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1905

BEING THE

ANNUAL REPORTS

OF THE VARIOUS

DEPARTMENTS AND INSTITUTIONS

For the Year 1904.

VOLUME IV.

AUGUSTA
KENNEBEC JOURNAL PRINT
1905

ANNUAL REPORT

OF THE

UNIVERSITY OF MAINE

For the Year 1904

REPORTS OF TRUSTEES, PRESIDENT AND TREASURER

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REPORT OF THE BOARD OF TRUSTEES

To the Honorable Governor and Executive Council of Maine:

The trustees of the University of Maine respectfully submit their thirty-sixth annual report, with the reports of the president and treasurer.

These reports clearly state the present condition of the University and refer to its most important needs. There have been no changes in the board of trustees during the past year and but few changes in the faculty.

Notable changes have taken place in the buildings. Two new chapter houses have been erected, affording homelike accommodations for about sixty students, thereby relieving the University from providing dormitory accommodations for that number. Another chapter house is in process of construction. The Experiment Station building has been enlarged and greatly improved at an expense of about $5000. The large increase in the number of students in the agricultural courses has made the increased facilities necessary. This building, a detailed description of which is given in President Fellows' report, has been named Holmes Hall, for Dr. Ezekiel Holmes, one of Maine's most prominent and public spirited citizens, who devoted years of toil and effort to advance the agricultural interests of the State of Maine. Dr. Holmes was largely instrumental in causing the University of Maine to be established as an independent institution. Holmes Hall was dedicated May 26, 1904. Appropriate and valuable addresses were made by Hon. S. L. Boardman of Bangor, President Butterfield of the Rhode Island Agricultural College and Hon. A. W. Gilman, Commissioner of Agriculture. The new Engineering Building, Lord Hall, was completed, with the exception of rooms upon the second floor, and was in condition to be used at the beginning of the fall term. This building, of which full description can be found in the reports of last year, was dedicated Nov. 22, 1904. The exercises took place in the chapel, which was much too small to contain the large number in attendance. Prior to the dedicatory exercises the students in uniform gave a short drill on the campus, showing plainly the efficiency of their instruction in military tactics. The dedicatory exercises were as follows: Music by the University Band; prayer by Rev. Dr. Beach, President of Bangor Theological Seminary; delivery of the building to the State by Hon. Henry Lord, President of the Board of Trustees; acceptance of the building by Col. I. K. Stetson, as the repre-

sentative of Governor Hill; entrusting of the keys of the building to the president and faculty by Senator Hale; acceptance of the keys by President George E. Fellows; dedicatory address by Hon. William T. Cobb. The weather was that of a beautiful Indian summer day. The exercises were very interesting, and the occasion especially notable because of the presence of Governor-elect William T. Cobb and Senator Eugene Hale, whose able and eloquent addresses received the close attention of the large and appreciative audience. It was extremely gratifying to the friends of the institution to have the State and Nation represented by these distinguished men. The occasion was one of encouragement and inspiration to all present.

The addition of Lord Hall to the university buildings and the enlargement of Holmes Hall make even more important than heretofore the need of a central power and heating plant. The economy and value of such a plant have been presented in former reports. It is estimated that a suitable plant that will meet the demands of the University can be erected for $40,000. The destruction by fire in February of University Hall, a building in Orono village, formerly a hotel, leased by President Fellows and fitted up for a dormitory, entailed a loss upon the University of about $2500. Fortunately the new Phi Kappa Sigma House was completed just prior to the fire, thereby making it less difficult than it otherwise would have been to provide for the students deprived of accommodations by the loss of University Hall. The needs of the Law School and of the Department of Chemistry for larger and better accommodations, must soon be met, if the necessary means can be obtained. The need of additional dormitory accommodations and of necessary equipments for the different departments of the University are pressing and it is hoped can be relieved, at least in part, at an early day. Within a decade the students have increased in number more than threefold. This rapid growth in the student body has made necessary new buildings, additional equipment and a large increase in the number of instructors. The cost of meeting new demands and maintaining the institution is greater every year, and the income has not been adequate to meet the increasing expenses.

The trustees will ask the next Legislature for an appropriation of $12,000 for each of the years 1905 and 1906, to defray the increased cost of instruction and equipment made necessary by the constant growth in the number of students, and for $40,000 for a central power and heating plant.

