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THIRTEENTH ANNUAL REPORT

OF THE

CORPORATION, BOARD OF MANAGERS,

OF THE

R. I. COLLEGE OF AGRICULTURE

AND

MECHANIC ARTS,

MADE TO THE

GENERAL ASSEMBLY AT ITS JANUARY SESSION, 1901.

PART I.

PART II—EXPERIMENT STATION REPORT—IS PRINTED UNDER SEPARATE COVER.

PROVIDENCE, R. I.
E. L. FREEMAN & SONS, PRINTERS TO THE STATE.
1901.

Rhode Island College of Agriculture and Mechanic Arts.

CORPORATION.

HON. MELVILLE BULL.....NEWPORT COUNTY.
HON. C. H. COGGESHALL.....BRISTOL COUNTY.
HON. HENRY L. GREENE.....KENT COUNTY.
HON. BENJAMIN A. JACKSON.....PROVIDENCE COUNTY.
HON. J. V. B. WATSON.....WASHINGTON COUNTY.

OFFICERS OF THE CORPORATION.

HON. HENRY L. GREENE, President.....P. O., RIVERPOINT, R. I.
HON. C. H. COGGESHALL, Clerk.....P. O., BRISTOL, R. I.
HON. MELVILLE BULL, Treasurer.....P. O., NEWPORT, R. I.

REPORT.

To His Excellency William Gregory, Governor, and the Honorable General Assembly of the State of Rhode Island and Providence Plantations, at its January Session, 1901:

I have the honor to submit herewith the Thirteenth Annual Report of the Board of Managers of the Rhode Island College of Agriculture and Mechanic Arts, as required by law.

HENRY L. GREENE,

President of the Board of Managers of the Rhode Island College of Agriculture and Mechanic Arts.

FACULTY AND ASSISTANTS.

JOHN HOSEA WASHBURN, PH. D.,

PRESIDENT,

Professor of Agricultural Chemistry and Physiography,

B. S., Massachusetts Agricultural College, 1878; Graduate student, Massachusetts Agricultural College, 1881-1883; Professor of Chemistry, Storrs Agricultural School, 1883-1887; Student in Göttingen University, 1885 and 1887-1889; Ph. D., Göttingen, 1889; Appointed President, 1890.

HOMER JAY WHEELER, PH. D.,

Professor of Geology,

B. S., Massachussetts Agricultural College, 1883; Assistant Chemist, Massachusetts State Experiment Station, 1883-1887; Graduate student, University of Göttingen, 1887-1889; Ph. D., Göttingen, 1889; Appointed Chemist of Rhode Island Agricultural Experiment Station and Professor of Geology, 1890.

ANNE LUCY BOSWORTH, PH. D.,

Professor of Mathematics,

B. S., Wellesley College, 1890; First Assistant, Amesbury (Mass.) High School, 1890-1892; Appointed Professor of Mathematics, April, 1892; Graduate student at the University of Chicago, summer of 1894 and 1896; Student in Göttingen University, 1898-1899; Ph. D., Göttingen, 1899.

E. JOSEPHINE WATSON, A. M.,

Professor of Languages,

A. B., Smith College, 1882; A. M., Cornell University, 1883; Assistant in English, Smith College, 1883-1887; Student of North European Languages in Göttingen, 1887-1889; Appointed Professor of Languages, September, 1892; Student of French in Tours, summer of 1895.

WILLIAM ELISHA DRAKE, B. S.,

Professor of Mechanical Engineering,

B. S., Polytechnic Institute, Worcester, 1886; Instructor in Physics and Electricity, Worcester Polytechnic Institute, 1887; Instructor in Woodworking at Pratt Institute, Brooklyn, 1887-1893; Appointed Professor of Mechanical Engineering, 1893.

All salaries of members of the faculty are paid from United States funds.

HARRIET LATHROP MERROW, A. M.,

Professor of Botany,

B. S., Wellesley College, 1886; Teacher of Science, Plymouth (Mass.) High School, 1887-1888; Teacher of Science, Harcourt Place, Gambier, O., 1888-1891; Graduate student, University of Michigan, 1891-1892; A. M., Wellesley College, 1893; Graduate assistant, Botanical Laboratory, University of Michigan, 1893-1894; Appointed Professor of Botany, January, 1895.

ARTHUR AMBER BRIGHAM, PH. D.,

Professor of Agriculture,

B S., Massachusetts Agricultural College, 1878; Engaged in practical farming, 1878-1888; Professor of Agriculture in the Imperial Agricultural College at Sapporo, Japan, 1888-1893; Graduate student at Göttingen University, 1893-1896; Ph. D., Göttingen, 1896; Appointed Professor of Agriculture, 1896.

FRED WALLACE CARD, M. S.,

Professor of Horticulture,

B. S., Cornell University, 1892; M. S., Cornell University, 1893; Assistant Horticulturist Cornell University Experiment Station, 1893; Associate Professor of Horticulture, University of Nebraska, 1893-1898; Appointed Professor of Horticulture, 1898.

COOPER CURTICE, D. V. S., M. D.,

Professor of Zoölogy,

B. S., Cornell University, 1881; D. V. S., Columbia Veterinary College, N. Y., 1883; M. D., Columbian University, Washington, D. C., 1887; Assistant Paleozoic Paleontologist, U. S. Geological Survey, 1883-1886; Specialist, Department of Agriculture, Washington, D. C., 1886-1892; Veterinarian, State Board of Health, N. Y., 1892-1894; Tuberculosis Specialist, U. S. Department of Agriculture, Washington, D. C., 1895-1896; Professor of Zoölogy, North Carolina College of Agriculture and Mechanic Arts, 1893; State Veterinarian, North Carolina, 1899; Appointed Professor of Zoölogy, 1900.

SOLOMON E. SPARROW,

CAPTAIN 21ST INFANTRY, U. S. A.,

Professor of Military Science and Tactics,

Graduate of West Point, 1878; Detailed Professor of Military Science and Tactics, 1900.

JOHN EMERY BUCHER, A. C., PH. D.,

Associate Professor of Chemistry,

State Normal School, Millersville, Pa., 1887-1888; A. C., Lehigh University, 1891; Ph. D., Johns Hopkins University, 1894; Instructor in Organic Chemistry, Tufts College, 1894-1897; Appointed Associate Professor of Chemistry, 1897.

All salaries of members of the faculty are paid from United States funds.

ARTHUR CURTIS SCOTT, B. S.,

Assistant Professor of Physics,

B. S., R. I. College of Agriculture and Mechanic Arts, 1895; Appointed Instructor in Physics, 1895; Appointed Assistant Professor of Physics, 1897.

THOMAS CARROLL RODMAN,

Instructor in Woodwork,

Appointed 1890.

MABEL DEWITT ELDRED, B. S.,

Instructor in Drawing,

B. S., R. I. College of Agriculture and Mechanic Arts, 1895; Appointed Instructor in Drawing, 1897.

ELIZABETH WATSON KENYON, A. M.,

Instructor in Languages and History,

B. S., Mt. Holyoke College, 1896; A. M., Brown University, 1897; Instructor in English and History, Middleborough (Mass.) High School, 1898-1900; Appointed Instructor in Languages, 1900.

CHARLES BEARDSLEY, A. M.,

Instructor in Political Science,

A. B., Harvard University, 1892; Graduate Student, Harvard University, 1893-94; Instructor in Economics, Iowa State University, 1894-96; A. M., Harvard University, 1897; Student at Berlin, 1898; Instructor in Economics, Harvard University, 1898-1900; Appointed Instructor in Political Science, 1900.

SARAH WATSON SANDERSON, B. L.,

Instructor in Languages,

B. L., Smith College, 1900; Appointed Instructor in Languages, 1900.

HOWLAND BURDICK, B. S.,

Instructor in Agriculture and Farm Superintendent,

B. S., R. I. College of Agriculture and Mechanic Arts, 1895; Appointed Assistant in Agriculture, 1897.

MARSHALL HENRY TYLER, B. S.,

Instructor in Surveying and Master of the Preparatory Department,

B. S., Amherst College, 1897; Instructor at St. Mark's, 1897-1898; Appointed Master of the Preparatory Department, 1898.

All salaries of members of the faculty are paid from United States funds.

ALBERT AUGUSTUS RADTKE, B. S.,

Instructor in Physics,

B. S., University of Wisconsin, 1900; Appointed Instructor in Physics, 1900.

LUCY HELEN GAGE, A. B.,

Instructor in Stenography and Typewriting,

A. B., Tufts College, 1899; Graduate of Chandler Normal Shorthand School, 1900; Appointed Instructor in Stenography and Typewriting, 1900.

CAPTAIN TIBERIO GARCIA ALOMÁ,

Assistant Instructor in Spanish.

JOHN FRANKLIN KNOWLES, B. S.,

Assistant in Woodwork.

GEORGE BURLEIGH KNIGHT,

Assistant in Ironwork.

LILLIAN MABELLE GEORGE, B. S.,

Assistant in English and Librarian.

CARROLL KNOWLES, B. S.,

Assistant in Mechanics.

NATHANIEL HELME,

Meteorologist.

All salaries of members of the faculty are paid from United States funds.

COLLEGE CALENDAR.

1901.

WINTER TERM.

January 2, 10 A. M. ..... Examination of Conditioned Students.
January 2, 1 P. M. ..... Term begins.
January 31 ..... Day of Prayer for Colleges.
February 22 ..... Washington's Birthday.
March 29 ..... Term ends.

SPRING TERM.

April 8, 10 A. M. ..... Examination of Conditioned Students.
April 9, 1 P. M. ..... Term begins.
May 10 ..... Arbor Day.
May 30 ..... Memorial Day.
June 16 ..... Baccalaureate Sunday.
June 17 ..... Reading of Cincinnati Orations for Lippitt Prize.
June 18 ..... Commencement.
June 21, 9 A. M. .... Entrance Examinations for College and Preparatory Department, given at the College; the State Normal School, Providence; and at the School Committee rooms, Clarke Street, Newport.

FALL TERM.

August 30, 9 A. M .....Entrance Examinations at the College.
September 17, 9 A, M.....Entrance Examinations at the College.
September 17, 10 A. M.....Examination of Conditioned Students.
September 18, 1 P. M.....Term begins.
November 6.....Election Day.
———— .....Thanksgiving Day.
December 24.....Term ends.

1902.

WINTER TERM.

January 6, 10 A. M.....Examination of Conditioned Students.
January 6, 1 P. M.....Term begins.

EXPERIMENT STATION STAFF.

JOHN H. WASHBURN, Ph. D., ... President of the College.
ARTHUR A. BRIGHAM, Ph. D., ... Director and Agriculturist.
H. J. WHEELER, Ph. D., ... Chemist.
FRED W. CARD, M. S., ... Horticulturist.
COOPER CURTICE, D. V. S., M. D., ... Biologist.
BURT L. HARTWELL, M. S., ... First Assistant Chemist.
GEORGE E. ADAMS, B. S., . . . Photographer, Assistant Horticulturist.
J. A. TILLINGHAST, ... Assistant, Field Experiments.
THOMAS H. TAYLOR, JR., ... Poultryman.
ALFRED W. BOSWORTH, B. S., ... Assistant Chemist.
MARTHA AUSTIN, Ph. D., ... Assistant Chemist.
NATHANIEL HELME, ... Meteorologist.
MILDRED W. HARVEY, B. S., ... Clerk and Accountant.
S. ALINE NYE, ... Stenographer.
MARY G. SCHERMERHORN, ... Stenographer.

The publications of the Station will be mailed free to anyone in Rhode Island interested in agriculture. The Station desires the co-operation of the farmers of the State in the work of investigation, and any facts of special interest concerning animal or vegetable growth or disease are solicited. Visitors are always welcome. Railroad station, telegraph, express, and post-office—Kingston, Rhode Island.

GENERAL VIEW OF CAMPUS.

THE COLLEGE.

HISTORY.

IN 1863 the State of Rhode Island accepted from the United States Government the land grant scrip, which gave to each State thirty thousand acres of the public lands for each Senator and Representative in Congress. The land was to be sold by the States or their agents, the proceeds arising from the sale invested, and the annual income derived therefrom was to be "inviolably appropriated by each State which may take and claim the benefit of this act, to the endowment, support and maintenance of at least one college where the leading object 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 Mechanic Arts, in such manner as the Legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life."

On March 2, 1887, the act known as the Hatch Act was passed, appropriating $15,000 annually to each State, for the purpose of establishing an Agricultural Experiment Station in connection with an Agricultural College or School.

From the time of the acceptance by the State of Rhode Island of the land scrip in 1863, there were many people who felt that this State did not offer to young men such advantages for instruction in agriculture and mechanic arts as others afforded that had genuine agricultural and mechanical colleges. So great was the dissatisfaction among the citizens of Rhode Island at the absence

of these educational advantages, that they were determined to have the Hatch Agricultural Experiment Station located at a *bona fide* agricultural educational institution.

The Rhode Island State Agricultural School was established according to Chapter 706 of the Public Laws, passed May 23, 1888.

The United States Congress, on August 30, 1890, passed an act known as the New Morrill Bill. This appropriated for the further support of the agricultural and mechanical colleges a sum beginning with $15,000 and continuing, with a yearly increase of $1,000, until the annual appropriation should reach $25,000.

That the school already established might receive the benefit of the act of Congress, the General Assembly amended Chapter 706 of the Public Laws, incorporating the Rhode Island College of Agriculture and Mechanic Arts.

Since September, 1892, the institution has been conducted on a college basis, with an entirely new course of study.

On April 19, 1894, the Legislature passed an act authorizing the State treasurer to pay Brown University the sum of $40,000, in consideration of which the university was to turn over to the State the proceeds of the original land grant of 1862 and to withdraw from the United States Supreme Court its suit for the Morrill fund.

On January 27, 1895, the college dormitory was destroyed by fire; but it was replaced by a new granite building, which was ready for use the first of October of the same year, and was called Davis Hall.

At the January session of the Legislature, 1897, the institution was given an appropriation for a stone building, one hundred and thirty feet by forty feet, practically three stories high. The basement has three rooms used for instruction in photography and physics, and a large room devoted to electrical engineering. On the second floor are recitation-rooms, chapel, library and reading-room, and young women's study-room. The third floor contains a large hall for drill and gymnasium purposes, above which are bath-rooms and lockers. The hall is also used for assemblies

whenever larger audiences are expected than the chapel can accommodate. This building is called Lippitt Hall.

Since then an excellent dairy barn has given the agricultural department increased facilities for instruction.

OBJECT OF THE INSTITUTION.

The college stands for the idea that technical work, properly taught, possesses educative value equal at least to that furnished by the classics, but that premature specialization is to be avoided if the best results are to be obtained; that technical education, to meet the requirements, must be based upon a sound knowledge of mathematics, the natural sciences and the English language. The method employed is technical instruction in agriculture, in the mechanic arts and in the sciences.

There are five courses leading to the degree of Bachelor of Science: the agricultural course, mechanical engineering course, electrical engineering course, chemical course and biological course. On entering, all regular students take the same course until the winter term of the Freshman year, when a choice is made. The aim of the agricultural course is to fit students not only for practical agriculture but for positions in experiment stations, as teachers, and farm superintendents. To this end thorough instruction is given in science and the application of its principles to agriculture, supplemented by a general training in mathematics and languages. The mechanical course is intended for those wishing to become mechanical engineers, as the electrical course is designed to train electrical engineers. The chemical course offers several special lines of work. A student may prepare himself to become a general chemist or a teacher; may specialize in agricultural chemistry with a view to experiment-station work; or may elect industrial chemistry with the idea of obtaining a position in a factory, dyeing establishment, or along other technical lines. The biological course offers so many electives that it is well adapted to prepare students for high-school

teaching in general science, mathematics and English. It is especially adapted to fit one to pursue a course in medicine or veterinary science, to become an assistant in an experiment station, or to take a government position in some special department of science.

PREPARATORY DEPARTMENT.

Young men and young women who have had no opportunity to receive high school instruction may enter this department to prepare for the college.

For entrance requirements, see page 74.

SPECIAL COURSES.

Whenever possible, students are urged to enter one of the courses leading to a degree. The arrangement of these courses is the result of careful thought and long experience as to the best combination of studies to fit one for the various occupations in which a technical education is required; and it is believed that no such thorough preparation can be obtained from special courses selected by the student.

Short courses in mechanics, and special work in science, are open to those unable to take the regular college work. For these courses no examination is required, except such as will satisfy the professor in charge of any branch chosen that the applicant is prepared to derive benefit from the work he wishes to elect.

SPECIAL STUDENTS IN AGRICULTURE.

Students having a working knowledge of the English branches may enter the college without examination and take those subjects which will prove of most direct benefit to them in the work of the farm. One or two years can thus be spent with excellent results. A certificate will be granted at the end of the time, showing the work covered. Such a course would consist of the study of agricultural soils, drainage, agricultural implements and apparatus,

farm fertility and its maintenance, field-crops, breeds of farm animals, stock-breeding, feeding of farm animals, dairy-husbandry, poultry-raising, farm-accounts, the principles of horticulture, fruit-growing, vegetable-gardening, landscape-gardening, physiology, entomology, bench-work, wood-turning and forging. Suitable courses in botany are also available to those having sufficient training or experience to enable them to take such courses with profit. In connection with the above, other subjects for which the student is fitted may be taken. The study of English should be included in most cases.

Among the special courses offered are the Summer School for Nature Study, of two weeks, designed for the teachers of Rhode Island; the Poultry School of six weeks, and the Horticultural School of two weeks. Payment of tuition fees for those outside the State and board for the full time is required in advance of students registering in the special courses. Those interested in these courses will please send for circulars giving a full description of them. Address the president.

REQUIREMENTS FOR ADMISSION TO THE COLLEGE, 1901.

Graduates from high schools, and other schools of similar grade, are admitted without examination, on certificates which are filled out by their principals. The candidate must apply to the college for the certificate, giving the address of his principal who is to certify him. The college will correspond with the principal, furnishing blanks for him to fill. Graduates from high schools are not admitted on diploma.

Candidates not entering the Freshman class on certificate will be examined in arithmetic; algebra; plane geometry; English grammar; advanced English; one year of German, French or Latin.

In the arithmetic examination especial attention will be paid to fractions, the metric system, simple and compound proportion, and square and cube root; thorough drill in mental arithmetic will be necessary. The applicant should have mastered all of

Wells's Academic or Wentworth's School Algebra, and Wells's Plane Geometry, or their equivalents.

