - Bangor.
*Jackson, John, - - Alfred.
Lane, Samuel, - - Sangerville.
Oak, John Marshall, - - Garland.
Ransom, Frederic Alexander, - - Augusta.
Reed, Charles Emery, - - Garland.
Scribner, Frank Lamson, - - Manchester.
*Shorey, Marcus Peltiah, - - Camden.
Thayer, Harvey Bates, - - Garland.

*Deceased.

STATE INDUSTRIAL COLLEGE.

FRESHMAN CLASS.

Burleigh, Frank Pierce, - - Springfield.
Burnham, Mark Emery, - - Garland.
Curtis, Louville, - - Bowdoinham.
Curtis, Roland, - - Bowdoinham.
Gerrish, Willie Herbert, - - Portland.
Hunter, Rodney David, - - Clinton.
Lovejoy, Wilbur Fremont, - - Winn.
Moore, Samuel Campbell, - - Cherryfield.
Osgood, Charles Frederic, - - Garland.
Reed, William Henry, - - Springfield.
Trickey, George Irving, - - Bangor.
Whitehouse, Manley Hacker, - - Orrington.
Wingate, Edward Ricker, - - Cherryfield.
Wood, William Ireland, - - Stetson.
DESIGN OF THE INSTITUTION.

It is the design of the Maine State College of Agriculture and the Mechanic Arts 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 24th, 1871. Candidates proposing to enter at that time should confer at once with Professor Fernald, and learn definitely of the course of study pursued by the class during the fall.

COURSE OF STUDY—FIRST YEAR.

FIRST TERM.

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

SECOND TERM.

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

THIRD TERM.

Geometry.
Botany (Analysis)—Gray.
Horticulture.
Natural Philosophy.
Rhetoric—Haven.
Lectures on Anatomy and Physiology, Meteorology, Physical Geography, Natural Philosophy, Structural Botany and Practical Agriculture; English Composition and Declamation will be regular exercises throughout the year.

SECOND YEAR.

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

SECOND TERM.
Trigonometry—Loomis.
French.
Chemistry (General.)
Elements of Agriculture.
Rhetoric.

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

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

THIRD YEAR.

FIRST TERM.
Spherical Trigonometry—Loomis.
Conic Sections—Loomis.
French. (first half term.)
German. (second half term.)
Chemistry (Qualitative Analysis.)
Mineralogy (Determinative.)
Agriculture. Market Farming and Gardening.
Logic.

SECOND TERM.
Mechanics (with lectures on Applied Mechanics.)
Industrial Drawing.
German.
Chemistry (Quantitative Analysis).
Agriculture—Cultivation of the Cereals.
Logic.

THIRD TERM.
Civil Engineering.
Industrial Drawing.
German.
Comparative Anatomy and Zoology.
Metallurgy, Chemistry Applied, Commercial Products, for Agriculture.
Logic.

Lectures on Chemistry, Mineralogy, Market Farming and Gardening, including the culture of the small fruits, the cultivation of Grasses and the Cereals, Applied Mechanics, Comparative Anatomy, Zoology and Sheep
Husbandry. Regular exercises in English Composition and Original Declamation 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, Horticulture or Mechanics, 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 ornament, 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 processes 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 two 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 Penobsot, 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.

FARM AND BUILDINGS.

The European and North American Railroad, over which trains pass several times each day, has a station at the village of Orono. The College is within nine miles of the city of Bangor, and is consequently easily accessible from all parts of the State.

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 which has been used as a Dormitory for the two years past, contains eighteen rooms, and affords excellent accommodations for a limited number of students. Some of the lower rooms of this building are appropriated to general and class purposes.

The new Dormitory, now in process of erection, will be completed before next autumn, and will contain forty-six rooms. The Boarding House, also in process of erection, near the other College buildings, will be open to students at the commencement of the next term. With these new buildings, the Institution will furnish desirable accommodations for one hundred and twenty-five students.

The Chemical Laboratory is essentially completed and contains two apparatus rooms, a lecture room, a cabinet, a library and weighing room, a recitation room, and rooms for analytical and other purposes, and is in all respects admirably adapted to the wants of the Chemical and Mineralogical departments.

APPARATUS.

The College is furnished with new and valuable ap-
paratus for the departments of Physical Geography, Natural Philosophy and Chemistry and for Surveying and Civil Engineering, to which additions will be made as the exigencies of the several departments require.

LIBRARY.

The Library already contains several hundred volumes, some of which have been obtained by purchase, while others have been kindly donated to the College. 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.


The following scientific journals are furnished by subscription to the Reading Room, viz:


CABINET.

A room in the Chemical Laboratory has been fitted up with cases for Minerals, and a few hundred specimens have been presented to the College. All specimens thus donated 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 College, and public worship on the Sabbath at some one of the neighboring churches, unless excused by the President.

EXPENSES, AND MEANS OF DEFRAYING THEM.

Tuition is free to students from all parts of the State. Those from other States will be charged twelve dollars per term. Room rent is free, and each room is furnished
with a bedstead, mattress, table, sink, and four chairs. All other bedding and furniture must be supplied by the students, who will also furnish their own lights. Three dollars per week will be charged for board, and fifty cents per week for washing and fuel. These bills, with those for incidental expenses, are payable at or before the close of each term.

Students receive compensation for their labor according to their industry, faithfulness and efficiency, the educational character of the labor being also taken into account. The average amount paid will be about twenty-five cents for three hours labor.

The terms are so arranged that the long vacation occurs in the winter, that students may have an opportunity to teach during that time. By means of the amount thus earned, together with the allowance for labor, the industrious and economical student can cancel the greater part of his College expenses.

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**General Statement.**

Students are required to make their own beds and sweep their own rooms.

Each student is required, at the commencement of his College course to deposit with the Treasurer of the College, a bond for $100, signed by responsible sureties, to secure the payment of his board bill, and any incidental charges.

Strict conformity to College regulations and requirements is the only condition of continued membership of the College.

Candidates for the next class should make early application.

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**Calendar.**

1870—Aug. 25—Thursday, First Term commenced.

" Nov. 22—Tuesday, Examination. First Term closes.

" Vacation of nine weeks.

1871—Jan. 24—Tuesday, Examination for advanced standing.

" Jan. 26—Thursday, Second Term commences.

" April 25 and 26—Tuesday and Wednesday, Examination. Second Term closes.

" Vacation of one week.

" May 4—Thursday, Third Term commences.

" July 24—Monday Evening, Junior Exhibition.

" Aug. 1—Tuesday Evening, Prize Declamation of Sophomore Class.

" Aug. 1 and 2—Tuesday and Wednesday, Examination. Third Term closes.

" Vacation of four weeks.

" Aug. 29—Tuesday, Examination for admission to College.

" Aug. 31—Thursday, First Term commences.

" Nov. 28 and 29—Tuesday and Wednesday, Examination. First Term closes.