The University of Maine is strong and prosperous, successful in all of its departments. Its wants and needs are those of a growing institution. That its work may be well done, its income and facilities should keep pace with its development and growth. Should not the State meet every reasonable requirement of this institution?

HENRY LORD,

President of Board of Trustees.

REPORT OF THE PRESIDENT

To the Board of Trustees of the University of Maine:

The president of the University has the honor to present his third annual report, covering the years 1903-1904.

Changes in the Faculty

The University is to be warmly congratulated because there have been fewer changes in the faculty during the past year than in former years. Thoroughness in scholarship and mutual confidence of teacher and pupil are greatly promoted by the permanence of the teaching force. It is certainly true that in the majority of cases where friction occurs between faculty and students it is found in those departments where there have been frequent changes of instructors.

But one member of the faculty above the grade of instructor has resigned during the past year. One new member has been added to the faculty.

Mr. Harold S. Boardman, associate professor of civil engineering, has been promoted to be professor of civil engineering.

Mr. Edgar M. Simpson, instructor in law, has been promoted to be assistant professor in the Law School.

Mr. Charles P. Weston has been appointed assistant professor of mechanics and drawing. Heretofore the drawing has been cared for by the civil engineering department, and the mechanics by the department of mechanical engineering. The classes, however, had grown so large that this arrangement was no longer possible; besides, the importance of mechanics and of drawing was so great that the oversight of these subjects demanded the attention of a person of more experience and better training than we are usually able to find among the younger instructors. Mr. Weston is a graduate of the University of Maine in the class of 1896. He has served for several years previous to 1900 as instructor, and since that time has pursued a course leading to the Doctor's degree at Columbia University. Mr. Weston is unusually well prepared, by reason of his study and of his personality, to take charge of this new department.

Several of the changes in the corps of instructors have been occasioned by the appointment of our young men to positions in the government civil service.

Mr. W. D. Lambert, of the department of mathematics, resigned to accept a position in the Tide Division of the United States Coast and Geodetic Survey.

Mr. John E. Burbank, of the department of physics, resigned to accept a similar position in the Magnetic Division of the Coast and Geodetic Survey.

Mr. P. D. Simpson, of the civil engineering department, resigned to accept a position with the United States Hydrographic Survey.

Mr. R. M. Conner, of the department of mathematics, resigned to accept a position in the Reclamation Service in the Western states.

While it would be better for the institution if we could retain the services of the instructors whom we have found efficient, still we feel that the institution is honored and its work appreciated by this continual draft upon us for men to fill positions of importance.

Mr. L. E. Woodman, a graduate of Dartmouth College, 1899, (M. A. from the same institution in 1903) has been appointed instructor in physics to replace Mr. Burbank, resigned.

Mr. Harley R. Willard, a graduate of Dartmouth College in 1899, (M. A. from the same institution in 1901) has been appointed instructor in mathematics to replace Mr. W. D. Lambert, resigned.

Mr. Raymond K. Morley, a graduate of Tufts College 1904, (M. A. from the same institution) has been appointed tutor in mathematics to replace Mr. R. M. Conner, resigned.

Mr. W. K. Ganong, a graduate of Worcester Polytechnic Institute, 1900, has been appointed instructor in electrical engineering, to replace Mr. V. M. Arana, who resigned to undertake mining enterprises in Peru.

Mr. Stanley J. Steward resigned to enter into business in Bangor. The work formerly done by Mr. Steward has been divided among the other members of the department of mechanical engineering.

Mr. L. C. Smith, a graduate of the University of Maine in 1904, has been appointed assistant in chemistry to replace Mr. H. M. Soper, who resigned to engage in business.

Mr. Bartlett Brooks has been appointed instructor in Contracts in the Law School, to replace Mr. Eugene C. Donworth, who resigned to engage in the practice of law in Machias.

Mrs. Clara E. Patterson has been appointed assistant librarian to replace Miss Geneva R. Hamilton, resigned.

Miss Edith M. Patch has been appointed entomologist in the Experiment Station.

The increased number of students who have elected major work in the departments more recently established, is an indication of the demand in these lines, and also of the value of retaining the same teachers for a period of years.

The total number of members of the faculty is the same for this year as in the year previous. The increased number of students presses very heavily upon the time of the instructors in several of the departments, and the time is near when more teaching force will be absolutely necessary.