The English requirements are those prescribed for entrance to the New England colleges. The student will be expected to show familiarity with the works named below. These are divided into two classes. Those marked (*a*) are to be read, and the candidate will be required to show a general knowledge of their subject-matter and of the lives of the authors. Those marked (*b*) are to be thoroughly studied, so that the candidate will be able to pass an examination upon their subject-matter and structure. To be acceptable, the candidate's paper must show a good knowledge of spelling, capitalization, punctuation, sentence and paragraph structure. The books prescribed for 1901 are the following: (*a*) Addison's The Sir Roger de Coverley Papers; Coleridge's The Ancient Mariner; Cooper's The Last of the Mohicans; Eliot's Silas Marner; Goldsmith's The Vicar of Wakefield; Lowell's The Vision of Sir Launfal; Pope's Iliad, books I, VI, XXII, XXIV; Scott's Ivanhoe; Shakespeare's The Merchant of Venice; Tennyson's The Princess. (*b*) Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and Addison; Milton's L'Allegro, Il Penseroso, Comus, and Lycidas; Shakespeare's Macbeth. For 1902: (*a*) Same as 1901. (*b*) Same as 1901. For 1903: (*a*) Addison's The Sir Roger de Coverley Papers; Carlyle's Essay on Burns; Coleridge's The Ancient Mariner; Eliot's Silas Marner; Goldsmith's The Vicar of Wakefield; Lowell's The Vision of Sir Launfal; Scott's Ivanhoe; Shakespeare's The Merchant of Venice, and Julius Cæsar; Tennyson's The Princess. (*b*) Same as 1901. For 1904: (*a*) Same as 1903. (*b*) Same as 1901. The language requirements cover one year's work in either French, German or Latin; and Latin is recommended. In French and German, this requirement comprises the essentials of grammar, easy reading and elementary composition. In Latin, the candidate must be prepared to study Cæsar. The following text-books are recommended: Chardenal's Complete French Course, Lyon and De Larpent's Primary French Translation Book; the Joynes-

Meissner German Grammar, Part I, or Collar's Shorter Eysenbach, Guerber's Märchen und Erzählungen, Part I; Collar and Daniel's First Latin Book or Lindsay and Rollins's Easy Latin Lessons.

ADMISSION TO ADVANCED STANDING.

Candidates may enter any of the higher classes for which they are prepared.

OPPORTUNITIES OFFERED TO WOMEN.

The courses offered to men are open to women, together with special courses. The women's dormitory will accommodate a limited number of students, and the college will on application find boarding-places for others in private families in town. Special waiting and study-rooms are provided for the women who are day students.

DOMESTIC SCIENCE.

The college offers no separate course by the title of domestic science, but all young women candidates for a degree may receive instruction in domestic science as follows. In the fall term of the Sophomore year, there is offered a three-hour elective in the construction, ventilation, plumbing, and heating of homes and school buildings. In chemistry, the adulteration of foods is studied; and analyses of milk, water, dairy products and fruits are made. Electives are offered in physiological chemistry, sanitary chemistry, and the chemistry of cooking. Hygiene and the physiology of digestion are treated in the courses in zoölogy.

EXPENSES FOR WOMEN.

Board, including room-rent, is three dollars per week. Fuel and lights are supplied at cost. Rooms are provided with necessary furniture, including mattresses, but no other bedding material. Other expenses are as given below. The women have an

opportunity to do their own washing and ironing. A Singer and a Household sewing-machine are at the disposal of all those living at the dormitory.

EXPENSES.*

Tuition is free to all Rhode Island students. The regular expenses are tabulated below:

		Per year. Minimum.	Maximum.
Men's Dormitory.	Board, $3 per week, for 36 weeks	$108 00	$108 00
	Room-rent, $3 per term	9 00	9 00
	Lights, $1 to $3 per term	3 00	9 00
	Fuel, spring and fall terms, each $3; winter term, $6	12 00	12 00
Books		15 00	30 00
Washing, 30c. to 60c. per week		10 80	21 60
Uniform for military drill, $15		7 50	30 00
Reading-room tax, 25c. per term		75	75
General expense, for damage in building, etc., 50c. per term		1 50	1 50
Laboratory fees, $2 to $10 per term		6 00	30 00
		$173 55	$251 85

The amount of laboratory fees depends upon the laboratory work taken each term. One dollar per term is charged for each of the following: botanical, zoölogical, and physical laboratories; carpenter shop; wood-turning, forge shop, machine shop, and wood-carving. This pays for the material ordinarily used in class work and for the wear and care of tools and apparatus. Any person who breaks apparatus or tools, through carelessness or neglect of instructions, will be charged the cost of the same. The chemical laboratory fee is three dollars per term for qualitative, quantitative, and organic laboratory work. This covers general chemicals and use of apparatus. Students are required to pay for breakage and for any chemicals they may use in making special preparations for themselves. Graduates pay the cost of diplomas,

* For exceptions in expenses for women, see above.

five dollars. *No diploma will be issued until the candidate has paid all term bills.* Every able-bodied male student is required to drill and to wear a uniform. The uniform must be paid for immediately on entering the college, when the students are measured for the suits. When worn only on drill and properly cared for, one uniform may last two or more years. The student may, however, wear his uniform all the time. Day students are required to deposit five dollars per term in advance. The college conveys students daily to and from the railroad station free of charge. Once at the beginning and end of each term, a team conveys trunks to and from the station. Boarding students shall pay term bills in advance, deposit fifty dollars each term, or give bond for two hundred dollars for the payment of all bills. No bond will be accepted from any member of the faculty. A reduction of fifty cents per week on board is allowed students going home Friday afternoon and returning Monday forenoon, provided that notice of the intended absence is given in advance. Those failing to give such notice will be charged full price for board. No other reduction is made for less than three whole days' absence at one time, and this only when notice is given as above. Fifteen cents extra is charged for each meal sent to a student's room, from sickness or any other cause. *All students in the men's dormitory are required to supply their own furniture and bedding.* The necessary furniture may be obtained at the college when desired. A room may be furnished for from eight to ten dollars. Iron bedsteads three feet wide are included under room-rent. The furniture, if properly kept, may be sold, when the student leaves, for one-half to three-fourths the original price. All clothing should be distinctly marked.

SELF-HELP.

A limited amount of work about the buildings, on the farm, at the experiment station, and in the laboratories, will be furnished to students who desire it and who prove industrious and trustworthy. Good students, who desire to help in paying their ex-

penses, should be able to earn from twenty-five to one hundred dollars per year, depending upon the amount of time they can spare from their studies. *No work is given to students who have not a fair standing in their classes.* The larger sums can be earned only by students who spend their vacations here at work. These opportunities are offered only to students who show a sense of responsibility in the performance of the duties assigned to them, and a disposition to render a fair equivalent of work for the compensation they receive. Thus far no worthy student has been compelled to leave the institution for lack of means.

THE LIPPITT PRIZE.

The Lippitt prize consists of a purse of one hundred dollars, offered through the generosity of ex-Governor Charles Warren Lippitt. This sum is divided into two prizes, the first of sixty and the second of forty dollars, which are awarded for the best written and delivered essays on the history of Rhode Island in the Revolution. These essays are of the nature of Cincinnati Orations and are read on the Monday preceding commencement. In 1900 the successful competitors were John Wilby, Kingston, R. I., first prize; Roena Hoxsie Steere, Providence, R. I., second prize.

DISCIPLINE.

The discipline of the institution has been delegated by the faculty to two joint committees of faculty and students, called the Activity Committees. The committee for the direction of the young women is composed of three women of the faculty and two students; and that for the young men is composed of three men of the faculty and four students, one from each class. Entertainments and exercises which are conducted by both the men and women students are sanctioned by the conference of these joint committees. It is the duty of the committees to see that the general rules of conduct for the members of the institu-

tion are observed. Money paid for dormitory expenses will not be refunded to students dismissed from the dormitory.

REGULATIONS OF THE COLLEGE.

Conditions.—Section 1.—Any student absenting himself from more than ten per cent. of the total number of recitations in any subject shall not be allowed to take his examination in that subject, except by special vote of the faculty, but shall be conditioned.

Section 2.—Examinations of conditioned students shall be held only on the days assigned in the college calendar. Any student who, after such examination, shall still have three or more conditions shall be obliged to withdraw from the college. Students still having not more than two conditions may take second examinations at the next regular time, and failing to pass, shall have no further opportunity to remove such conditions except by special vote of the faculty.

Section 3.—A student wishing to take an examination to remove a condition must make application for the same to the professor in whose department the condition was received, at least seven days before the date of the examination.

Section 4.—Students, whether regular or special, shall remove entrance conditions to both the preparatory department and the college within a year from the date of entrance, unless excused by the committee on courses of study.

Exemption from Examination.—Section 5.—Students shall be exempt from examination at the end of the term in studies in which their term averages are above eighty per cent.

Thesis.—Section 6.—Every student who is a candidate for a degree shall prepare a thesis, and shall submit it to the president of the college at least one month before the time for granting the degree.

Student Publications.—Section 7.—No student shall publish any

article in any college, class, or society publication designed for public circulation, or deliver any address on the college campus attended by persons other than students, without the consent of the president or some person appointed by him for granting such permissions.

Athletics.—Section 8.—No student shall represent the college on the athletic field, or in any other organization before the public, who is not regularly registered and in good standing; by good standing is meant conformity to all the rules of the college.

PUBLIC WORSHIP.

The students are expected to be present at chapel exercises every morning, and on Sundays to attend some church at least once a day, or the praise service which is held at the college every Sunday afternoon. Absence from chapel must be reported at the president's office for excuse on Tuesday morning of each week. A branch of the Intercollegiate Young Men's Christian Association is doing good work among the students, as is also the Young Women's Christian Union. Following is a list of speakers who have addressed the students during the past year:

Prof. Chas. F. Kent, Brown University	Providence, R. I.
Rev. C. J. Burns	Wakefield, R. I.
Rev. Wallace Nutting	Providence, R. I.
Rev. W. H. Garth	Wakefield, R. I.
Rev. J. W. Fobes	Peace Dale, R. I.
Rev. Parley D. Root	Wakefield, R. I.
Prof. F. W. Very	Providence, R. I.
Rev. J. H. Holden	Attleboro, Mass.
Rev. J. Hagadorn Wells	Kingston, R. I.
Rev. L. F. Randolph	Hopkinton City, R. I.
Rev. Theodore Snow	Wakefield, R. I.
Rev. John MacCalman	Swansea Centre, Mass.
Rev. E. Tallmadge Root	Providence, R. I.
Rev. F. H. Decker	Westerly, R. I.
Rev. Frank H. Palmer	Boston, Mass.

PRIN. J. W. V. RICH.....Providence, R. I.
MR. EUGENE W. LYMAN, Yale University.....New Haven, Conn.
MR. H. W. JUMP, Yale University.....New Haven, Conn.
MR. BLANCHARD, Yale University.....New Haven, Conn.
MR. BUTLER, Yale University.....New Haven, Conn.
MR. GEO. R. MONTGOMERY, Yale University.....New Haven, Conn.

The Rhode Island College Lecture Association.

In the fall of the current year, faculty and students uniting with residents of the vicinity formed a lecture association, aiming to introduce talented speakers upon subjects both entertaining and instructive. With a membership roll of one hundred and forty-three in the first year of its organization, it would seem that the association may be looked upon as a permanent and important factor in college activities. For the season of 1900–1901, the following programme was secured :

December 7, Hezekiah Butterworth, Rhode Island Folk Lore Tales.

January 4, Commander Gardiner C. Sims, Chief Engineer of the Transport Service, Reminiscences of the Spanish-American War.

February 1, Thomas Wentworth Higginson, American Orators and Oratory.

March 1, Jacob A. Riis, The Battle with the Slum.

March 15, Henry Austin Clapp, Shakespeare's The Merchant of Venice.

THE LIBRARY.

The library occupies a large room in Lippitt Hall and numbers about ten thousand volumes. The books are arranged in stacks, to which the students have free access. The Dewey system of classification is used; and a dictionary catalogue gives author, subject and title. As the library has been from the first intended for reference work, the various departments of instruction have made their selections with the greatest care. Combined with the library is the reading-room, where sixty of the leading periodicals —of literary, scientific and general interest—are on file. From

time to time these are bound, and prove of great value in research work.

The library is open every week day from 7:30 A. M. to 6:00 P. M., with the exception of a half-hour at noon; on Sunday it is open in the afternoon only, from 12:30 to 1:30 and from 2:30 to 5:00. The librarian or her representative is in constant attendance to aid any one in search of information. As the college is an institution designed to further the educational interests of Rhode Island, all residents of the State are urged to use its library.

LOCATION.

The college is situated on a hillside, which furnishes it with quick drainage and a delightful view. It is less than two miles from the railroad station. A macadamized road leads from the grounds to the station, insuring at all times a good walk and drive. The railroad station is situated on the New York, New Haven & Hartford Railroad, with twenty-one trains daily, in the winter, stopping at Kingston, and more in the summer. The town is a very healthful place, five or six miles from the ocean.

THE LIBRARY.

DEPARTMENTS OF INSTRUCTION.

CHEMISTRY.

DR. WASHBURN, DR. BUCHER.

Instruction in chemistry begins with the Sophomore year and consists of lectures, recitations and laboratory work; two hours of laboratory work being counted as equivalent to one period of recitation or lecture work. The course in general chemistry extends through the first two terms of this year; three periods per week being devoted to lectures and recitations and one period to laboratory work. The course in qualitative analysis extends through the second and third terms of this year, part of the time being given to lectures and recitations, but the greater part to practical work in the laboratory. The above courses are required of all candidates for a degree, as part of a liberal education, and are preparatory to the subsequent courses, which are designed for students desiring to make chemistry their profession, either as teachers or practical chemists.

The more advanced courses furnish an excellent preliminary basis for the study of medicine, biology or agriculture.

The first two courses are followed by a course in inorganic preparations, three periods per week in the third term of the Sophomore year. The subject of theoretical chemistry is begun in the general chemistry and continued in the third term of the Sophomore year, much attention being given to the application of the principles to problems. This subject is continued in a much more advanced way in the first term of the Senior year, a portion of the time being devoted to laboratory work. Quantitative analysis is

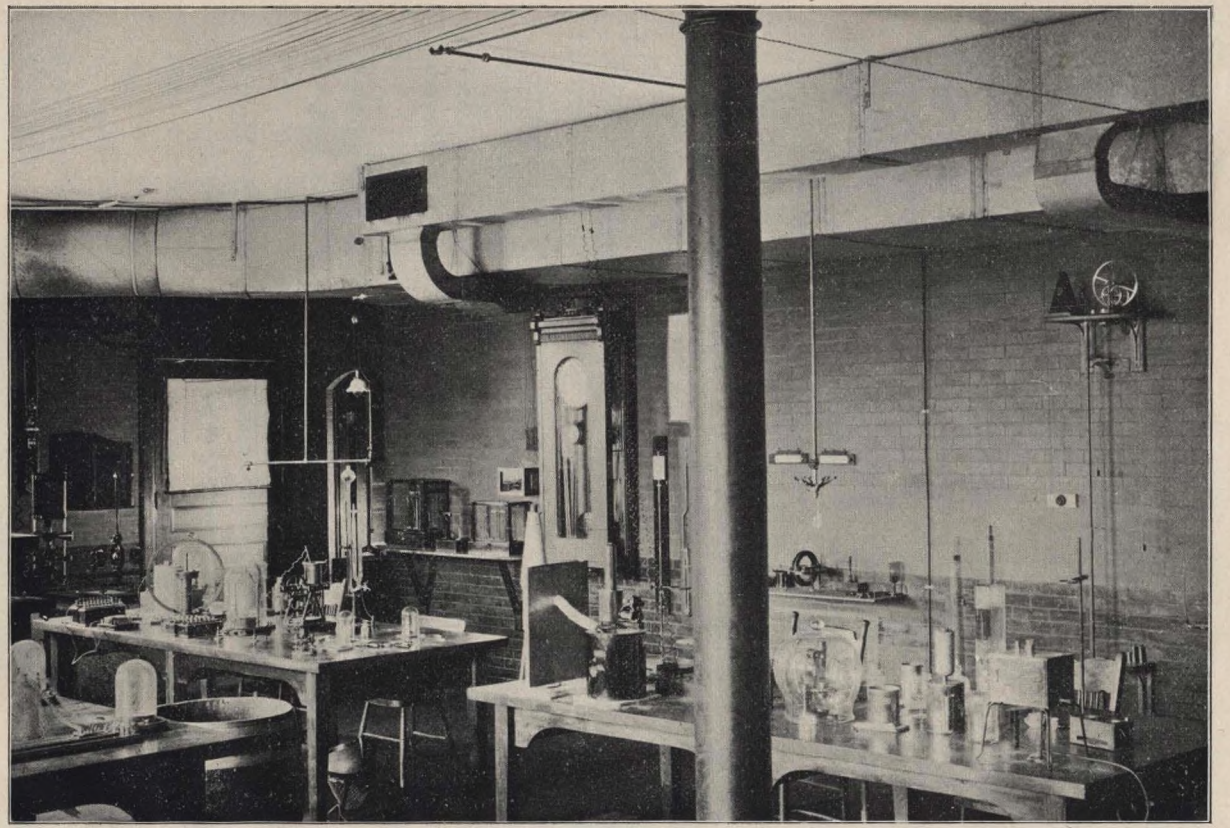
taken up in the Junior year, both gravimetric and volumetric work being required. Accuracy in the work is insisted upon. Organic chemistry begins in the first term of the Junior year and extends through five terms. It includes an extended course in organic preparations. The course also affords opportunity for work in gas analysis, metallurgy, mineralogy, blow-pipe analysis, assaying, sanitary chemistry, industrial chemistry, physiological chemistry, agricultural chemistry, toxicology, and textile coloring. In the Senior year, candidates for a degree in the chemical course are required to prepare a thesis on some chemical subject. Agricultural chemistry is required of all agricultural students and is given during the winter and spring terms of the Junior year and the fall term of the Senior year. The instruction consists of lectures of three exercises per week during the first two terms and three exercises per week of laboratory work during the third term.

The laboratory is thoroughly equipped with apparatus for the above-mentioned courses, and opportunity is given for graduate students to continue work in the above lines beyond that required for a degree. Provision is also made for special students who are unable to spend the time required by the regular courses. They may take such courses as will be of most benefit to them in the line of work they intend to follow. A large number of German, French, and English chemical journals are accessible, thus affording excellent opportunity for research work.

PHYSICS.

PROFESSOR SCOTT, MR. RADTKE.

Instruction in physics in the college course begins with the first term of the Freshman year and consists of lectures, recitations and laboratory work. The various branches grouped under this head are treated both mathematically and experimentally. Mechanics and heat are studied in the fall term, magnetism and electricity in the winter term, and sound and light in the spring



CORNER OF PHYSICAL LABORATORY.

term. The recitations are prepared chiefly from Wentworth and Hill's Text-book of Physics. The laboratory work consists of special experiments from various authors.

The study of advanced physics follows in the Sophomore year and is required throughout the year of all students in the electrical engineering course; for the fall and spring terms, of all mechanical course students; and is open as an elective to all students in other courses who have completed course I or its equivalent. This course embraces a deeper and more extended discussion of heat and mechanics of fluids in the fall term; of statics, kinetics, wave motion and sound, in the winter term; and light, electricity and magnetism, in the spring term. Hastings and Beach's General Physics is used as a text-book, supplemented by lectures.

Special instruction in photography is offered as an elective course to students who have an elementary knowledge of physics and chemistry. The course embraces lectures and recitations, together with instruction in practical methods of making negatives and photographs. A suitable photographic laboratory is provided for reproducing the appearance of tested specimens, photographs of physiographic features, microscopic structure of substances, etc., for use in the lecture-room.

A course in advanced photography is open to students who have completed the elementary course. It consists of a more extended study of the chemistry and optics of photography, and laboratory work in making bromide enlargements and lantern-slides. This is followed by the theory and use of the microscope and practical work in photo-micrography, the manipulation of the projection microscope and the optical lantern. The department is provided with room and ample apparatus for illustrating and testing every form of light that is in use in projection work, together with the apparatus for X-ray photography with either the high frequency induction coil or electrostatic machine. The theory and practice of color photography are considered, and apparatus is at hand for the projection of photographs in colors from nature.

PHYSIOGRAPHY.

DR. WASHBURN.

The Freshman class study physiography during the fall term, with two exercises per week of recitation and one of laboratory work, and during the winter with one exercise per week of laboratory work, including occasional excursions and field work.

A well-equipped physiographic laboratory, with globes, models, maps, charts and other illustrative material, together with a special library, is open to the students. Especial attention is given to the scientific phases of the study—to the chemistry and geology of the soils, the influence of air and water on the same, and the flora and fauna of the different countries. Davis's Physical Geography is taken as a basis; and Dana's Coral Islands, Shaler's Aspects of the Earth, and Dana's Characteristics of Volcanoes are thoroughly studied during the term. Five hundred lantern-slides, illustrating ethnological subjects, are projected and explained before the class. This course seems to be especially valuable to introduce the student to the scientific studies which are to follow.

General Mineralogy.—General mineralogy is taught in the winter term of the Junior year and consists of three exercises per week. A short course dealing with the elements of crystallography is given, together with the physical and chemical characteristics of minerals, especially of the rock-making minerals composing our soils. Laboratory work in blow-pipe analysis and physical determination of minerals follows the crystallography. The course is arranged so that it may be extended as an elective for another term.

AGRICULTURAL GEOLOGY.

DR. WHEELER.

The course in agricultural geology embraces structural, dynamical and historical geology, particular attention being paid to the

THE BOTANICAL LABORATORY.

first-mentioned subdivision. A careful study is made of those minerals and rocks of importance in the formation of soils, of the agencies by which their decomposition is effected, and of the compounds which result. In this connection the instruction is designed to familiarize the student with the desirable mineral and physical features of soils, with those compounds the presence of which is undesirable or which may give rise to a greater or less degree of soil sterility, and with the means by which such conditions may be avoided or overcome. A proportionate amount of time is devoted to the history of those natural deposits of particular interest to agriculturists; such as nitrate of soda, the German potash salts, and phosphates of various kinds.

BOTANY.

PROFESSOR MERROW.

The required work in botany for students in the agricultural, biological, and chemical courses begins in the winter term of the Freshman year with a course called the biology of plants, which continues three terms. The object of this course is to give the student a knowledge of plant life, by the study of the plants themselves in the laboratory and in the field. Attention is given to representatives of the vegetable kingdom from the lowest to the highest. Some time is given to the determination of species, but the chief work of the course is the study of the structure of the plant, its activities, and its relation to its environment. In short, the course is adapted to the needs of the general student who desires a knowledge of the principles of biology as illustrated by our common plants, and also furnishes a good foundation to the student who is to follow more advanced work in botany, agriculture, horticulture or medicine. Students wishing to emphasize botany in their choice of studies in the biological and agricultural courses are given every opportunity to follow lines of work best suited to their needs. In the spring term a three-hour course is given which considers the native flora from an ecological and sys-

tematic standpoint. A similar course may be taken on the fall flora if desired. The study of histology may be followed as a three or a six-hour course. It is believed that excellent advantages are offered to those who wish to elect work in the parasitic fungi of seed plants. The laboratory is provided with a supply of dry and alcoholic material, and collecting-fields for fresh material are near at hand.

Each student is supplied with a compound microscope, a dissecting microscope, re-agents, and small instruments. The laboratory is provided with apparatus for simple physiological experiments, a microtome, paraffin bath, charts, thirty Brendel models, Briosi and Cavara's Parasitic Fungi of Cultivated Plants, Ellis's Fungi Columbiani, Seymour and Earle's Economic Fungi, Arthur and Holway's Uredineae, and a collection of native plants. A good working library and several American and foreign periodicals are an important part of the equipment of the laboratory.

ZOÖLOGY.

DR. CURTICE.

The course is open to students who have done satisfactory work in the biology of plants, or an equivalent, and is designed to meet the needs of those intending to pursue one of the following or allied vocations: agriculture, including the raising of live-stock; horticulture, including market-gardening and fruit-growing; poultry-raising, including water-fowls; apiculture; aqui-culture, including fish and shell-fish propagation; medicine, human or veterinary; economic entomology.

The zoölogical instruction is, as far as possible, entirely practical in its nature. Lectures, text-book readings, and demonstration from specimens, models and charts constitute the general class work. The laboratory practice is outlined for students according to their needs. Students in agriculture will be required to study particularly one or more of the farm animals as types, and the insects especially beneficial or injurious to farm crops; students in

horticulture will devote their laboratory time to economic entomology; students in preparatory medicine, to dissections of a typical vertebrate, to anatomical and histologic technology and to physiology; students in poultry-raising, to dissection of fowls, to physiology, parasites, diseases, etc.

Especial facilities for the study of the smaller farm animals are afforded by the college farm and experiment station poultry-yards. The experiments now in progress in the "hothouse" plans of raising poultry give unequalled advantages for study in this line. All the elementary problems relating to large farms are the same as apply to the small and can be learned by close study of the latter. The rapid reproduction of poultry, rabbits, etc., makes them ideal material in studying living processes.

The marine fauna, occurring at a short distance from the college, in the ocean, Narragansett bay and numerous estuaries; the fresh-water fauna, occurring in the springs, ponds and streams near by; together with an abundant land fauna of the smaller types of mammals, birds, reptiles, amphibians, fish and insects, make the locality especially favored for field work.

For indoor study the department is well equipped with Leuckart's charts; Zeigler's and other models; manikins elucidating the anatomy of man, horse and fowl; preparations of skins and skeletons of typical vertebrated animals, including the domesticated animals, gorilla, chimpanzee, lemurs, phalangers, manatee, sloth, birds and mammals peculiar to the Australian region, lung-fishes (Dipnoi), Surinam toad, and giant salamander (C. japonicus); also with preserved specimens and preparations of the most important invertebrated forms, including nautilus in the shell, Argonauta; and apparatus for class demonstration of macroscopic and microscopic preparations. The department library includes the best literature on the subject, and many of the current zoölogical journals are available either at the experiment station library or by special arrangements.

Particular attention is given to the collection illustrating the zoölogy of Rhode Island.

PSYCHOLOGY.

MR. BEARDSLEY.

An elective course in psychology is offered during the winter and spring terms, to Juniors and Seniors. James's Briefer Course is used. Lectures and recitations are supplemented by reading and simple experiments.

AGRICULTURE.

DR. BRIGHAM, MR. BURDICK.

In connection with the course in agriculture, it may be said that the foundation instruction is largely given in the study of chemistry, botany, physics, geology, anatomy, physiology, zoölogy and economics.

Following upon this fundamental knowledge, it is the aim in the agricultural course to teach the student the practical application of the scientific principles underlying technical agriculture. This is sought to be accomplished by means of lectures and recitations and by the use of text-books and reference books as far as available. The chief desire is to supplement, enforce and fix this instruction by what may be termed laboratory work in agriculture; that is, by actual educational training in the different branches of farming. The object of the agricultural course is to assist in preparing the young man to become a successful farmer and a useful citizen. The course also aims to fit the students to fill remunerative positions as managers of farms and estates.

Preliminary to the teaching of agriculture a course is taken in the winter term of the Freshman year in agricultural mechanics, including the use of tools, bench work and carpentering. Commencing in the spring term of the Freshman year, an introduction is given in the form of lectures dealing with the origin and necessity of agriculture; its relation to other occupations; the preparation for farming; the relations of air, water and sunshine, and of plant and animal life, to agriculture.

FILLING THE SILO.

In the Sophomore year a study is made of farm soils, their characteristics, classification, and adaptions, their faults and means of improvement, clearing land and preparing for crops, irrigation and land drainage, with practice in planning and constructing systems of under-draining on the college farm. In the winter term instruction is supplied in the construction, use and care of farm implements, machines and vehicles; and in the arrangement, construction and maintenance of farm buildings, fences, roads and bridges. In the spring term fertilization is dealt with, and the instruction is re-inforced by object lessons offered by the fertilization experiments of the experiment station and by the manuring of the fields for the crops of the college farm.

In the first term of the Junior year, field crops are considered. During this year horticulture is chiefly taught. (See horticulture.)

In the Senior year opportunity is provided to study live stock husbandry, including the breeds, breeding, care and management of farm animals; rational feeding of live stock; dairy husbandry; poultry-culture; farm management and accounts.

Further elective subjects are available to advanced students by special arrangement, including the history and economics of agriculture, agricultural and horticultural literature, farm law, apiculture, agricultural debate and agricultural experimentation.

During the course in agriculture occasional inspection excursions enable the students to learn what practical, successful specialists in the various branches of modern farming are doing.

Plans for short courses in agriculture and horticulture have been made. These courses would instruct special students in the principles and details underlying poultry-culture, dairying, gardening and general farming. The aim in the special courses is to provide the instruction needed to enable the student promptly to engage in a particular branch of farming or to take charge of such work as superintendent. For placing these courses in full operation the college awaits the providing by the State of additional suitable buildings and equipment, which will greatly

re-inforce the means of instruction in the regular agricultural course.

Special Instruction in Poultry-Culture.—For the past three years a short course of instruction in poultry-culture has been held during the winter term, commencing in January and continuing several weeks. The college has a strong force of regular teachers in the sciences and arts upon which poultry-culture is based, and a large number of expert poultry specialists assist as instructors.

In this special course of study the main purpose is to impart the fundamental knowledge which underlies practical poultry-keeping. Instruction is given in chemistry, zoölogy, anatomy and physiology sufficient for the foundation of the course. Embryology is taught in the biological laboratory, where also the nature and habits of poultry parasites are studied. Carpentering and the construction of poultry-houses and fences are taught in the carpenter shop. The course of study includes the following topics: poultry-plants, location, planning and establishment; drainage of the land; buildings, planning and drawing of plans, making specifications and estimates, location and arrangement, construction, heating, ventilation and furnishing; fowls, their origin, kinds, breeds and types; principles of breeding, mating, special breeding of water-fowl, turkeys, pigeons, etc.; incubation and rearing, both natural and artificial; foods, feeding, care and management; production of eggs and flesh, caponizing, fattening, killing, dressing and marketing; diseases, business methods and management, scoring, records, accounts, poultry, photography, etc. The Saturdays are devoted chiefly to inspection excursions to different poultry-farms in New England. Special public lectures are occasionally given. Opportunity is further offered to a limited number of students to supplement this special course of study by a year's practical training in the college poultry plant.

No entrance examination is required. Oral or written examinations may be given during and at the close of the course. Certificates are awarded according to merit.

POULTRY CLASS, 1900.

HORTICULTURE.

PROFESSOR CARD.

Work in horticulture is designed for students from all courses. It is felt that some knowledge of the subject may very properly form a part of every well-rounded education.

In the introductory course the aim will be to discuss principles of general importance to all who have to deal with orchard or garden crops. The courses in pomology and vegetable-gardening are designed to give practical instruction in the growing of fruits and vegetables.

Landscape-gardening is especially recommended to those who seek to appreciate the beautiful in nature or in art. Its aim is to apply the principles of beauty, as evinced in the work of nature, to the art of embellishing grounds.

Forestry touches problems of import to every citizen interested in the public welfare. Owing to the intimate relation between forests and waterflow, the subject is often of more vital importance to the manufacturer than to the farmer.

The subject of plant-breeding will appeal chiefly to those interested in the broader problems of biological development and relationship. A careful study of the amelioration and development of plants under culture throws light upon many of the general problems of evolution which are of interest to all thinking students.

The courses in reading and original investigation are designed chiefly for students who wish to make a specialty of horticulture.

A short special course in horticulture was inaugurated in 1900. The object of this course is to give the greatest amount of definite, practical instruction in the least possible time. Experts in different lines of horticultural practice are secured to give the benefit of their experience. Instruction is also given in the fundamental facts relating to soils, fertilizers and plant-life, which underlie agricultural and horticultural operations. The types of horticulture which cluster around great cities receive especial attention.

Large establishments of this class are easily reached from Kingston.

LANGUAGES.

PROFESSOR WATSON, MISS KENYON, MISS SANDERSON, SR. ALOMÁ.

The subjects grouped under this head are English, German, French, Spanish and Latin.

English—comprising composition, rhetoric and literature—may be studied throughout the course. It is required during the first three years of the course. The theory and practice of rhetoric are taught throughout the Freshman year, and the application of rhetorical principles is sought in exercises and themes. The Sophomores make a critical study of certain prose masterpieces and write essays and various short papers. The required work of the Juniors consists of a course in English history and a study of the leading poets from Chaucer to Tennyson. Collateral reading is supplied, and students are encouraged to special investigation along literary and historical lines. In the Senior year electives are offered in literature and themes.

In the courses in agriculture, mechanical engineering, electrical engineering, and chemistry, three years of foreign language study are required for graduation; one preparatory and two advanced. It is desirable that two of the three years be spent upon one language. In the biological course, four years of foreign language study are required for graduation; one preparatory and three advanced. Of the three years, two must be given to German and one to French.

A three years' course in German has been arranged, which is begun in the Freshman year. As far as possible the language itself is made the medium of instruction; and the subject is studied in grammar work, dictation, conversation and translation—from English into German and from German into English. The course is carefully graded. As soon as a small vocabulary is acquired, the student begins the reading of simple prose and poetry, passing gradually to more difficult texts.

French may also be studied three years. Six courses are offered. The instruction in this language is similar to that given in German. Grammar, conversation, dictation, translation and composition are taught.

A two years' course in Spanish is offered. The work is elective and is intended largely to meet the needs of those students who may wish to engage in business in Spanish-speaking countries. Special attention is therefore paid to conversation, reading, letter-writing and commercial forms.

Latin is elective. The institution offers a two years' course. Should a student wish to pursue the subject farther, he may do so at his own expense, by taking private lessons of the instructor. Much attention is paid to derivation of words, in order that such study may aid in comprehending the terminology of science.

HISTORY AND POLITICAL SCIENCE.

MISS KENYON, MR. BEARDSLEY.

United States history is required of students in the biological course, throughout the Junior year, and is elective for others. English history is studied in connection with English literature during the Junior year and is required of all candidates for a degree. In the Senior year a course in modern European history from the beginning of the French revolution is offered as an elective. This may also be taken by Juniors who have had the work in United States history. In all of these courses much use is made of the library.

Political science V, offered in the fall term, consists of a study of the origin, development and present structure of our government—town, city, county, state and national. Special attention is paid to municipal problems and to the United States constitution. Extensive use of the library is necessary. The winter and spring terms are devoted to political economy, based upon Walker's Advanced Course. In the spring term special consideration is

given to the application of the general principles to banking, finance and other present day problems.

MATHEMATICS.

DR. BOSWORTH.

Three courses in mathematics are prescribed for all candidates for a degree; the subjects being higher algebra, plane trigonometry, and solid and spherical geometry. The work extends throughout the Freshman year and is of the utmost importance, both as a basis for further work in mathematics and science, and as a means for developing the power of logical reasoning and of exact and concise expression. It is the aim throughout the course to select such problems and applications as shall have direct bearing upon practical subjects.

Courses in analytical geometry and calculus are required of students in the mechanical and electrical engineering courses, in addition to the above, and a number of electives are open to students who propose to make a specialty of mathematics or of any of the sciences which depend largely upon it.

The course in analytical geometry includes the subject of loci and their equations, the analytical demonstration of many geometrical theorems, and the simpler properties of the conic sections. The work in calculus includes the differentiation of algebraic, trigonometric, anti-trigonometric, exponential, and logarithmic functions, successive differentiation, and the integration of simple functions, illustrated by applications to the rectification of plane curves, the areas of plane curves, and the surface and volume of solids of revolution. The fundamental formulas of mechanics are developed and illustrated. The more familiar devices for integration are studied, and a short time is devoted to the interesting subject of curve-tracing.

Students wishing to prepare for advanced work along the lines of mechanical or electrical engineering are especially advised to elect courses in advanced integral calculus, analytical mechanics,

and differential equations; while those who desire an insight into the development of modern pure mathematics may elect work in projective geometry, modern analytical geometry, theory of equations, and theory of functions.

CIVIL ENGINEERING.

MR. TYLER.

It is intended in this department to give an opportunity to study the fundamental principles which are the basis of all civil engineering work.

The equipment consists of transits, levels, compasses, solar attachments, hand instruments, planimeters, slide rulers, mercury and aneroid barometers, tapes, chains, level and stadia rods, etc. Among the transits are two Buff and Berger instruments.

The college and adjacent properties furnish an opportunity for all kinds of surface surveying, without loss of time in going to and from the work. A chain of lakes about one-half a mile away gives an excellent chance for hydrographic work.

The drill-hall offers opportunity for performing various experiments with tapes and chains.

HOME SANITATION.

PROFESSOR SCOTT.

This course is given in the fall term and is open to Juniors, Seniors, and Specials who have sufficient preparation. Merriman's Sanitary Engineering is used as a text-book and is supplemented by lectures on the movements of ground-water; sources of potable water; water pollution; natural and artificial methods of purification; the interpretation of water analyses. Practical plumbing in dwellings and plumbing materials are discussed both with reference to water supply and sewage disposal in suburban and rural districts. Inspection excursions are taken to pumping-

stations and storage reservoirs and practical plants connected with sewerage systems.

The winter and spring terms are devoted to a study, by lectures and recitations, of the heating and ventilation of buildings, together with experimental laboratory work on the different systems in general use. The laboratory is heated both by the direct and the plenum systems, the latter having an eight-foot fan with fifteen horse-power engine for driving the same, the system being arranged to impel both hot and cold air at the same time. There is also a practical arrangement in use for heating by exhaust steam, and these, together with other systems in use at the college, and minor facilities, such as a six-foot fan driven by an electric motor, other small fans, anemometers, manometers, facilities for the determination of carbon dioxide, bacteria in air, etc., make the laboratory work in practical testing of much value to the student.

This course is given throughout the Junior and Senior years, alternating with a course in methods of refrigeration and cold storage.

Experimental laboratory work is given in refrigeration as far as practicable, and inspection excursions are made to typical heating and ventilating systems and cold-storage plants in the respective courses. Preparation for the course necessitates a knowledge of mathematics, physics, chemistry, surveying, and elementary mechanics.

MECHANICAL ENGINEERING.

PROFESSOR DRAKE, MR. KNOWLES, MR. KNIGHT.

The aim of this department is to give sound theoretical and thorough practical training to students who seek to prepare themselves for useful and responsible positions. The course offered in shop-work will furnish such training as will ensure, other things being equal, marked success in mechanical pursuits subsequent to graduation. The regular four years' course deals with mechanical engineering as applicable to the industries carried on in New England and particularly in Rhode Island. Special attention is

LADD LABORATORY.

THE CARPENTER SHOP.

THE WOOD-WORKING MACHINERY.

given to the designs and the economical operation of shops and mills, and of manufacturing and industrial machinery. The subjects of mechanism, metallurgy, heating and ventilation of buildings, engineering specifications, and laws of contracts are treated by lectures and text-books. The several laboratories are well equipped for working in wood and metals and for the testing of materials used in construction. Students in the course of mechanical engineering receive instruction in bench-work in wood, wood-turning, pattern-making, forging, machine-shop work and mechanical drawing.

Students in the agricultural course receive instruction in wood-working and forging, and may elect other work with the advice and consent of the committee on studies.