It is greatly to the advantage of the institution to have members of its faculty pursue special courses of study at other institutions whenever possible. Their services are more valuable to the University, as well as to themselves.

During the past summer Mr. Shute, instructor in modern languages, spent the summer months in study in France.

Mr. Cummings, of the biological department, spent the summer in study at Cold Spring Harbor.

Mr. Edson, of the department of English, studied in the department of oratory at Harvard.

It would be money well invested for the University to be financially able to give each professor a sabbatical year, as is the custom in many institutions, with the understanding that this year be spent in study.

College of Agriculture

With the appointment one year ago of a new professor in agriculture, and with the new plans and work inaugurated within the past year, the increased number of students in this college has been so marked that the professors are already overworked, and further increase of the faculty in this line is immediately necessary.

Other Increase Needed

Unless there should be a great falling off in the number of students next year (which in no way seems probable) there will of necessity be a demand for more instructing force in the departments of civil engineering, mechanical engineering, mathematics, physics, modern languages, English, biology, and chemistry.

Degrees Conferred

The following is the list of degrees conferred at the last Commencement:

College of Agriculture

Roger Haskell, B. S. (Agriculture) ..... Westbrook

College of Liberal Arts

Florence Emily Buck, B. S. (History) ..... Bucksport
Edson Bayard Buker, B. S. (Biology) ..... Brownville
Carroll Sherman Chaplin, B. S. (Civics) ..... Portland
Edward Clinton Clifford, B. S. (Modern Languages) ..... Woodfords
Lennie Phoebe Copeland, B. S. (Mathematics) ..... Bangor
Roy Horton Flynt, B. S. (Civics) ..... Augusta
Clyde Irving Giles, B. S. (Civics) ..... Skowhegan
Benjamin True Larrabee, B. S. (Chemistry) ..... Cumberland Mills
Thomas Edward Leary, B. S. (Civics) ..... Hampden
Cecil Arthur Lord, B. A. (Modern Languages) ..... Bar Harbor
Edward Alton Parker, B. S. (Civics) ..... Skowhegan

Karl Byron Porter, B. S. (Biology).....Oldtown
Lottie Luella Small, B. A. (Modern Languages).....Auburn
Thomas Francis Taylor, B. A. (Latin).....Bangor
John Voden Tucker, B. S. (Civics).....Rumford Falls
Francis Howe Webster, B. S. (Biology).....Orono

COLLEGE OF PHARMACY

James Rich Talbot, B. S. (Pharmacy).....East Machias
Mary Ruggles Chandler, Ph. C.....Columbia Falls
Frank Albert Derby, Ph. C.....Temple
Charles John Huen, Ph. C.....Sabattus
John Raymond Kittredge, Ph. C.....Rockland
Walter Scott Sikes, Ph. C.....Three Rivers, Mass.

COLLEGE OF TECHNOLOGY

Roy Samuel Averill, B. S. (Civil Engineering).....Milltown
Hubert Merle Bassett, B. S. (Civil Engineering).....Taunton, Mass.
Ralph Smith Bassett, B. S. (Civil Engineering).....Oldtown
Paul Leonard Bean, B. S. (Civil Engineering).....Saco
Ira Mellin Bearce, B. S. (Electrical Engineering).....Hebron
Edward Robie Berry, B. S. (Chemistry).....Lynn, Mass.
Luther Cary Bradford, B. S. (Civil Engineering).....Turner
George Samuel Brann, B. S. (Civil Engineering).....Dover
Everett Mark Breed, B. S. (Electrical Engineering).....Skowhegan
Edwin Sherman Broadwell, B. S. (Chemistry).....Cleveland, Ohio
Horace Arthur Brown, B. S. (Civil Engineering).....Bradley
Albert Deering Case, B. S. (Civil Engineering).....Lynn, Mass.
Clifford Gray Chase, B. S. (Electrical Engineering).....Baring
Elmer Bishop Crowley, B. S. (Civil Engineering).....Indian River
Arthur Edward Davenport B. S. (Electrical Engineering).....
East Brimfield, Mass.
Eugene Garfield Day, B. S. (Civil Engineering).....Madison
Philip Dorticos, B. S. (Chemistry).....Woodfords
Fred Victor Fifield, B. S. (Electrical Engineering).....East Eddington
Harold Francis French, B. S. (Electrical Engineering).....Glenburn
Harry Dennett Haley, B. S. (Civil Engineering).....Gardiner
Thomas Carroll Herbert, B. S. (Civil Engineering).....Richmond
Ernest Randall Holmes, B. S. (Mechanical Engineering).....Eastport
Ralph Thomas Hopkins, B. S. (Chemistry).....Bangor
Alfred Carroll Jordan, B. S. (Electrical Engineering).....Casco
Charles Benjamin Kimball, B. S. (Electrical Engineering).....
North New Portland
Ralph Waldo Emerson Kingsbury, B. S. (Electrical Engineering)..
South Brewer
Earle Brush Kingsland, B. S. (Civil Engineering).....Vergennes, Vt.
Allen Mark Knowles, B. S. (Civil Engineering).....Corinna
Leonard Alexander Lawrence, B. S. (Civil Engineering).....Eastport