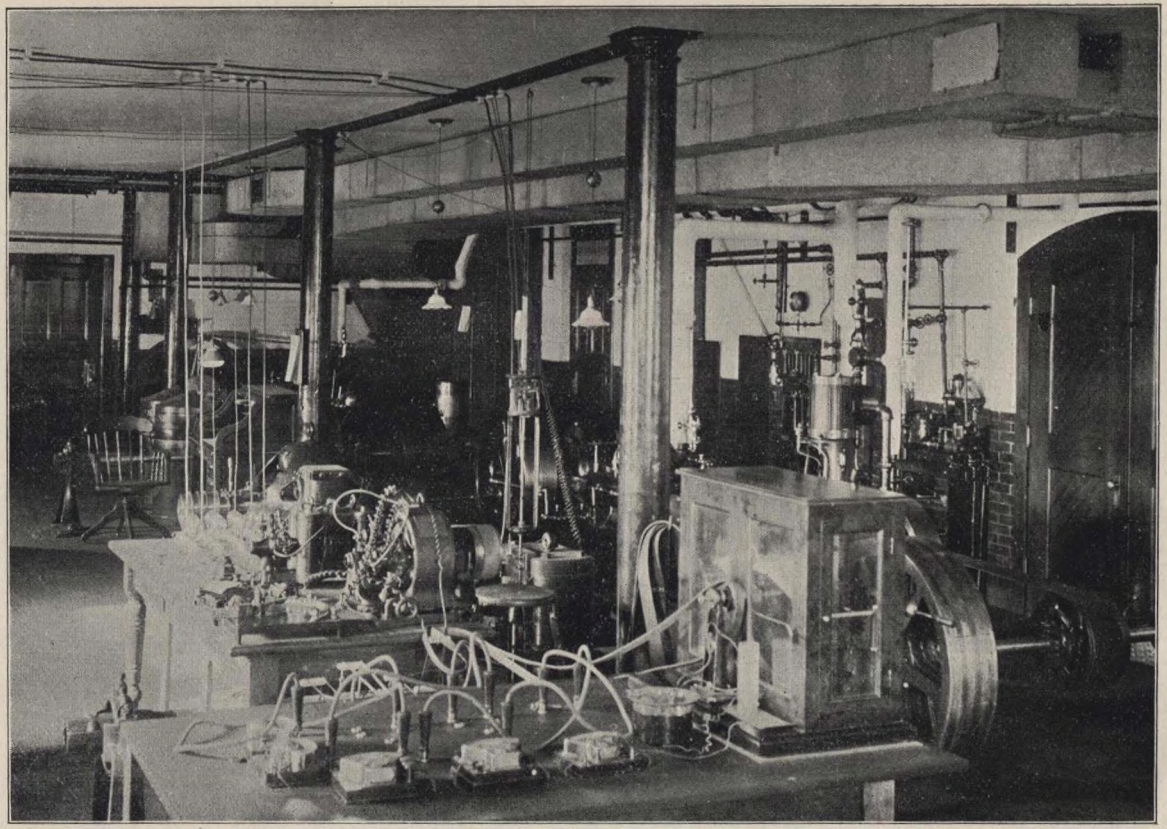
The carpenter shop contains benches and tools sufficient to accommodate twenty-four students at one time. The course is designed to give skill and confidence in working the various kinds of wood, and also to impart a fair knowledge of the principles of building and construction. A series of practical lectures upon the art of estimating the cost of various constructions of wood is given to the agricultural students of the Sophomore year. The wood-turning room contains thirteen lathes, each with its complete set of gouges and turning tools. In the same room are benches for pattern-making, and also power machinery for working wood; such as circular saw, hand-saw, jig-saw, surface-planer, buzz-planer, mortising-machine, dowel-machine and others. All students take wood-turning, and during the period each has practice under the direct charge of the engineer in care of the shop, boiler and engine. The engine is of thirty horse-power. The work in pattern-making given to the students in the mechanical department consists in the making of selected pieces to illustrate the principles of shrinkage, drafts, finish, core-box making, built-up work, and the general requirements of pattern-making.

The forge shop will accommodate twelve students at one time. It contains twelve forges and anvils, a stock-cutter, a bolt-header, a post-drill, and is well supplied with all the hammers, tongs, and

other forge and anvil tools necessary for complete work. A regular course is followed here as in other lines; and for the students of the agricultural course the work is of such a nature as is found about a farm. The various operations of drawing, bending, upsetting, and welding are taught and applied in the making of such useful pieces as staples, hooks, chains, and iron work for farm tools. The students of the mechanical department follow a similar course, but in a direction more suited to the machine shop. Bolts, nuts, machine-forgings, chisels, and lathe tools are made, and afterward put to practical use. Only students in the mechanical and electrical engineering courses work in the machine shop.

The course here is designed to give a sure knowledge of and intelligent practice in the best modern methods of using the various tools; such as lathes, planers, drills, milling-machines and grinding-machines. A course of hand work at the bench is offered, and includes instruction in chipping, filing, scraping and finishing. Students of former years have made an engine, dynamo, speed lathe, full set of arbors, set of nut arbors, and a variety of other tools.

In experimental engineering the students make tests of engines, boilers, pumps, steam gauges, injectors and a hydraulic ram. The strength of materials is investigated theoretically in class under the head of mechanics of materials, and practically in the laboratory by conducting tests upon specimens of wood, iron, steel, brick, stone, cement, boiler-plate, etc. In hydraulics, water-meters are calibrated, and measurements of water made by orifices and wiers. During the spring term of the Senior year the class in mechanical engineering holds semi-weekly conferences; reports are given upon articles in the industrial magazines and journals, and engineering subjects of general interest are discussed. The following are some of the topics considered: types of steam-boilers, furnaces, boiler-feeders, fuels, lubricants, gas and heat engines, preparation and use of wood, cutting-tools for metals, pumping-machinery.



THE ELECTRICAL ENGINEERING LABORATORY.

DRAWING.

PROFESSOR DRAKE, MISS ELDRED.

MECHANICAL DRAWING is required for a period of three years. Students keep notebooks, in which freehand sketches are made from models; and these sketches are afterward worked up into finished drawings. The making of working drawings for some machine completes the course. Practice in tracing and blue printing is given to all students. The course in drawing is designed to aid in the corresponding courses of shop work and not to produce professional draughtsmen.

FREEHAND DRAWING.—Freehand drawing is taught in the fall and spring terms and is required in the fall term, Freshman year. The required work comprises the study of perspective and values from objects, still life, and simple casts. Memory sketches of the objects drawn are expected of each student, who is also required to leave at the college a specimen of his work. The library contains an excellent collection of art books. In addition to the art electives, comprising drawing from still life and the cast, painting in oil, pastel and water-color, and modeling, special work will be arranged for scientific and mechanical students. An hour's study of the history of art, by means of reading, lectures and the use of photographs, with which the studio is well supplied, may be substituted for one hour of the three-hour art elective offered in the spring term, Sophomore year.

ELECTRICAL ENGINEERING.

PROFESSOR SCOTT, MR. RADTKE.

The course in electrical engineering is offered to students who have completed courses I and II in physics.

The studies in electro-technology embrace fundamentally the theory of electricity and magnetism, followed by a thorough treatment of the various technical applications of electricity. These

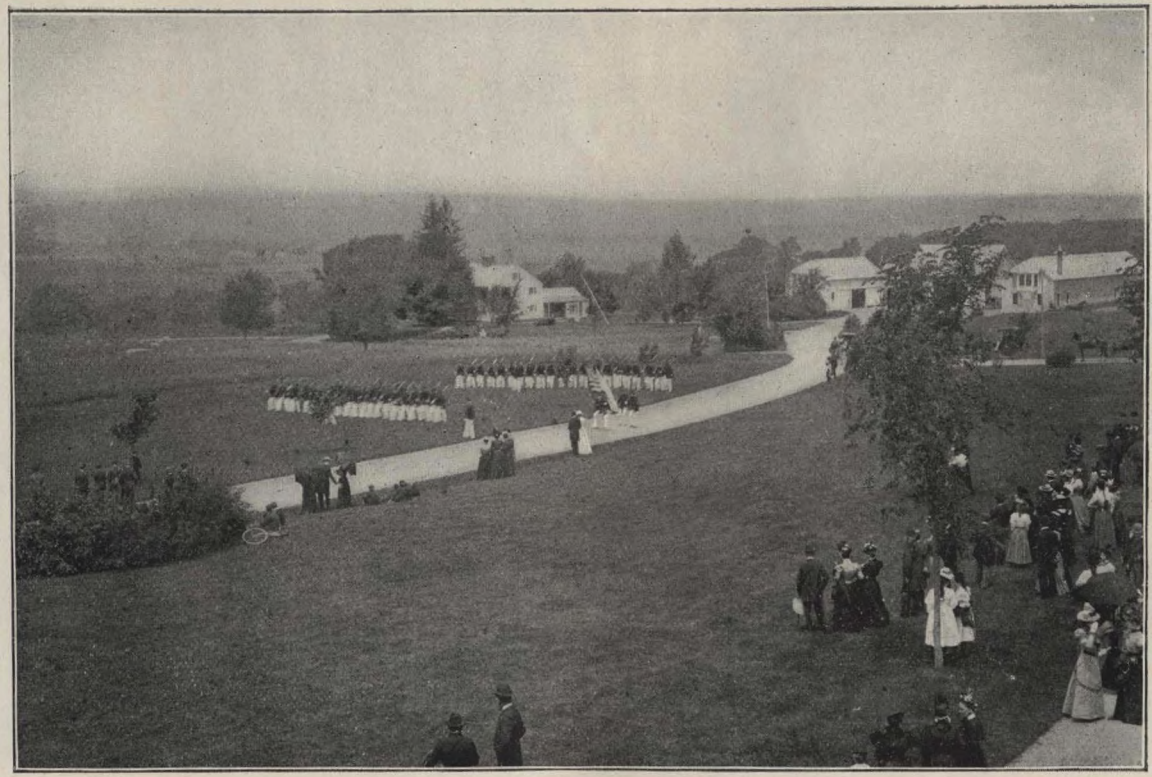
include the theory, design and manipulation of continuous and alternating current generators and motors, transformers, and the storage battery; the design of generating and distributing plants for light and power; electrical testing; electro-metallurgy; telegraphy; telephony; electric signalling. The department is provided with a satisfactory plant for laboratory purposes, containing two sixty horse-power water-tube boilers; two high speed engines of fifty and fifteen horse-power; one thirty K. W. 1000-v. Westinghouse compound alternator with exciter; two 110-v. continuous current generators, one twenty-five K. W., and the other eight K. W.; a storage battery of 110-30 amp.-hour cells; several small dynamos and motors; transformers; condensers; arc and incandescent lamps; Lord Kelvin and Weston voltmeters and ammeters; dynamometers; wattmeters; galvanometers; Wheatstone bridges; standard cells, and rheostats. Adequate means are supplied by a photometry room for testing and comparing electric and other forms of illuminating apparatus. The laboratory has also a two horse-power standard Leffel turbine water-wheel, engine lathe, and suitable material for the repairing and making of apparatus.

The course is open to special students who may not be able to spend the time for obtaining a degree. They will take such subjects as will most readily prepare them for their intended line of work.

STENOGRAPHY AND TYPEWRITING.

MISS GAGE.

Stenography and typewriting are offered as electives. A thorough knowledge of the common English branches is required of every one taking the course. The Chandler Practical Shorthand and either the touch or sight system of typewriting are taught. The shorthand work may be divided into two parts: first, the perfecting of the knowledge of the system; second, a graded course in dictation. In typewriting, the students are given a series of exercises consisting of words, sentences, phrases, business letters and



DRILL ON CAMPUS.

STUDENTS IN DRILL HALL.

forms, and other matter selected with reference to its variety and scope. Absolute accuracy is required from the first in both subjects, and particular attention is paid to spelling and punctuation.

MILITARY ORGANIZATION.

CAPTAIN SPARROW.

For the past three years, since the recall of Captain W. W. Wotherspoon for duty in the Philippines, the Senior class of the college has drilled the other students in the school of the soldier. On December 16, 1900, the president of the United States detailed Captain S. E. Sparrow as professor of military science and tactics at this institution. He will begin his duties on January 2, 1901. During the fall term of 1900 the military organization was as follows:

Captains	A. A. Denico,
	C. S. Burgess.
Lieutenants	H. D. Smith,
	J. Wilby,
	L. G. K. Clarner.
Sergeants	B. J. Cornell,
	A. L. Reynolds,
	O. N. Ferry,
	R. W. Pitkin.

COURSES OF INSTRUCTION.

The following courses of instruction are offered in the different departments. All studies required of regular students lead to the degree of Bachelor of Science.

CHEMISTRY.

I. General Chemistry.—Lectures, recitations and laboratory work. *Fall and Winter terms, Sophomore year;* lectures and recitations, *3 exercises per week;* laboratory work, *1 exercise of 2 hours per week. Required of all candidates for a degree.*

II. Qualitative Analysis.— *Winter term, Sophomore year; 2 exercises of 2 hours each per week. Spring term, Sophomore year; 3 exercises of 2 hours each per week. Required of all candidates for a degree.*

III. Inorganic Preparations.—*Spring term, Sophomore year; 3 exercises of 2 hours each per week. Required of students in the Chemical course, elective for other students.*

IV. Theoretical Chemistry.—Lectures and recitations. *Spring term, Sophomore year; 3 exercises per week. Required of students in the Chemical course, elective for other students.*

V. Quantitative Analysis. — Gravimetric and Volumetric. *Throughout the Junior year. Fall term; 5 exercises of 2 hours each per week, required of students in the Chemical course; 3 exercises of 2 hours each per week, required of students in the Agricultural course; 2 exercises of 2 hours each per week, required*

of students in Mechanical and Electrical Engineering courses. Winter term; 3 exercises of 2 hours each per week. Required of students in the Chemical course. Spring term; 5 exercises of 2 hours each per week. Required of students in the Chemical course; elective, open to students in the Biological course.

VI. Organic Chemistry.—Lectures, recitations and laboratory work. *Fall and winter terms, Junior year;* lectures and recitations, *3 exercises per week;* laboratory work, *1 exercise of 2 hours per week. Fall term, required of students in the Chemical, Agricultural, and Biological courses. Winter term, required of students in the Chemical and Biological courses.*

VII. Organic Preparations.—*Spring term, Junior year; 3 exercises of 2 hours each per week. Required of students in the Chemical course; elective, open to students in the Biological course.*

VIII. Sanitary Chemistry.— *Winter term, Junior year; 3 exercises of 2 hours each per week. Required of students in the Chemical course; elective, open to students in the Biological course.*

IX. Mineralogy and Blowpipe Analysis.— *Winter term, Junior year; 3 exercises of 2 hours each per week. Required of students in the Chemical course; elective, open to students in the Biological course.*

X. Gas Analysis.—*Spring term, Junior year; 1 exercise of 2 hours per week. Required of students in the Chemical course.*

XI. Assaying.—*Spring term, Junior year; 1 exercise of 2 hours per week. Required of students in the Chemical course.*

XII. Industrial Chemistry.—Lectures and recitations. *Spring term, Junior year, and Fall term, Senior year; 3 exercises per week. Required of students in the Chemical course.*

XIII. Organic Chemistry (Advanced course).—*Fall and Winter terms, Senior year; 3 exercises per week. Required of students in the Chemical course; elective, open to students in the Biological course.*

XIV. Theoretical Chemistry (Advanced course).—Lectures, recitations and laboratory work. *Fall term, Senior year;* lectures and recitations, *4 exercises per week;* laboratory work, *2 exercises of 2 hours each per week. Required of students in the Chemical course; elective, open to students in the Biological course.*

XV. Physiological Chemistry.—*Fall and Winter terms, Senior year; 3 exercises per week. Required of students in the Chemical course.*

XVI. Textile Coloring.—*Winter and Spring terms, Senior year; 3 exercises per week. Required of students in the Chemical course.*

XVII. Agricultural Chemistry.—*Winter and Spring terms, Junior year; 3 exercises per week. Fall term, Senior year; 3 exercises per week. Required of students in the Agricultural course. Winter and Spring terms, Senior year; 3 exercises per week, taken with the Juniors. Required of students in the Chemical course; elective, open to students in the Biological course.*

XVIII. Electro-Chemistry.—*Winter term, Senior year; 3 exercises per week. Required of students in the Chemical course.*

XIX. Metallurgy.—Lectures and recitations. *Spring term, Senior year; 3 exercises per week. Required of students in the Chemical course.*

XX. Toxicology.—*Spring term, Senior year; 1 exercise of 2 hours per week. Required of students in the Chemical course.*

XXI.—Thesis Work. *Throughout the Senior year. Required of students in the Chemical course.*

PHYSICS.

I. General Course.—Study of mechanics, hydraulics, pneumatics and heat, *Fall term;* electricity and magnetism, *Winter term;* sound and light, *Spring term, Freshman year;* recitations, *2 exercises per week;* laboratory work, *1 exercise per week. Required of all candidates for a degree*

II. Advanced Physics.—*Throughout the year;* recitations, *2 exercises per week;* laboratory work, *2 exercises per week. Required of Sophomores in Electrical Engineering course. Required of students in Mechanical Engineering course, 3 exercises per week, Fall and Spring terms; elective, open to students in other courses who have completed Physics I or its equivalent.*

III. Elementary Photography.—A course of lectures and recitations upon the optics and chemistry of photography, together with practical photographic work. *Spring term;* lectures, *2 exercises per week;* laboratory work, *1 exercise per week; elective, open to all students.*

IV. Advanced Photography.—A course of lectures on photomicrography, the making of lantern-slides and bromide enlargements, and the manipulation of the optical lantern. *Spring term;* lectures, *1 exercise per week;* laboratory work, *2 exercises per week; elective, open to students who have taken course I.*

PHYSIOGRAPHY.

*II. Tarr's Physical Geography, with required reading from reference books.—Laboratory work and excursions. *Fall term, Freshman year; 3 exercises per week: Winter term, Freshman year; 1 exercise per week. Required of all candidates for a degree.*

III. Mineralogy. See Chemistry, IX.

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* Course I is given in the preparatory department.

GEOLOGY.

I. Agricultural Geology.—Lectures and recitations. *Winter term, Senior year; 2 exercises per week. Elective.*

BOTANY.

I. Biology of Plants.—The general principles of biology are illustrated by our common plants. Laboratory, reading and lectures. *Winter and Spring terms, Freshman year, and Fall term, Sophomore year; 3 exercises of 2 hours each per week. Required of students in the Agricultural, Biological, and Chemical courses.*

II. Fungi.—A study of fungi with special reference to parasitic forms of economic importance. Laboratory, reading and lectures. *Elective; open to students who have taken course I. Hours arranged with instructor.*

III. Histology.—Laboratory, reading and lectures. The laboratory work includes methods of imbedding, sectioning, staining and mounting. *Elective; open to students who have taken course I. Hours arranged with instructor.*

IV. A study of the Spring Flora of Kingston, with practice in the identification of species. Field and laboratory, *Spring term; 3 exercises per week. Elective; open to students who have taken course I.*

V. Plant-Life.—A study of the plant and its environment. The functions of root, stem and leaf, reproduction, and plant diseases are treated. Lectures and reading, illustrated by models, charts, demonstrations, and field and laboratory work. *A six weeks' course given in the winter school of Horticulture.*

By consulting the instructor other arrangements may sometimes be made for those desiring to elect work in botany.

ZOÖLOGY.

I. (A) Physiology.— *Winter and Spring terms, Sophomore year; 3 exercises per week. Required of Agricultural, Biological, and Chemical students.*

II. Farm Animals.—*Fall, Winter and Spring terms, Senior year; 3 exercises per week. Elective for Agricultural students.*

II. (A) Vertebrates.—As far as possible farm animals are used as types. *Fall term, Sophomore year; 3 exercises per week. Required of Biological students. Elective for Agricultural students.*

II. (B) Laboratory.—Students may elect their laboratory work in either the botanical or zoölogical laboratories by arrangement. Types: fish, frog, fowl, cat, man. *Winter term, Junior year; 3 exercises per week. Elective for Biological students.*

III. Invertebrates.—*Fall term, Junior year; 3 exercises per week. Required of Biological students.*

III. (A) Laboratory.—Types: Amœba, Paramœcium, Vorticella, Hydra, earthworm, etc. *Fall term, Junior year; 3 exercises per week. Elective for Biological students.*

IV. (A) Embryology (Elementary).—Types: eggs of frogs and fowls. *Spring term, Junior year; 3 exercises per week. Elective.*

IV. (B) Poultry and Parasites.— *Winter term, 5 exercises per week. Elective. Required for short course Poultry students.*

V. (A) Anatomical Technology.—Type: the cat. *Fall, Winter and Spring terms, Junior year; 6 exercises per week. Elective for Biological students.*

VI. Histologic Technology.—*Fall and Winter terms, Senior year; 6 exercises per week. Elective for Biological students.*

VII. Entomology.—*Spring term, Junior year; 3 exercises per week. Elective for Agricultural and Biological students.*

VII. (A) Economic Entomology.—*Spring and Fall terms, Junior year; 3 exercises per week. Elective for Agricultural and Biological students.*

VIII. Animal Biology.—*Special studies will be allowed those of the Seniors who have passed the Junior work; not less than 3 periods of 3 hours per week may be taken. Elective for Biological students.*

PSYCHOLOGY.

I. Elementary Course.—Lectures, recitations, simple laboratory experiments. *Winter and Spring terms; 3 exercises per week. Elective for Juniors and Seniors.*

AGRICULTURE.

I. Introduction.—Definition of terms; origin and necessity of agriculture; relations of agriculture to other industries; agriculture as an occupation; education for agriculture; the atmosphere and sunshine in relation to agriculture; plant and animal life in agriculture. *Spring term, Freshman year; 2 exercises per week. Required of Agricultural students.*

II. Soils.—*The origin, formation and deposition of soils are studied under physiography; the composition, mechanical and chemical analysis under agricultural chemistry; the physical properties and relations under soil-physics.* Agricultural Soils.—Definition; function; variation; classification; adaptation; location; examination; faults; improvement and preparation; clearing land; grading; mixing soils; paring and burning; reclaiming land; irrigation. *Fall term, Sophomore year; two exercises per week for one-half term. Required of Agricultural students.*

III. Land Drainage.—Sources of water; necessity of drainage; kinds of drains; action of drains; planning systems of drainage; drain tiles; construction and care of drains; cost and value of drains; sanitary effects of drainage. *Fall term, Sophomore year;*

2 exercises per week for one-half term. Required of Agricultural students.

IV. Agricultural Apparatus and Constructions.—Farm tools; implements; machines and vehicles; farm buildings; fences; roads and bridges—arrangement, construction, care and maintenance. *Winter term, Sophomore year; 3 exercises per week. Required of Agricultural students.*

V. Farm Fertilization.—Introduction; classification of manures, atmospheric, mineral and organic; manurial sources of potash, lime, magnesia, soda, iron, phosphates and nitrogen salts; animal manure, stable manure, composition and management; liquid manure; farm sewage; guanos; fish fertilizers; animal refuse; peat; green manuring; sea-weeds; vegetable refuse and by-products; composts; divisors for manures; application and action of manures; valuation of manures. *Spring term, Sophomore year; 2 exercises per week. Required of Agricultural students.*

VI. Field Crops.—Balancing of farm; rotation of crops; grass-land; wood-land; tillage-land; preparation of land, planting, cultivating, harvesting, storing and disposal of crops; special consideration of the hay crop, fodder crops, Indian corn, potatoes, root crops, field and garden vegetables; weeds. *Fall term, Junior year; 2 exercises per week. Elective.*

VII. Breeds of Farm Animals.—Origin, history, characteristics and adaptability of the leading breeds of the horse, neat cattle, sheep, swine and poultry; scoring; tracing pedigrees; breeders' associations. *Fall term, Senior year; 2 exercises per week. Elective.*

VIII. Breeding of Live Stock.—The principles of breeding; heredity; atavism; correlation; variation; fecundity; in-breeding; cross-breeding; relative influence of parents; sex; pedigree; form; selection; the breeding, care and management of the horse, neat cattle, sheep, swine and poultry. *Fall term, Senior year; 3 exercises per week. Elective.*

IX. History of Agriculture.—Agriculture in relation to civilization; fisher and hunter-folk; nomads; tillers of the soil; development of tillage; history of the plow; crop rotation; irrigation; fertilization; general and special farming; agricultural education; agricultural experimentation; evolution of farming implements; the farm and the farmer to-day. *Fall term, Senior year; 2 exercises per week. Elective by special arrangement.*

X. Feeding of Farm Animals.—Principles of rational feeding; animal body, composition, processes of digestion, assimilation and excrementation; feeding-stuffs, composition and digestibility; nutrients; feeding-standards; formulating rations; selection of feeding-stuffs; preparation of food; methods of feeding; utility of shelter; special feeding of horse, cow, sheep, swine and poultry. *Winter term, Senior year; 3 exercises per week. Elective.*

XI. Dairy Husbandry.—Breeds and breeding of dairy cattle; barns and dairy buildings; milk production, composition; management, æration, pasteurization, sterilization, testing, transportation and marketing; creaming; butter-making; cheese-making; milk-preservation, condensed milk, milk-sugar, etc. *Winter term, Senior year; 3 exercises per week. Elective.*

XII. Poultry Raising.—Domestic fowls—kinds, breeds, selection and breeding; buildings—location and arrangement, construction and furnishing, ventilation, yards and parks; foods and feeding, care and management, production of eggs and flesh, fattening; dressing and marketing; incubation, natural and artificial; rearing; diseases and enemies; caponizing; records and accounts; special management of turkeys, geese, ducks and pigeons. *Winter term, Senior year; 2 exercises per week. Elective.*

XIII. Agricultural Economics.—The mutual relations of agriculture and the body politic; the position of agriculture; independence of agriculture; state intervention; legislation; tariff; bounties; taxation; insurance; credit; reward; census; moral and social aspects of agriculture; division and distribution of

farms; size of farms; extensive and intensive farming; ownership of land; inheritance; nationalization of land; government lands; colonization; agricultural laborers, machinery, experimentation; education; association; coöperation; press; agricultural improvement; reclamation and irrigation of land; diversification of products. *Winter term, Senior year; 2 exercises per week. Elective by special arrangement for students who have taken Agriculture IX.*

XIV. Agricultural Literature.—An opportunity to read and study in any special line of agriculture for which the student is prepared. Examination and consideration of reports and bulletins of the agricultural experiment stations. *Winter term, Senior year; 2 exercises per week. Elective by special arrangement.*

XV. Farm Management.—Introduction and definitions; farming requisites; farm production and market relations; capital—permanent, floating and perishable—distribution in land, buildings, apparatus, live stock and supplies; labor and power; machinery; kind of farming; size of farm; system of farming; ownership or rental of farm; maintenance and management; returns and results; inventory, and balancing of accounts. *Spring term, Senior year; 5 exercises per week. Elective.*

XVI. Farm Accounts and Records.—The principles and methods of book-keeping in their application to the keeping of farm accounts; diary; note-book; calendar; records and accounts of special departments, crops, fields and animals; calculations; estimates and valuations; inventories. *Spring term, Senior year; 1 exercise per week. Elective.*

XVII. Farm Law.—The legal rights and liabilities of farmers; purchase and sale of farm, forms of deeds; rental of farm, terms of lease; boundaries and fences; overhanging trees; water rights and drainage; ways over the farm; rights in the highway; roadsides; live stock; dogs; game; trespass; theft; fires; insurance; employing laborers; liability of employer and employed; contracts; mortgages; notes; taxes; exchange, sale and purchase;

contagious diseases of live stock and crops. *Spring term, Senior year; 1 exercise per week. Elective by special arrangement.*

XVIII. Apiculture.—A study of the habits, care, breeding and management of the honey-bee, with practical work in the apiary. *Spring term, Senior year; 1 exercise per week. Elective by special arrangement.*

XIX. Agricultural Debate.—Discussion in the form of regular parliamentary debates upon leading agricultural questions. *Spring term, Senior year; 1 exercise per week. Elective.*

XX. Agricultural Experimentation.—A study of the objects, principles and methods of agricultural experimentation. Opportunity will be given for practical participation in the work of the experiment station to those students who arrange to continue this work through the experimental season. *Spring term, Senior year; 2 exercises per week. Elective by special arrangement.*

HORTICULTURE.

I. Principles of Horticulture.—A discussion of fundamental principles underlying horticultural operations in orchard, garden and greenhouse. *Fall term, Junior year; 2 recitations and 1 laboratory period per week. Required of Agricultural students.*

II. Pomology.—Lectures and supplementary reading. Designed to give practical instruction in fruit-growing. *Winter term; 3 exercises per week. Elective.*

III. Vegetable-Gardening.—Methods of growing garden vegetables in the open ground and under glass. *Winter term; 3 exercises per week. Elective.*

IV. Landscape-Gardening.—The principles underlying landscape-gardening as a fine art, with discussion of the ornamentation of home-grounds, school-grounds, cemeteries, parks, highways and other public grounds. Lectures and supplementary reading. *Fall term; 3 exercises per week. Elective.*

V. Forestry.—General importance of forests, their influence on climate and water supply, methods of regeneration, and systems of forest management. Lectures and supplementary reading. *Spring term; 3 exercises per week. Elective.*

VI. Plant-Breeding.—A discussion of the development of plants under culture, with especial reference to problems of heredity, environment, variation, selection and evolution. Lectures and supplementary reading. Open to students who have had course I in botany. *Fall term; 2 exercises per week. Elective.*

VII. Horticultural Literature.—A seminary course designed to give familiarity with horticultural writings, ancient and modern. *By arrangement. Elective.*

VIII. Original Investigation.—For advanced students only. *By arrangement. Elective.*

ENGLISH.

*II. Rhetoric.—Text-book study and practical application of rhetorical principles in themes and exercises. *Throughout the Freshman year; 2 exercises per week. Required of all candidates for a degree.*

III. Critical study of certain prose masterpieces, with essays and various short papers. *Throughout the Sophomore year; 2 exercises per week. Required of all candidates for a degree.*

IV. General English Literature.—Topical study. Essays and collateral reading required. *Throughout the Junior year; 2 exercises per week. Required of all candidates for a degree.*

V. Special English Literature.—Study of special periods and authors. *Throughout the year; 3 exercises per week. Elective; open to students who have taken courses I–IV or their equivalent.*

VI. Special Work in Themes. *Throughout the year. Elec-*

* Course I, Elementary English, is given in the preparatory department.

tive; open to students who have taken courses I–IV or their equivalent.

GERMAN.

I. Elementary Course. — Grammar, dictation, conversation, reading of easy prose and poetry. *Fall and Winter terms, Freshman year; 5 exercises per week: Spring term; 3 exercises per week. Required of all candidates for a degree who do not offer French.*

II. Reading of intermediate texts, composition, conversation. *Fall term, Sophomore year; 3 exercises per week. Open to students who have taken course I or its equivalent, and required of all candidates for a degree who do not offer French.*

III. German Classics.— *Winter and Spring terms, Sophomore year; 3 exercises per week. Open to students who have taken courses I and II or their equivalent, and required of all candidates for a degree who do not offer French.*

IV. Goethe's Meisterwerke (Bernhardt).—*Fall term; 3 exercises per week. Elective; open to those who have taken courses I–III or their equivalent.*

V. Study of Schiller or Heine.— *Winter term; 3 exercises per week. Elective; open to those who have taken courses I–III or their equivalent.*

VI. Study of Freytag.—*Spring term; 3 exercises per week. Elective; open to those who have taken courses I–III or their equivalent.*

VII. Scientific German.—Special work assigned by different professors. *Elective; open to those who have taken courses I–III or their equivalent.*

FRENCH.

I. Elementary Course.—Grammar, dictation, conversation, reading of easy prose and poetry. *Fall and Winter terms, Fresh-*

man year; 5 exercises per week: Spring term, 3 exercises per week. Required of all Freshmen not taking German or Latin and not offering French for admission.

II. Reading of intermediate texts, composition, conversation.—*Throughout the Sophomore year; 3 exercises per week. Required of all candidates for a degree who do not offer German.*

III. French Classics.—*Throughout the year; 3 exercises per week. Elective; open to students who have taken courses I and II.*

IV. Lyrics of the Nineteenth Century.—*Fall term; 3 exercises per week. Elective; open to those who have taken courses I and II or their equivalent.*

V. Study of Victor Hugo.—*Winter term; 3 exercises per week. Elective; open to those who have taken courses I and II or their equivalent.*

VI. Scientific French.—Special work assigned by different professors. *Elective; open to those who have taken courses I and II or their equivalent.*

SPANISH.

I. Elementary Course.—Grammar, dictation, conversation, letter-writing, commercial forms, reading of easy prose and poetry. *Throughout the year; 3 exercises per week. Elective.*

II. Advanced Course.—Continuation of course I. Reading of more difficult texts. *Throughout the year; 3 exercises per week. Elective.*

LATIN.

*II. Cæsar or Selections from various Latin authors.—*Throughout the year; 3 exercises per week. Elective.*

*Course I, Elementary Latin, is given in the preparatory department.

HISTORY AND POLITICAL SCIENCE.

*II. Constitutional and Political History of the United States. Based on Hart's Epochs of American History.—Lectures, recitations, readings and reports.—*Throughout the year; 3 exercises per week. Required of Juniors in the Biological course; elective for other students.*

III. English History.—This subject forms a part of the required work in Junior English. (See English IV.)

IV. Modern European History from the Beginning of the French Revolution.—*Throughout the year; 3 exercises per week. Elective for Juniors and Seniors.*

V. Science of Government.—Town, city, county, state and United States. Their origin, development and practices. Critical analysis of the Constitution of the United States. Lectures, recitations and reports. *Fall term, Senior year; 3 exercises per week. Required of all candidates for a degree.*

VI. Political Economy.—General principles. Based on Walker's Advanced Course.—Lectures, recitations, discussions, readings, essays. Consideration of present day problems. *Winter and Spring terms, Senior year; 3 exercises per week. Required of all candidates for a degree.*

MATHEMATICS.

†IV. College Algebra (Taylor).—The theory of limits; differentiation; development of functions in series; permutations and combinations; determinants. *Fall term, Freshman year; 4 exercises per week. Required of all candidates for a degree.*

V. Plane Trigonometry (Bowser).—The derivation of the fundamental formulas; logarithms; the solution of right and oblique

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*Course I, General History, is given in the preparatory department.

†Courses I, II and III are given in the preparatory department.

triangles; practical problems. *Winter term, Freshman year; 3 exercises per week. Required of all candidates for a degree.*

VI. Solid Geometry (Phillips and Fisher).—Lines and planes in space; diedral angles; polyhedral angles; polyhedrons; the cylinder, cone and sphere; measurement of the cylinder, cone and sphere; numerical examples and original demonstrations. *Spring term, Freshman year; 3 exercises per week. Required of all candidates for a degree.*

VII. Analytical Geometry (Loney).—Coördinate systems; the point; the line; relation between different coördinate systems; the equation of the first degree, the straight line; the equation of the second degree, the conic sections; higher plane curves. *Throughout the Sophomore year; 3 exercises per week. Required of students in the Mechanical and Electrical Engineering courses. Elective for other students.*

VIII. Calculus (Osborne).—The differentiation of algebraic, trigonometric, logarithmic, exponential and anti-trigonometric functions. Integration of fundamental forms; definite integrals; applications to geometry and mechanics; successive differentiation; successive integration with applications; evaluation of indeterminate forms; the development of functions in series; maxima and minima; change of the independent variable; integration of rational fractions; integration by rationalization; integration by parts and by series; curve tracing. *Throughout the Junior year; 3 exercises per week. Required of students in the Mechanical and Electrical Engineering courses. Elective for other students.*

IX. Differential Equations.—*First half the Senior year; 3 exercises per week. Elective for students who have completed course VIII.*

X. Analytical Mechanics.—*Second half the Senior year; 3 exercises per week. Elective for students who have completed course VIII.*

XI. Courses in synthetic geometry, projective geometry, theory of equations, modern analytical geometry, theory of functions, may be arranged for by consultation with the head of the department.

CIVIL ENGINEERING.

I. Surveying.—Theory and practice; problems in the use and adjustment of modern surveying instruments; land surveying; computations and plotting. *Fall term; 1 classroom exercise, 2 exercises of three hours each of field-work per week. Elective.*

II. Land Drainage (See Agriculture III).—Sources of water; necessity of drainage; kinds of drains; action of drains; planning systems of drainage; drain tiles; construction and care of drains. *Fall term, Sophomore year; 2 exercises per week for one-half the term. Required of Agricultural students.*

III. Surveying.—Land, city, topographic and hydrographic. Theory and practice. *Spring term; 1 classroom exercise, 2 exercises of field-work per week. Required of Sophomores in the Agricultural course. Elective for students who have taken course I or II.*

IV. Highways and Pavements.—Theory of the location and construction of earth, gravel and broken-stone roads and paved streets. *Fall term; 3 classroom exercises, 1 exercise of field-work per week. Elective.*

V. Location of Roads and Railroads.—Field work; reconnaissance; preliminary survey; location survey; slope-staking; computation of earth works. *Fall term; 2 exercises of three hours each. Elective for those who have completed courses III and VI.*

VI. Topographical Drawing and Lettering (See Mechanics VI).— *Winter term; 1 exercise of three hours per week. Required of Agricultural Sophomores. Elective.*

VII. Elements of Geodesy.—Measurement of base line; triangulation; adjustment of triangles and quadrilaterals; mapping; computations; problems in finding latitude and longitude. *Spring term. Elective to those who have completed courses IV and V.*

HOME SANITATION.

I. A course of lectures and recitations on plumbing, water-supply and sewerage systems, heating and ventilation, accompanied by laboratory work, given in alternate years with refrigeration and cold storage. *Throughout the Senior year. Lectures, 3 exercises per week, Fall term; lectures, 2 exercises, and laboratory work, 1 exercise, Winter and Spring terms. Required of students in the Electrical Engineering course. Elective; open to Juniors and Seniors in other courses.*

MECHANICS.