Clifford Henry Leighton, B. S. (Electrical Engineering).....Addison
Leslie Eugene Little, B. S. (Civil Engineering).....Bucksport
Frank McCullough, B. S. (Civil Engineering).....Lynn, Mass.
Walter Draper McIntyre, B. S. (Mechanical Engineering).Orange, Mass.
Holman Waldron Monk, B. S. (Electrical Engineering)..North Buckfield
John Emanuel Olivenbaum, B. S. (Mechanical Engineering)....Jemtland
Allen Thatcher Paine, B. S. (Civil Engineering).....Brewster, Mass
Ralph Howard Pearson, B. S. (Electrical Engineering).....Guilford
Connor Arthur Perkins, B. S. (Electrical Engineering).....Bucksport
Alverdo Linwood Phinney, B. S. (Electrical Engineering)..So. Portland
John Herman Quimby, B. S. (Civil Engineering).....Goodale's Cor.
Charles Henry Sampson, B. S. (Mechanical Engineering).....Gorham
James Herbert Sawyer, B. S. (Civil Engineering).....Saco
Walter Erwin Scott, B. S. (Civil Engineering).....Dexter
Karl Augustus Sinclair, B. S. (Civil Engineering).....Malden, Mass.
Alvah Randall Small, B. S. (Civil Engineering).....South Portland
Leroy Clifton Smith, B. S. (Chemistry).....East Exeter
Godfrey Leonard Soderstrom, B. S. (Mechanical Engineering).....
Brooklyn, N. Y.
George Thomas Stewart, B. S. (Civil Engineering).....Auburn
Roy Elgin Strickland, B. S. (Electrical Engineering).....South Paris
Alec Gladstone Taylor, B. S. (Mechanical Engineering)..North Sullivan
Elliott William Taylor, B. S. (Mechanical Engineerng).Wollaston, Mass.
Howard Smith Taylor, B. S. (Civil Engineering).....Bangor
Roland Lee Turner, B. S. (Civil Engineering)....West Boothbay Harbor
Albert Lawrence Whipple, B. S. (Civil Engineering).....Solon

College of Law

Mark Jonathan Bartlett, LL. B.....Montville
Benjamin Willis Blanchard, LL. B.....Bangor
Glidden Bryant, LL. B.....Newcastle
Edward Everett Clarke, LL. B.....New Bedford, Mass.
George Edwin Clough, LL. B.....Monson, Mass.
John Howard Haley, LL. B.....Cornville
John Chellis Ham, LL. B.....Belfast
Clarence Bertram Hight, LL. B.....Athens
Alfred Alexander Lang, LL. B.....Vicquez, Porto Rico
George Lougee, LL. B.....Bangor
John Bryant Merrill, LL. B.....Bangor
John Edward Nelson, LL. B.....Waterville
Edgar Burnham Putnam, LL. B.....Danforth
Judson Emery Sipprelle, LL. B.....Bangor

ADVANCED DEGREES

Master of Arts

Gertrude Lee Fraser, B. Ph. (1901).....Nunda, N. Y.
Harry Oliver Hofstead, B. A. (Yale 1903).....New Haven, Conn.