I. Mechanical Drawing.—Elementary principles, use of tools, inking in, geometrical drawing. *Winter and Spring terms, Freshman year. Winter term: 2 periods of 2 hours each per week required for a degree in Mechanical Engineering; 1 period of 2 hours per week required for a degree in Electrical Engineering. Spring term: 2 periods of 2 hours each per week required for a degree in Mechanical and Electrical Engineering; 1 period of 2 hours per week required for a degree in Agriculture. Elective for other students.*

II. Mechanical Drawing.—Screw threads, bolts and nuts, shade lines, line shading. *Winter term, Sophomore year; 3 periods of 2 hours each per week. Required for a degree in Mechanical Engineering.*

III. Mechanical Drawing.—Descriptive geometry. *Spring term, Sophomore year; 3 periods of 2 hours each per week. Required for a degree in Mechanical and Electrical Engineering.*

IV. Mechanical Drawing.—Machine details and parts, tracing,

blue printing. *Fall term, Junior year; 3 periods of 2 hours each per week. Required for a degree in Mechanical Engineering.*

V. Mechanical Drawing.—Elements of machine design. *Winter term, Junior year; 3 periods of 2 hours each per week. Required for a degree in Mechanical Engineering.*

VI. Mechanical Drawing.—Practical machine design. *Fall term, Senior year; 2 periods of 2 hours each per week. Required for a degree in Mechanical Engineering.*

VII. Mechanical Drawing.—Elements of topographical drawing as introductory to land surveying. *Winter term, Sophomore year; 1 period of 2 hours per week. Required for a degree in Agriculture.*

VIII. Wood-working.—Use of tools, bench work and carpentering. *Winter term, Freshman year; 2 exercises of 3 hours each per week. Required for a degree in Mechanical and Electrical Engineering and Agriculture.*

IX. Wood-working.—Wood-turning and pattern-making. *Spring term, Freshman year; 3 exercises of 3 hours each per week. Required for a degree in Mechanical and Electrical Engineering.*

X. Shopwork.—Foundry practice, principles of moulding and casting. *Fall term, Sophomore year; 2 exercises of 2 hours each per week. Required for a degree in Mechanical Engineering.*

XI. Shopwork.—Forging, drawing, bending, welding and tool dressing. *Fall term, Junior year; 2 exercises of 3 hours each per week. Required for a degree in Mechanical Engineering.*

XII. Shopwork.—Forging. Short course. *Spring term, Freshman year; 1 exercise of 3 hours each per week. Required for a degree in Agriculture.*

XIII. Machine-shop Practice.— *Winter and Spring terms, Junior year; 2 exercises of 3 hours each per week. Required for a degree in Mechanical and Electrical Engineering.*

XIV. Wood-carving.—Care and use of tools, geometrical motives, diaper patterns, incised carving, flat and curved surface carving, historic ornament, low relief and high relief. *1 exercise of 3 hours per week. Elective.*

XV. Steam Boilers.—Types, construction, strength, uses and management. *Fall term, Junior year; 2 exercises per week. Required for a degree in Mechanical and Electrical Engineering.*

XVI. Thermodynamics.—As directly applied to the steam engine. Simple and compound engines. *Winter term, Junior year; 4 exercises per week. Required for a degree in Mechanical Engineering.*

XVII. Steam Engineering.—Valve gears, regulators, condensers, power plants, tests. *Spring term, Junior year; 3 exercises per week. Required for a degree in Mechanical and Electrical Engineering.*

XVIII. Strength of Materials.—Wood, iron, steel, alloys, brick, stone and cements. *Spring term, Junior year; 3 exercises and 1 laboratory exercise of 2 hours per week. Required for a degree in Mechanical Engineering.*

XIX. Theoretical and Applied Mechanics.—Bodies at rest and in motion, friction of rest and motion, energy, work and power. *Fall term, Senior year; 4 exercises per week. Required for a degree in Mechanical Engineering.*

XX. Graphic Statics of Structures and Machines.— *Winter term, Senior year; 4 exercises per week. Required for a degree in Mechanical Engineering.*

XXI. Hydraulics.—Flow of water through pipes, orifices and sewers. Measurement of flow of rivers and streams. Water

power and water supply. *Spring term, Senior year; 4 exercises per week. Required for a degree in Mechanical and Electrical Engineering.*

XXII. Engineering Laboratory.—Physical tests of materials used in industries and in construction. Tests of machines and apparatus. *Throughout the Senior year; 2 lectures and 1 laboratory exercise per week. Required for a degree in Mechanical Engineering.*

XXIII. Mill Construction.—Lectures upon the structural development and design of shops and mills. *Fall term, Senior year; 3 exercises per week. Required for a degree in Mechanical and Electrical Engineering.*

XXIV. Metallurgy.—Cast iron, wrought iron, steel, copper, tin, lead, zinc and alloys. *Winter term, Senior year; 3 exercises per week. Required for a degree in Mechanical Engineering.*

XXV. Textile Machinery.—Lectures upon types of machinery and processes for the manufacture of cotton and woolen goods. *Spring term, Senior year; 3 exercises per week. Required for a degree in Mechanical Engineering.*

ELECTRICAL ENGINEERING.

I. Electrical Measurements and Electrical Machinery. — A course of lectures and laboratory work upon electrical measurements, testing of instruments, dynamos and motors. *Throughout the Junior year;* lectures, *1 exercise per week;* laboratory work, *2 exercises per week. Required of students in the Electrical and Mechanical Engineering courses; elective for other students who have taken Physics II.*

II. Applied Electricity.—A course of lectures, accompanied by laboratory work upon modern practical applications of electricity. *Throughout the Senior year;* lectures, *1 exercise per week;* laboratory work, *2 exercises per week. Required of students in*

THE STUDIO.

Electrical Engineering course; and elective for other students who have taken course I.

DRAWING AND MODELING.

I. Freehand Drawing.—Drawing in charcoal from objects. Memory sketches required. *Fall term, Freshman year; 1 exercise of 2 hours per week. Required of all candidates for a degree.*

II. Drawing in Charcoal from Still Life and the Cast.—*Spring term, Freshman year; 3 exercises of 2 hours per week. Required of students in Biological course; elective for students in Chemical course.*

III. Drawing in Charcoal from Still Life and the Cast.—*Fall term, Sophomore year; 3 exercises of 2 hours per week. Elective; open to students in the Biological course who have taken course I. Spring term, Sophomore year; open to students in Biological course.*

IV. Modeling.—*Fall term, Sophomore year; 3 exercises of 2 hours per week. Elective; open to students in Chemical and Biological courses.*

STENOGRAPHY.

I. Elementary Course.—Instruction in principles; dictation. *Throughout the year; 4 exercises per week. Elective.*

II. Advanced Course.—Dictation, including the following: business letters, legal documents, terms used, deeds, wills, mortgages, contracts, declarations, etc.; hints useful in office work; general dictation. *Throughout the year; 3 periods per week. Elective.*

THE COURSES OF STUDY LEADING TO A DEGREE.

FRESHMAN.

Fall Term.

Physiography II*	3	English II	2
Physics I	3	German I	5
Mathematics IV	4	Freehand Drawing I	1

Winter Term.

Agriculture.		Mechanical Engineering.		Electrical Engineering.		Chemistry.		Biology.	
Mathematics V	3	Mathematics V	3	Mathematics V	3	Mathematics V	3	Mathematics V	3
Physics I	3	Physics I	3	Physics I	3	Physics I	3	Physics I	3
Physiography II	1	Physiography II	1	Physiography II	1	Physiography II	1	Physiography II	1
English II	2	English II	2	English II	2	English II	2	English II	2
German I	5	German I	5	German I	5	German I	5	German I	5
Botany I	3	Mechanics VIII	2	Mechanics VIII	2	Botany I	3	Botany I	3
Mechanics VIII	2	Mechanics I	2	Mechanics I	1	Military Drill.		Military Drill.	
Military Drill.		Military Drill.		Military Drill.					

Spring Term.

Agriculture.		Mechanical Engineering.		Electrical Engineering.		Chemistry.		Biology.	
Mathematics VI	3	Mathematics VI	3	Mathematics VI	3	Mathematics VI	3	Mathematics VI	3
Physics I	3	Physics I	3	Physics I	3	Physics I	3	Physics I	3
English II	2	English II	2	English II	2	English II	2	English II	2
German I	3	German I	3	German I	3	German I	3	German I	3
Mechanics XII	1	Mechanics I	2	Mechanics I	2	Botany I	3	Botany I	3
Botany I	3	Mechanics IX	3	Mechanics IX	3	Military Drill.		Freehand Drawing II	3
Agriculture I	2	Military Drill.		Military Drill.		ELECTIVES.		Military Drill.	
Military Drill.						(*One to be chosen.*)			
						Freehand Drawing II	3		
						Mechanics I	3		

* The Roman numerals refer to the course numbers; see pp. 48-69.

SOPHOMORE.

Fall Term.

Agriculture.	Mechanical Engineering.	Electrical Engineering.	Chemistry.	Biology.
Chemistry I†..... 4	Chemistry I†..... 4	Chemistry I†..... 4	Chemistry I†..... 4	Chemistry I†..... 4
English III..... 2	English III..... 2	English III..... 2	English III..... 2	English III..... 2
German II..... 3	German II..... 3	German II..... 3	German II..... 3	German II..... 3
Botany I..... 3	Physics II..... 3	Physics II..... 4	Botany I..... 3	Botany I..... 3
Agriculture II, III..... 2	Mathematics VII..... 3	Mathematics VII..... 3	Zoölogy II A..... 3	Zoölogy II A..... 3
Zoölogy II A..... 3	Mechanics X..... 2	Military Drill.	Military Drill.	Military Drill.
Military Drill.	Military Drill.		ELECTIVES.*	ELECTIVES.*
			(Each subject three times a week, one to be chosen.)	*(Each subject three times a week, one to be chosen.)*
			History II.	Horticulture I, VI.
			French. German.	Zoölogy.
			Physics II. Mathematics VII.	Physics II. Mathematics VII.
			Civil Engineering I.	French. Latin.
			Agriculture II, III. Freehand Drawing III.	
			Sanitation I.	

Winter Term.

Chemistry I..... 4	Chemistry I..... 4	Chemistry I..... 4	Chemistry I..... 4	Chemistry I..... 4
Chemistry II..... 2	Chemistry II..... 2	Chemistry II..... 2	Chemistry II..... 2	Chemistry II..... 2
English III..... 2	English III..... 2	English III..... 2	English III..... 2	English III..... 2
German III..... 3	German III..... 3	German III..... 3	German III..... 3	German III..... 3
Zoölogy I A..... 3	Mathematics VII..... 3	Physics II..... 4	Zoölogy I A..... 3	Zoölogy I A..... 3
Mechanics VII..... 1	Mechanics II..... 3	Mathematics VII..... 3	Military Drill.	Military Drill.
Agriculture IV..... 3	Military Drill.	Military Drill.	ELECTIVES.	ELECTIVES.
Military Drill.			*(Each subject three times a week, one to be chosen.)*	*(Each subject three times a week, one to be chosen.)*
			History II. French.	Horticulture II, III.
			German. Physics II.	Botany. Zoölogy.
			Mathematics VII.	Physics II. Mathematics VII.
				French. Latin.

Spring Term.

Chemistry II..... 3	Chemistry II..... 3	Chemistry II..... 3	Chemistry II..... 3	Chemistry II..... 3
English III..... 2	English III..... 2	English III..... 2	English III..... 2	English III..... 2
German III..... 3	German III..... 3	German III..... 3	German III..... 3	German III..... 3
Zoölogy I A..... 3	Physics II..... 3	Physics II..... 4	Zoölogy I A..... 3	Zoölogy I A..... 3
Civil Engineering III..... 3	Mathematics VII..... 3	Mathematics VII..... 3	Chemistry III..... 3	Chemistry IV..... 3
Agriculture V..... 2	Mechanics III..... 3	Mechanics III..... 3	Chemistry IV..... 3	Military Drill.
Military Drill.	Military Drill.	Military Drill.	Military Drill.	ELECTIVES.
			ELECTIVES.	*(Each subject three times a week, two to be chosen.)*
			(Each subject three times a week, one to be chosen.)	FIRST GROUP.
			History II. French.	*(One of this group must be and two may be chosen.)*
			Physics II, III.	Horticulture V. Botany IV.
			Mathematics VII.	Zoölogy. Physics III.
			Agriculture V.	SECOND GROUP.
			German.	*(Only one of this group may be taken.)*
				Physics II. Mathematics VII.
				French. Latin.
				Chemistry III.

† The Roman numerals refer to the course numbers; see pp. 48-69.

* Electives must be chosen by advice of the course of study committee.

JUNIOR.

	Agriculture.	Mechanical Engineering.	Electrical Engineering.	Chemistry.	Biology.
Fall Term.	Chemistry V †..... 3 English IV..... 2 Zoölogy III..... 3 Horticulture I..... 3 Chemistry VI..... 4 Military Drill. Elective*..... 3 *(One-half of the elective work throughout the course is to be chosen from lines related to Agriculture; the remainder may consist of any available subjects for which the student is fitted.)*	Chemistry V †..... 2 English IV..... 2 Mathematics VIII..... 3 Electrical Engineering I. 3 Mechanics IV..... 3 Mechanics XI..... 2 Mechanics XV..... 2 Military Drill.	Chemistry V †..... 2 English IV..... 2 Mathematics VIII..... 3 Electrical Engineering I. 3 Mechanics IV..... 3 Mechanics XV..... 2 Military Drill. ELECTIVES.* *(Each subject three times a week, one to be chosen.)* History II. Mathematics XI. Civil Engineering I.	Chemistry V †..... 5 English IV..... 2 Chemistry VI..... 4 Military Drill. ELECTIVES.* *(Each subject three times a week, two to be chosen.)* FIRST GROUP. *(Only one of this group may be taken.)* History II, IV. French. German. SECOND GROUP. *(One of this group must be and two may be taken.)* Zoölogy II. Botany. Physics II. Mathematics VIII. Horticulture I.	History II †..... 3 English IV..... 2 Chemistry VI..... 4 Zoölogy III..... 3 Military Drill. Electives*..... 6 BIOLOGIC GROUP. *(Students taking Zoology or Botany as major studies must elect at least one from this group.)* Horticulture I, VI. Zoölogy III A, V A, VII A. Botany. GENERAL STUDIES GROUP. French. German. Latin. Mathematics VII, VIII. Physics II. Chemistry V.
Winter Term.	English IV..... 2 Chemistry XVII..... 3 Military Drill. Elective..... 12	English IV..... 2 Mathematics VIII..... 3 Electrical Engineering I. 3 Mechanics V..... 3 Mechanics XIII..... 2 Mechanics XVI..... 4 Military Drill.	English IV..... 2 Mathematics VIII..... 3 Electrical Engineering I. 3 Mechanics XIII..... 2 Mechanics V..... 3 Military Drill. ELECTIVES. *(Each subject three times a week, one to be chosen.)* Mathematics XI. (Synthetic Geometry.) History II.	English IV..... 2 Chemistry VI..... 4 Chemistry VIII..... 3 Chemistry V..... 3 Chemistry IX..... 3 Military Drill. ELECTIVES. *(Each subject three times a week, one to be chosen.)* History II, IV. French. German. Psychology. Physics II. Mathematics VIII.	History II..... 3 English IV..... 2 Chemistry VI..... 4 Military Drill. Electives..... 9 BIOLOGIC GROUP. *(Students taking Zoology or Botany as major studies must elect at least two from this group.)* Horticulture II, III. Zoölogy II B, V A. Botany. GENERAL STUDIES GROUP. French. German. Latin. Mathematics VII, VIII. Physics II. Chemistry V, VIII, IX.
Spring Term.	English IV..... 2 Chemistry XVII..... 3 Military Drill. Elective..... 12	English IV..... 2 Mathematics VIII..... 3 Electrical Engineering I. 3 Mechanics XIII..... 2 Mechanics XVII..... 3 Mechanics XVIII..... 4 Military Drill.	English IV..... 2 Mathematics VIII..... 3 Electrical Engineering I. 3 Mechanics XIII..... 2 Mechanics XVII..... 3 Military Drill. ELECTIVES. *(Each subject three times a week, one to be chosen.)* Physics III. History II.	English IV..... 2 Chemistry VII..... 3 Chemistry XII..... 3 Chemistry V..... 5 Chemistry X..... 1 Chemistry XI..... 1 Military Drill. ELECTIVES. *(Each subject three times a week, one to be chosen.)* History II, IV. French. German. Psychology. Physics II. Zoölogy III. Mathematics VIII.	English IV..... 2 History II..... 3 Military Drill. Electives..... 12 BIOLOGIC GROUP. *(Students taking Zoology or Botany as major studies must elect at least two from this group.)* Horticulture V. Zoölogy IV A, V A, VII A, VII. Botany. Physics III, IV. GENERAL STUDIES GROUP. French. German. Mathematics VII, VIII. Physics II. Chemistry III, IV, V.

† The Roman numerals refer to the course numbers; see pp. 48-69.

* Electives must be chosen by advice of the course of study committee.

SENIOR.

	Agriculture.	Mechanical Engineering.	Electrical Engineering.	Chemistry.	Biology.
Fall Term.	Political Science V † .... 3 Chemistry XVII..... 3 Military Drill. Elective*.....11	Political Science V † .... 3 Mechanics VI .... 2 Mechanics XIX..... ... 4 Mechanics XXII..... 3 Mechanics XXIII..... 3 Military Drill.	Political Science V † .... 3 Electrical Engineering II 3 Sanitation I..... 3 Mechanics XXIII..... 3 Thesis. Military Drill. ELECTIVES.* (*Each subject three times a week, one to be chosen.*) Mathematics IX. Mathematics XI. History II, IV.	Political Science V †.... 3 Chemistry XIII..... 3 Chemistry XIV..... 6 Chemistry XII..... 3 Chemistry XV .... 3 Thesis. Military Drill. ELECTIVES.* (*Each subject three times a week, one to be chosen.*) History II, IV. French. German.	Political Science V †..... 3 Thesis. Military Drill. Electives*.....12 BIOLOGIC GROUP. (*Students taking Zoology or Botany as major studies must elect at least two from this group.*) Zoölogy VI, VIII. Botany. Horticulture I, IV. Agriculture VIII. Chemistry XV. GENERAL STUDIES GROUP. History IV. French. German. English V, VI. Mathematics VII, VIII. Physics II.
Winter Term.	Political Science VI..... 3 Military Drill. Elective.....12	Political Science VI..... 3 Mechanics XX..... ..... 4 Mechanics XXII..... 3 Mechanics XXIV..... 3 Thesis. Military Drill.	Political Science VI..... 3 Electrical Engineering II 3 Sanitation I..... 3 Thesis. Military Drill. ELECTIVES. (*Each subject three times a week, two to be chosen.*) Mathematics IX, X, XI. Psychology. History II, IV.	Political Science VI..... 3 Chemistry XIII..... 3 Chemistry XVI..... 3 Chemistry XVII..... 3 Chemistry XV..... 3 Chemistry XVIII..... 3 Thesis Military Drill. ELECTIVES. (*Each subject three times a week, one to be chosen.*) History II, IV. French. German. Psychology.	Political Science VI..... 3 Thesis. Military Drill. Electives.....12 BIOLOGIC GROUP. (*Students taking Zoology or Botany as major studies must elect at least two from this group.*) Zoölogy VI, VIII. Botany. Horticulture II, III. Psychology. Agriculture X. Chemistry XV, XVII. GENERAL STUDIES GROUP. History IV. French. German. English V, VI. Mathematics VII, VIII. Physics II.
Spring Term.	Political Science VI..... 3 Military Drill. Elective.....14	Political Science VI..... 3 Mechanics XXI..... 4 Mechanics XXII..... 3 Mechanics XXV..... 3 Thesis. Military Drill.	Political Science VI..... 3 Electrical Engineering II 3 Sanitation I..... 3 Inspection Excursions. Thesis. Military Drill. ELECTIVES. (*Each subject three times a week, two to be chosen.*) Mathematics X, XI. Psychology. History II, IV. Physics IV.	Political Science VI..... 3 Chemistry XIX..... 3 Chemistry XVI..... 3 Chemistry XVII..... 3 Special Chemistry..... 3 Chemistry XX..... 1 Thesis. Military Drill. ELECTIVES. (*Each subject three times a week, one to be chosen.*) History II, IV. French. German. Psychology.	Political Science VI..... 3 Thesis. Military Drill. Electives.....12 BIOLOGIC GROUP. (*Students taking Zoology or Botany as major studies must elect at least two from this group.*) Zoölogy VIII. Botany. Horticulture V. Psychology. Chemistry XV. Physics III, IV. Animal Industry. GENERAL STUDIES GROUP. History IV. French. German. English V, VI. Mathematics VII, VIII. Physics II. Chemistry III, IV.

† The Roman numerals refer to the course numbers; see pp. 48-69.

* Electives must be chosen by advice of the course of study committee.

THE PREPARATORY DEPARTMENT

OF THE

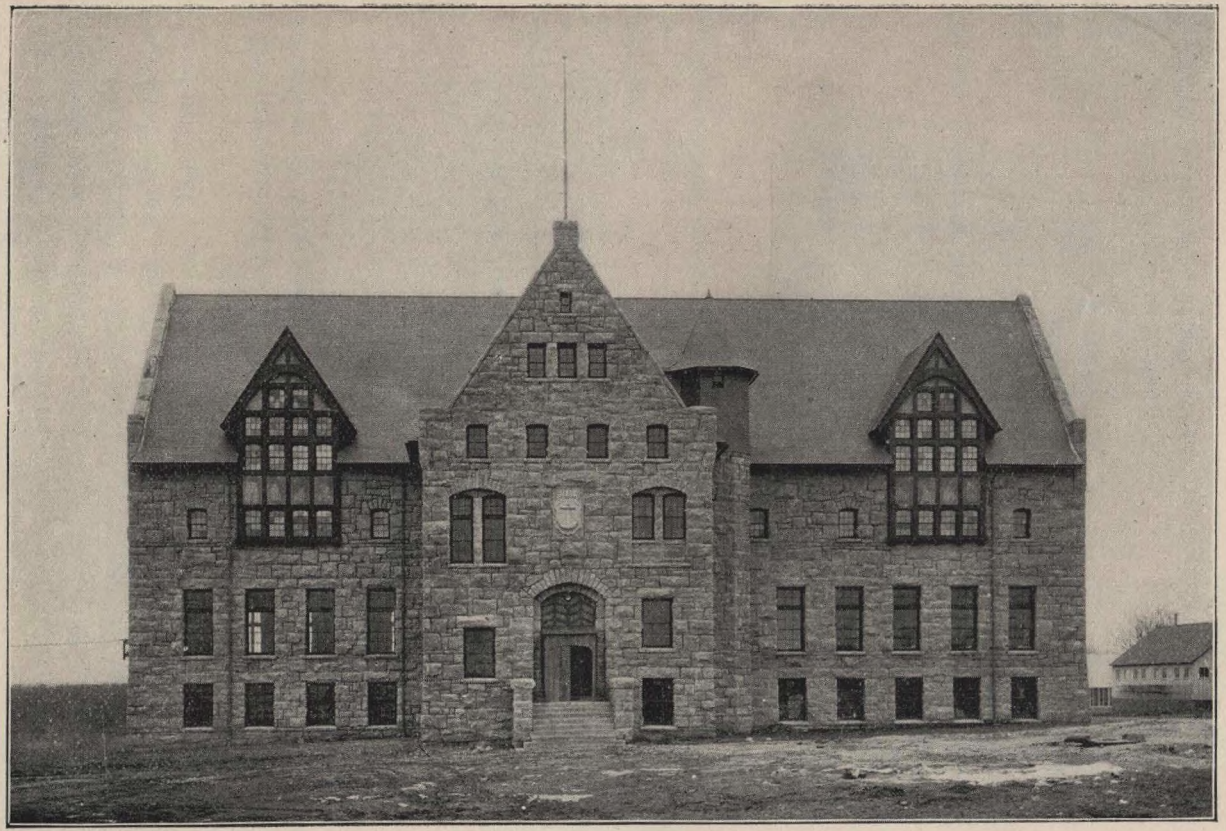
Rhode Island College of Agriculture and Mechanic Arts.

The preparatory school is intended for young men and young women who have not the privileges of a high school, and also for those who, because of maturity, are out of touch with the public schools.

REQUIREMENTS FOR ADMISSION TO PREPARATORY DEPARTMENT.

Candidates for admission must bring testimonials of good character, and must be not less than fifteen years of age.

For admission to the first year in the preparatory department, oral or written examinations will be given in arithmetic, geography, English grammar and United States history. In the arithmetic examination special attention will be paid to common and decimal fractions, denominate numbers, percentage and interest. Whitney and Lockwood's English grammar and Fiske's United States history are recommended. In English, each candidate will be required to answer certain questions in grammar, and to write a short composition correct in spelling, capitalization, punctuation and paragraphing, on a subject announced at the time of the examination. Candidates will be expected to show familiarity with the following works: Hawthorne's The House of the Seven Gables; Whittier's Snow-Bound, The Tent on the Beach and Other Poems; DeFoe's Robinson Crusoe; The Arabian Nights; Macaulay's Lays of Ancient Rome. Useful editions of these works will be found either in the Riverside School Library or the Riverside Literature Series, published by Houghton, Mifflin and Company.



LIPPITT HALL.

Students wishing to enter the second-year class in this school will be examined in geography and United States history, advanced arithmetic, algebra to quadratics, and English. In 1901 and 1902 the English requirements will cover Shakespeare's Merchant of Venice and Macbeth; Pope's Iliad, books I, VI, XXII, XXIV; Addison's The Sir Roger de Coverley Papers; Scott's Ivanhoe; Cooper's The Last of the Mohicans; Lowell's The Vision of Sir Launfal; Coleridge's The Ancient Mariner.

Any mature person who can satisfy the examining committee that he has the capacity to do the work, may enter on probation and take the examination later.

COURSE OF STUDY.

FALL TERM.

First Year Preparatory.	Hrs. per week.	Second Year Preparatory.	Hrs. per week.
Advanced Arithmetic	5	Algebra	4
English	6	Geometry	3
General History	3	English	3
Physiography	2	Latin	5

Electives.—Freehand Drawing, Carpentering, Practical Mechanics, Agriculture, Stenography.

WINTER TERM.

Algebra	5	Algebra	4
English	5	Geometry	3
General History	3	English	3
Physics	3	Latin	5
Physiography	1		

Electives.—Carpentering, Wood-carving, Practical Mechanics, Agriculture, Stenography.

SPRING TERM.

Algebra	5	Algebra	4
English	5	Geometry	3
General History	3	English	3
Physics	3	Latin	5

Electives.—Carpentering, Agriculture, Practical Mechanics, Freehand Drawing, Stenography.

Students are required to elect one of the courses offered under electives, which their previous training has fitted them to take. While the course of study is graded in two classes, designated as the First and Second Year Preparatory, a mature student may take such studies from both grades as are essential for preparation for the college.

Students desiring special work in *agriculture* or mechanics, who are not prepared to enter the regular courses leading to a degree, may combine with work in the preparatory department such courses in agriculture and mechanics as may fit their especial needs. The successful completion of such a special course will lead to a certificate covering the work completed.

GENERAL INFORMATION.

Information with regard to the calendar of the school, the cost of living, regulations, etc., may be found on the first twenty-five pages of this catalogue. For other information apply to

M. H. TYLER, *Master*,

KINGSTON, R. I.

THE SCHOOL OF CORRESPONDENCE.

Not all who would like to do so can attend college. Yet the benefits to be derived therefrom need not be entirely lost. Education by correspondence is making rapid strides. While it can never take the place of actual attendance at an educational institution, it may be the source of much benefit to the one who pursues it faithfully, earnestly and persistently.

The School of Correspondence is designed to help those who cannot attend the college classes. Its aim is to upbuild the farm-home. It will assist the father or the son in a study of the problems which directly bear upon the work of the farm. It will assist the mother or the daughter in the study of nature, science or literature. Through the Nature Guard it will stimulate the young people to see and appreciate more of the things of out-door life. It tries to bring to the farm-home some of the best things of the educational world and of college life. It does not undertake to outline and carry through a definite course of instruction, and the work which it offers is in no sense a substitute for a college education. But it does undertake to assist the student to a better understanding of the particular subjects in which he is most directly interested. Questions are forwarded as the work progresses and the replies discussed when necessary. Full opportunity is also afforded for questions on the part of the student.

No fees are exacted, the only expense being for the books used and the postage required in correspondence. Books are obtained at reduced rates from The Orange Judd Company, 52 Lafayette Place, N. Y., upon presentation of the certificate of enrollment.

Address, SCHOOL OF CORRESPONDENCE,

RHODE ISLAND COLLEGE,

KINGSTON, R. I.

THE NATURE GUARD.

The Nature Guard is an organization of young people formed for the purpose of awakening in its members a livelier interest in the things of out-door life. Its primal object is to stimulate observation and to furnish a key to the coyly hidden secrets of nature, while underneath and behind it all is the desire to instill a love of nature and country life.

The boys and girls in one school, or in one room, if the school is graded, form themselves into a band and elect officers, which are a Spy and a Guardian. Each band fixes its own times of meeting and adopts its own methods of procedure. Enrollment cards, to be signed and returned, are furnished from headquarters. Printed leaflets are mailed monthly during the school-year, and monthly reports giving observations of their own are asked from the members.

The following bands, aggregating a membership of over six hundred, were enrolled during the school-year of 1899–1900, the first year of its organization:

Agassiz Band, Woonsocket, R. I. Dorothy W. Caldwell, Spy; Ralph Green, Guardian.

Altus Band, Altus, Pa. Ethel W. Smith, Spy; Florence A. Watkins, Guardian.

Argus Band, Woonsocket, R. I. William Sharkey, Spy; Florence Mailloux, Guardian.

Bluebird Band, Pine Hill, R. I. Lottie M. Green, Spy; Anna Kenyon, Guardian.

Bright-eyed Band, Westerly, R. I. Joseph Marzoli, Spy; Grace E. Stillman, Guardian.

Buckfield Nature Band, Buckfield, Me. Harry Turner, Spy; Cleora M. De Coster, Guardian.

Clover-Leaf Band, Exeter, R. I. Bessie M. Brewer, Spy; Cleveland Joslin, Guardian.

Clover-Leaf Band, Mansfield, Pa. John Doane, Spy; Archie L. Ely, Guardian.

Daisy Band, Providence, R. I. Ruth Wells, Spy; Nina Easton, Guardian.

Daisy Band, Phenix, R. I. Robert M. Easdon, Spy; Amelia B. Clarke, Guardian.

Family Band, Peru, Me. Mrs. M. V. Hall, Mother.

Forest Band, Westerly, R. I. Alexander Kenneth, Spy; Louise Hiscox, Guardian.

Harris Avenue Band, River Point, R. I. Idwin Wood, Spy; Laura Hudson, Guardian.

Laurel Lake Band, Kingston, R. I. Ethel Tucker, Spy; Reuben Brigham, Guardian.

Look-about-You Club, Providence, R. I. Edgar Sellew, Spy; Grace Peckham, Guardian.

Lookout Band, Tiverton, R. I. Rodman C. Hart, Spy; Helen R. Simmons, Guardian.

Mary Dickerson Band, Providence, R. I. Frank Grady, Spy; Daniel McDonald, Guardian.

Mayflower Band, Madison, Conn. Harry N. D. Kelsey, Spy; Clarence Bassett, Guardian.

Mother Nature's Students, Westerly, R. I. Joseph Corey, Spy; Genevieve Burdick, Guardian.

Nature Observers, Providence, R. I. Walter H. Freeman, Spy; Bernice L. Carey, Guardian.

Pansy Band, Hillsdale, R. I. Arthur L. Cooke, Spy; Sadie Marshall, Guardian.

Sharp-Eyes Band, Providence, R. I.

Sons of Nature, Woonsocket, R. I. Leland A. Jenckes, Spy; Elton Kettlety, Guardian.

Sylvan Band, Sylvania, Pa. Eugenie Pierce, Guardian.

Washington Band, North Scituate, R. I. Frances R. Page, Spy; Eliza B. Knowlton, Guardian.

Waterton Band, Providence, R. I.

Wide-Awake Band, Phenix, R. I. Winfred E. Hoxsie, Spy; Mary Canavan, Guardian.

Wide-Awake Band, Hope, R. I. William H. Jordan, Spy; Nettie Brayton, Guardian.

Wide-Awake Band, Yantic, Conn. Ella P. Peck, Spy; Elsie K. Maine, Guardian.

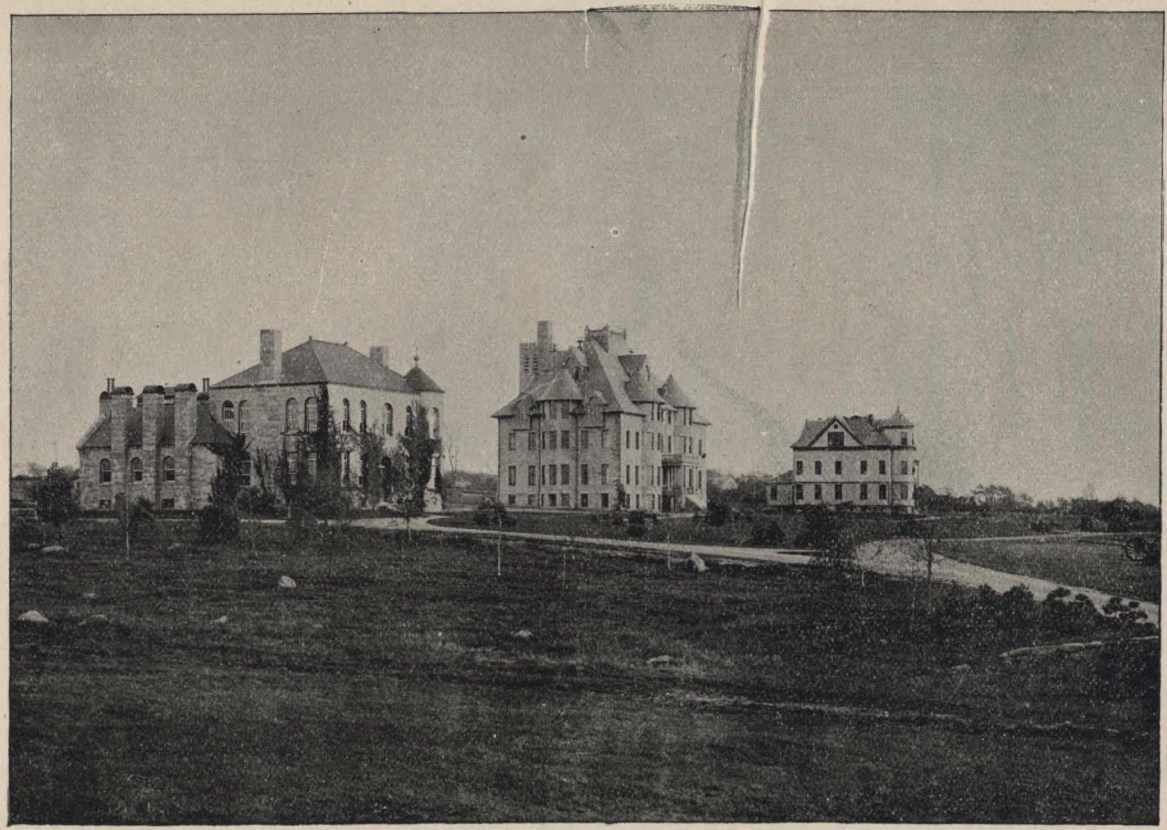
Woodland Band, Woonsocket, R. I. Theo. Crosby, Spy; Newton G. Chase, Guardian.

Young Observers of Nature, Providence, R. I. William P. Lynch, Spy; Lizzie Hamilton, Guardian.

Address, THE NATURE GUARD,

RHODE ISLAND COLLEGE,

KINGSTON, R. I.



TAFT LABORATORY. DAVIS HALL. BOARDING HALL.

RELIGIOUS ORGANIZATIONS.

Young Men's Christian Association.

R. W. PITKIN.....President.
E. J. CRANDALL.....Vice-President.
H. D. SMITH.....Cor. Secretary. / Rec. Secretary.
L. G. K. CLARNER.....Treasurer.

Young Women's Christian Union.

EDITH L. KEEFER.....President.
ANNA B. SHERMAN.....Vice-President.
EDNA E. DAWLEY.....Secretary.
LAURA M. COOKE.....Treasurer.

ALUMNI ASSOCIATION.

GEORGE E. ADAMS, President.

GEORGE A. RODMAN, Secretary, Woonsocket, R. I.

J. F. KNOWLES, Treasurer, Kingston, R. I.

GRADUATES.

1894.

Adams, George Edward, Agr.....Kingston, R. I.
Assistant Horticulturist R. I. Agr. Experiment Station.

Ammonds, George Clarence, Mech.....Kingston, "
Railroad Mail Clerk.

Arnold, Chapin Trafford, Agr.....Providence, "
Electrician.

Burlingame, George Washington, Agr.....Chepachet, "
Teacher.

Clark, Helen May.....North Brookfield, Mass.
Teacher.

Knowles, John Franklin, Mech.....Kingston, R. I.
Assistant in Woodworking Dept., R. I. C. A. & M. A.

Madison, Warren Brown, Agr.....East Greenwich, "
Horticulturist.

Mathewson, Ernest Hoxsie, Mech.....Keysville, Va.
Farmer.

Peckham, Reuben Wallace, Agr.....South Portsmouth, R. I.
Art Student.

Rathbun, William Sherman, Agr.....Wakefield, "
Veterinarian.

Rodman, George Albert, Mech.....Woonsocket, "
Assistant Bridge Dept., N. Y., N. H. & Hartford R. R.

Sargent, Charles Lawrence, Agr.....Newark, N. J.
Ph. D., University of Pennsylvania. Chemist.

Slocum, Samuel Watson, Agr ..... Westerly, R. I.
Carpenter.

Spears, John Barden, Agr ..... Foster Centre, "
Teacher.

Sweet, Stephen Adelbert, Agr ..... Slocums, "
Farmer.

Tucker, George Mason, Agr. ..... Ojitlan, Mexico.
Ph. D., University of Göttingen, Germany.
Manager of Coffee and Rubber Plantation.

Wilber, Robert Arthur, Mech ..... East Greenwich, R. I.
Express Agent.

1895.

Albro, Lester Franklin, Agr ..... Middletown, R. I.
Student in Singing.

Burdick, Howland, Agr ..... Kingston, "
Farm Superintendent, R. I. C. A. & M. A.

Clarke, Charles Sherman, Mech ..... Jamestown, "
Chief Engineer on Steamboat.

Eldred, Mabel DeWitt ..... Kingston, "
Instructor in Drawing, R. I. C. A. & M. A.

Hammond, John Edward, Agr ..... Jamestown, "
Farmer.

Oatley, Lincoln Nathan, Mech ..... Wakefield, "
Carpenter and Contractor.

Scott, Arthur Curtis, Mech ..... Kingston, "
Professor of Physics, R. I. C. A. & M. A.

Tefft, Jesse Cottrell, Mech ..... Jamestown, "
Purser on Steamboat.

Winsor, Byron Edgar, Mech ..... Summit, "
Farmer and Teacher.

1896.

Brown, May (Mrs. Charles A. White) ... Narragansett Pier, R. I.

Greenman, Adelaide Maria.....Narragansett Pier, "

Student and Teacher.

Kenyon, Albert Lewis, Mech.....Providence, "

Silver Spring Bleaching and Dyeing Co.

Moore, Nathan Lewis Cass, Agr.....East Providence, "

Gardener.

Tabor, Edgar Francis, Mech.....Providence, "

Silver Spring Bleaching and Dyeing Co.

Williams, James Emerson, Agr ....Summit, "

Farmer and Teacher.

1897.

Carmichael, Welcome Sands, Sci .....Providence, R. I.

Bookkeeper.

Case, Herbert Edwards Brown, Mech.....Pawtucket, "

Student, Moody Bible Institute, Chicago.

Grinnell, Archie Franklin, Mech.....Providence, "

Draughtsman.

Hanson, Gertude Maie, Sci.....Peace Dale, "

Teacher.

Hoxsie, Bessie Bailey (Mrs. E. F. Rueckert).....Providence, "

Larkin, Jessie Louise, Sci..... .....Westerly, "

Stenographer.

Kenyon, Charles Franklin, Mech.....Shannock, "

Kenyon, Albert Prentice, Mech..... .....Ashaway, "

Bookkeeper.

Marsland, Louis Herbert, Mech..... .....Bridgton, N. J.

Teacher.

Tefft, Eliza Alice, Sci..... .....Allenton, R. I.

Teacher.

Thomas, Irving, Mech.....Wakefield, R. I.
In Peace Dale Woolen Mills.

1898.

Arnold, Sarah Estelle, Sci.....Providence, R. I.
Clerk, Printing Department, Livermore & Knight.

Barber, George Washington, Agr.....Shannock, "
Farmer.

Cargill, Edna Maria, Sci.....Abbott Run, "
Student, Cornell University.

Case, John Peter, Agr.....Cleveland, Ohio.
With Brown Hoisting and Conveying Co.

Clarke, William Case, Sci.....Wakefield, R. I.
In Business.

Congdon, Henry Augustus, Mech.....Kingston, "
Farmer.

Flagg, Martha Rebecca, Sci.....Kingston, "

Harley, William Ferguson, Agr.....Pawtucket, "
Clerk in Store.

Turner, Harriette Florence, Sci.....Florence, Mass.
Instructor in Domestic Science.

Wilson, Grace Ellen, Sci.....Allenton, R. I.

1899.

Bosworth, Alfred Willson, Sci.....Kingston, R. I.
Assistant Chemist, R. I. Agr. Experiment Station.

Brooks, Ralph Ordway, Sci.....Providence, "
Draughtsman.

George, Lillian Mabelle, Sci.....Kingston, "
Librarian, R. I. C. A. & M. A.

Harvey, Mildred Wayne, Sci.....Kingston, "
Stenographer.

Kenyon, Blydon Ellery, Agr.....Chicago, Ill.
Electrician.

Knowles, Carroll, Mech.....Kingston, R. I.
Assistant in Mechanics, R. I. C. A. & M. A.

Knowles, Harry, Sci.....Point Judith, "
Journalist.

Ladd, Merrill Augustus, Mech...U. S. Army Transport "Buford."
Chief Electrician.

Morrison, Clifford Brewster, Sci.....Providence, R. I.
City Sewerage Department.

Owen, William Frazier, Mech.....Albany, N. Y.
Student.

Payne, Ebenezer, Sci.....Ann Arbor, Mich.
Student, University of Michigan.

Phillips, Walter Clark, Mech.....Lafayette, R. I.
Student, Brown University.

Reynolds, Robert Spink, Mech.....Providence, "
In City Engineer's Office.

Rice, Minnie Elizabeth, Sci.....Plainville, Mass.
Teacher.

Sherman, Abbie Gertrude (Mrs. Benj. A. Barton)..Kingston, R. I.
Sherman, George Albert, Mech.....Providence "
Draughtsman.

Thompson, Sally Rodman, Sci.....Wakefield, "

1900.

Brightman, Henry Maxson, Mech.....Buffalo, N. Y.
With Buffalo Forge and Blower Co.

Cross, Charles Clark, Mech.....Providence, R. I.
With Nicholson File Co.

Eldred, John Raleigh, Mech.....Providence, "
With Nicholson File Co.

Fison, Gertrude Sarah, Sci.....Northampton, Mass.
Assistant Librarian.

Goddard, Edith, Sci.....Brockton, "
Student in Bridgewater Normal School.

Kenyon, Amos Langworthy, Agr.....Wood River Junction, R. I.
Farmer.

Munro, Arthur Earle, Sci.....Quonochontaug, "
Student in Brown University.

Soule, Ralph Nelson, Sci.....Providence, "
Electrician.

Steere, Anthony Enoch, Mech.....Providence, "
With Nicholson File Co.

Stillman, Lenora Estelle, Sci.....Niantic, "
Teacher.

Tucker, Bertha Douglass, Sci.....Swansea Centre, Mass.
Dressmaker.

Wheeler, Charles Noyes, Sci.....Westerly, R. I.
Clerk in Store.

Wilson, Joseph Robert, Mech.....Belleville, "
In Woolen Mills.

STUDENTS.

Post Graduates.

George, Lillian Mabelle ..... Amesbury, Mass.
Harvey, Mildred Wayne..... Allenton, R. I.
Kenyon, Blydon Ellery..... Wood River Junction, "

Graduates of 1900.

Brightman, Henry Maxson, Sci..... Westerly, R. I.
Cross, Charles Clark, Mech..... Narragansett Pier, "
Eldred, John Raleigh, Mech..... Kingston, "
Fison, Gertrude Sarah, Sci..... Peace Dale, "
Fry, John Joseph, Sci..... East Greenwich, "
Goddard, Edith, Sci..... Brockton, Mass.
Kenyon, Amos Langworthy, Agr..... Wood River Junction, R. I.
Munro, Arthur Earle, Sci..... Quonochontaug, R. I.
Soule, Ralph Nelson, Sci..... East Greenwich, "
Steere, Anthony Enoch, Mech..... Chepachet, "
Stillman, Lenora Estelle, Sci..... Kenyon, "
Tucker, Bertha Douglass, Sci..... Swansea Centre, Mass.
Wheeler, Charles Noyes, Sci..... Shannock, R. I.
Wilson, Joseph Robert, Mech..... Allenton, "

Seniors.

Briggs, Nellie Albertine, Sci..... Kingston, R. I.
Burgess, Charles Stuart, Mech..... Providence, "
Clarner, Louis George Karl, Jr., Sci..... Arnold's Mills, "
Dawley, Edna Ethel, Sci..... Kenyon, "

Denico, Arthur Albertus, Sci.....Narragansett Pier, R. I.
James, Ruth Hortense, Sci.....Kenyon, "
Sherman, Anna Brown, Sci.....Kingston, "
Sherman, Elizabeth Agnes, Sci.....West Kingston, "
Smith, Howard Dexter, Sci ..... North Scituate, "
Steere, Roena Hoxsie, Sci.....Providence, "
Wilby, John, Sci ....Kingston, "

Juniors.

Clarke, Latham, Biol.....West Kingston, R. I.
Cornell, Bailey Jordan, Eng.....Croton-on-Hudson, N. Y.
Ferry, Oliver Needham, Mech.....Palmer, Mass.
Maxson, Ralph Nelson, Chem.....Westerly, R. I.
Pitkin, Robert William, Mech .....Providence, "
Reynolds, Arthur Leone, El. Eng.....Athol, Mass.

Sophomores.

Barber, Kate Grace, Biol.....Carolina, R. I.
Bell, Louis Frederick, Jr.....Wakefield, "
Brennan, Thomas, Biol .....Peace Dale, "
Church, Albert Sumner, Mech.....Narragansett Pier, "
Clarner, John Adams, Mech.....Pawtucket, "
Cooke, Laura Marion, Biol.....Narragansett Pier, "
Crandall, Daniel Alva .....Canonchet, "
Crandall, Elverton Jewett, El. Eng.....Adamsville, "
Cross, Frederick Lawrence, El. Eng .....Narragansett Pier, "
Duffy, John Edward, Biol.....Riverpoint, "
Goddard, Warren, Jr., Mech.....Brockton, Mass.
Hoxsie, Fred Clifford, Biol.....Woodville, R. I.
Hoxsie, Willard Munroe, Biol.....Quonochontaug, "
Keefer, Edith L., Biol .....Oceanus, N. Y.
Kent, Raymond Warren, Mech .....Woonsocket, R. I.
Kenyon, Charles Franklin, El. Eng.....Point Judith, "
Loomis, William, Mech.....Glastonbury, Conn.

Peckham, Arthur Noyes, Biol.....Kingston, R. I.
Quinn, Mary Louise, Biol.....Wakefield, "
Rice, George Henry.....Wickford, "
Rodman, Edith Stoughtenburg, Biol.....Kingston, "
Tefft, Ernest Allen, El. Eng.....Hope Valley, "
Wheeler, Everett Eugene.....Shannock, "
White, Mabelle Frances, Biol.....Amesbury, Mass.
Whitmore, Charles Ely, El. Eng.....Holyoke, "
Wood, John Amos.....Hope Valley, R. I.

Freshmen.

Alomá, Tiberio Garcia.....Cienfuegos, Cuba.
Ballou, Willard Alger.....Lawrence, Mass.
Briggs, Myron Watson.....Kingston, R. I.
Clancy, John.....Mystic, Conn.
Rodman, Walter Sheldon.....Wakefield, R. I.
Wells, Thomas Perry.....Kingston, "

Preparatory Department.

Adams, Harry Ernest.....Providence, R. I.
Allen, Fred Ray.....Hills Grove, "
Barber, Ernest Clark.....Shannock, "
Barber, Frank Oscar.....Mystic, Conn.
Brigham, Reuben.....Kingston, R. I.
Brown, Cora.....West Kingston, "
Brown, Martha Browning.....Kingston, "
Calder, John Alexander.....Westerly, "
Carley, Frederick James.....Tewksbury, Mass.
Carpenter, Hortense Blakesley.....Kingston, R. I.
Champlin, Sarah Elizabeth.....Kingston, "
Clark, Rollin Grover.....Narragansett Pier, "
Davis, Augustus Boss.....Kingston, "
Dawley, Percy William.....Kenyon, "
Donath, Francis Edward.....Pawtucket, "

Dorgan, Joseph.....Narragansett Pier, R. I.
Fagan, Hugh Jean.....Peace Dale, "
Gilman, Jean.....Gilman, Me.
Grinnell, George Francis.....Narragansett Pier, R. I.
Harrall, Nellie Armstrong.....Wakefield, "
Hevia, Horacio.....Habana, Cuba.
Hoxsie, Katharine Mertie.....Woodville, R. I.
Macdonald, James Merton.....Wood River Junction, "
Martin, Francesco.....Cartago, Costa Rica.
McCarthy, Charles Henry.....Central Falls, R. I.
Miller, Henry Francis.....Providence, "
Murray, James Lee.....Narragansett Pier, "
Nichols, Howard Martin.....Kenyon, "
Priday, Edward Thomas.....Peace Dale, "
Robbins, Robert Bruce.....Auburn, "
Robbins, William Wallace.....Auburn, "
Schofield, James Frederick.....Bristol, "
Sisson, Cora Edna.....Wickford, "
Sisson, Neva Maude.....Wickford, "
Slocum, Percy Wilfred.....Kingston, "
Smith, Bert Cleveland.....Tarkiln, "
Smith, Thomas Albert.....Providence, "
Tucker, Ethel Aldrich.....Kingston, "
Tucker, Hannah Mahala.....West Kingston, "
Urrutia, Carlos.....Comerio, Porto Rico.
Watson, Walter Irving.....Wakefield, R. I.
Winsor, Sydney Brown.....Greenville, "
Wright, Lola Rodman.....Wakefield, "

Specials.

Cargill, James Edward.....Abbott Run, R. I.
Chace, Emery Perkins.....Warren, "
Cross, John Gardiner.....Narragansett Pier, "
Morton, John Garfield.....New York, N. Y.

Reynolds, Walter Florus.....Brockton, Mass.
Sherman, Robert Joseph .....Usquepaugh, R. I.
Wightman, Levi Eugene.....South Scituate, "
Wilcox, Charles William.....Kingston, "

Specials in Wood-Carving.

Barton, Mrs. Benjamin A.....Kingston, R. I.
Bosworth, Mrs. Ellen.....Kingston, "
Brayton, Mrs. Charles A.....Kingston, "
Brown, Mary J.....Kingston, "
Clark, Mrs. George C.....Shannock, "
Dockray, Mary.....Peace Dale, "
Greenman, Mrs. A. A.....Kingston, "
Rodman, Lillie.....Kingston, "

Poultry School.

Andrews, Fred Matthias .....Pompey, N. Y.
Brayman, Benjamin Lewis.....Wickford, R. I.
Coggeshall, Dexter Elton.....Everett, Mass.
Currens, Robert Clifford.....Kearney, Neb.
Dornacher, Sebastian John.....West Springfield, Mass.
Flagg, Caleb Belcher.....Kingston, R. I.
Gifford, Harold Green .....Barrington, "
Harris, William Marchant.....West Kingston, "
Hodges, Mrs. Leonie Rose.....New York, N. Y.
Hope, Harry Vincent.....Kingston, R. I.
Jones, Frank Steward.....Chicago, Ill.
Marshall, John.....Fleming, N. Y.
Marshall, Margaret Elizabeth.....Slocumville, R. I.
Murray, Nelson Shepard.....Little Falls, N. Y.
Oatley, George Nichols.....Allenton, R. I.
Partelow, Earle Dexter.....Wakefield, "
Soenke, Carl Herman.....Walcott, Ia.
Stackus, Washington Graham.....Southington, Conn.

Stearns, Ralph Waldo ..... Jamestown, R. I.
Stoneburn, Frederick H..... Morristown, N. Y.
Taylor, Thomas House, Jr ..... Plainfield, N. J.
Thebaud, Mathilde M..... New York City, N. Y.
Tyler, Frankling Eugene..... Greenville, Me.

Horticulture School.

Flagg, Caleb Belcher..... Kingston, R. I.
Gifford, Harold Green ..... Barrington, "
Greenman, Mrs. Mary Easton..... Kingston, "
Hodges, Mrs. Leonie Rose..... New York, N. Y.
Nalbandian, Krikor G..... Providence, R. I.
Stackus, Washington Graham..... Southington, Conn.

Nature-Study School.

Allen, Harriet A..... Woonsocket, R. I.
Battey, Thomas J..... Providence, "
Brown, Charlotte B..... Providence, "
Brown, Ellen L..... Providence, "
Brown, Ellen P..... Providence, "
Brown, Mary Louise..... Providence, "
Chadwick, Annie H..... Fall River, Mass.
Chase, Josephine P..... Woonsocket, R. I.
Clark, Agnes E ..... Providence, "
Gale, Alice J..... Fall River, Mass.
Hawkins, Avis A ..... Providence, R. I.
Jenckes, Clara H..... Woonsocket, "
Kilton, Harriet A..... Providence, "
Lanphear, E. Gertrude ..... Peace Dale, "
Leonard, Mary B..... Providence, "
Munro, Annette G..... Bristol, "
Nichols, Mary J ..... Providence, "
Phetteplace, Estella J..... Woonsocket, "
Potter, Mabel Louise..... Farmington, Conn.

Richards, Anna B ..... Providence, R. I.
Sawin, Ida E ..... Providence, "
Shields, Katherine C ..... East Providence, "
Swan, Helen J ..... Boston, Mass.
Vaughn, Lillian H ..... Providence, R. I.
Walther, Alma L ..... Woonsocket, "

Post Graduates	3
Graduates of 1900	14
Seniors	11
Juniors	6
Sophomores	26
Freshmen	6
Preparatory Department	43
Specials	8
Specials in Wood-Carving	8
Poultry School	23
Horticulture School	6
Nature-study School	25
Total, counting none twice	175

TREASURER'S REPORT.

MELVILLE BULL, *Treasurer, in account with the* RHODE ISLAND COLLEGE OF AGRICULTURE AND MECHANIC ARTS.

1900.	DR.	
Jan. 1.	To cash balance on hand	$720 30
	Commissioner T. B. Stockwell, for assistance in Summer School	150 00
	Interest on 1862 fund	1,808 56
	J. H. Washburn, president, for students' board, etc.	11,033 56
	Cash received from incidentals	508 45
	Cash received from interest	4 72
		$14,225 59

1900.	CR.	
	By salaries	$1,212 39
	Postage, stationery and printing	97 10
	Freight and express	351 07
	Traveling	116 04
	Farm and student labor	2,651 81
	Labor (stenographers, engineers and janitors)	1,307 59
	Store	719 65
	Construction and repairs	408 93
	Provisions	2,065 72
	Boarding expense	929 66
	Grain	591 81
	Coal	322 38
	Implements and incidentals	1,649 17
	Balance	1,802 27
		$14,225 59

THIS IS TO CERTIFY that the undersigned, auditing committee of the Board of Managers of the Rhode Island College of Agriculture and Mechanic Arts, have examined the account of Melville Bull, treasurer, as above, and find the same to be correct, leaving a balance in the said treasurer's hands of one thousand, eight hundred and two dollars and twenty-seven cents ($1,802.27).

HENRY L. GREENE,
J. V. B. WATSON,
Auditing Committee.

Synopsis of the report of the treasurer of the Rhode Island College of Agriculture and Mechanic Arts to the Secretary of Agriculture and the Secretary of the Interior, of amount received under Act of Congress of August 30, 1890, in aid of Colleges of Agriculture and the Mechanic Arts, and of the disbursements thereof, to and including June 30, 1900 :—

Balance on hand July 1, 1899	$438 23
Installment for 1899-1900, received July 14, 1899	25,000 00
	$25,438 23

DISBURSEMENTS THEREOF FOR AND DURING THE YEAR ENDING JUNE 30, 1900 :—

SCHEDULE A. — Disbursements for Instruction in Agriculture and for facilities for such instruction	$3,190 29
SCHEDULE B. — Disbursements for Instruction in the Mechanic Arts and for facilities for such instruction	5,483 77
SCHEDULE C. — Disbursements for instruction in the English Language and for facilities for such instruction	3,565 98
SCHEDULE D. — Disbursements for Instruction in Mathematical Science and for facilities for such instruction	2,564 76
SCHEDULE E. — Disbursements for Instruction in Natural Science and for facilities for such instruction	9,623 43

SCHEDULE F.—Disbursements for Instruction in Economic Science and for facilities for such instruction	1,010 00
Total expended during the year	$25,438 23

I HEREBY CERTIFY that the above account is correct and true, and, together with the schedules hereunto attached, truly represents the details of expenditures for the period and by the institution named; and that said expenditures were applied only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematical, physical, natural, and economic science, with special reference to their application in the industries of life, and to the facilities for such instruction.

MELVILLE BULL, *Treasurer.*

ITEMIZED EXPENDITURES OF THE $15,000.00 (HATCH FUND FOR AGRICULTURAL EXPERIMENTS) WILL BE FOUND IN THE AGRICULTURAL EXPERIMENT STATION REPORT.