Master of Science

Marshall Baxter Cummings, B. S. (University of Vermont, 1901).... North Thetford, Vt.
Elmer Drew Merrill, B. S. (1898).....Manila, Philippine Islands

Civil Engineer

Philip Randolph Goodwin, B. C. E. (1900).....Boston, Mass.
Erastus Roland Simpson, B. M. E. (1896).....Toronto, Ontario

Master of Laws

John Daniel Mackay, LL. B. (1900).....Quincy, Mass.
Ulysses Grant Mudgett, LL. B. (1903).....Hampden
Donald Francis Snow, LL. B. (1903).....Bangor

HONORS AWARDED

General Honors

Everett Mark Breed,
Edwin Sherman Broadwell,
Carroll Chaplin,
Lennie Phoebe Copeland,
Elmer Bishop Crowley,
Ralph Waldo Emerson Kingsbury,
John Emanuel Olivenbaum,
Ralph Howard Pearson,
John Herman Quimby,
Leroy Clifton Smith.

Special Honors

Everett Mark Breed, in Physics.
Lennie Phoebe Copeland, in Mathematics.
Ralph Waldo Emerson Kingsbury, in Physics.

Students

The number of students for the year ending June, 1904, was 539. The total number to be cataloged in the fall of 1904 will be 557, sub-divided as follows:

Post Graduates, 12; Seniors, 85; Juniors, 79; Sophomores, 124; Freshmen, 95; Short Pharmacy, 10; Special Students, 33; School of Agriculture, 8; Summer School, 30; Law School, 81.

The secondary School of Agriculture opens its second year with more than double the number of students of the past year. The continued inquiry regarding this school corroborates the former belief that there was an urgent demand for this kind of work.

Every county in the State is represented in the student body. Every county in the State, with the exception of Franklin county, is represented in the freshman class. The largest number of students from any one county is from Penobscot county. The largest number of students in the freshman class from any one town is from Orono. The number of women students is 19.

Of the new students the State of Maine furnishes 102; Massachusetts, 17; Rhode Island, 1; New Hampshire, 2; Connecticut, 1; New Brunswick, 1.

The average age of the freshman class is 19 years, 6 months, 2 days. The age of the oldest student in the freshman class is 24 years, 7 months, 9 days; of the youngest 16 years, 1 month, 1 day.

In the fall of 1904 more students were admitted by examination than in any one year heretofore. In consequence of the institution having joined in the work of the New England College Entrance Certificate Board, a much smaller list of schools were authorized to give certificates of admission. Consequently, there was an increased number of applicants for admission who could not gain entrance otherwise than by examination. Although these facts have operated to diminish the number of admissions somewhat, it is believed that the preparatory schools of the State will greatly improve through their efforts to be approved by the Certificate Board, and that the preparation of our students in the future will be better than in the past. The Universiy will continue the most kindly relations with all of the public schools and academies in the State, and every effort that can bring the schools and the University into closer touch and harmony will be made. The authorities will always keep in mind that the University is an integral part of the public school system.

Department of Forestry

The second year of the work in the department of forestry opens auspiciously. There is an increased number of students. An increased number of inquiries regarding the work of this department are received, and it is hoped and expected that the Legislature will make permanent the provision for this department.

Commons

Before the close of last year it became evident that some modification of the system of furnishing board at the Commons would soon be necessary. After a careful investigation of the systems in vogue at several institutions, it was decided that the system which was adopted last year at Memorial Hall, Harvard University, would be most applicable to our conditions. This consists in charging a minimum price per week to each student for all board which does not include meat, fish or eggs. All orders for these are to be paid for separately, the price for each order being as low as it can possibly be without loss. So far, the system seems to have been satisfactory. It has been the most successful ever inaugurated at Harvard, and the prospect seems to be that as time goes on it will show itself to be adapted to the increasing number of students better than any former method.

Lecture Course

Last year our standing lecture committee made an effort to secure a course of six lectures for the benefit of the students. This course should give them a broader opportunity to know what is going on in the world

in the various departments of literature and science than could possibly be obtained otherwise in their surroundings. Of course if the institution were located in a large city there would be a sufficient number of these lectures within their reach.

As there were no funds appropriated for this course the faculty undertook to pay as large a proportion of the expenses as possible. Nearly every member of the faculty subscribed $2.00, some even more than this, for course tickets. A number of tickets were sold in the village, in Oldtown and in Bangor. The desire of the committee was to furnish the full course without expense to the students. The students were asked to subscribe for the tickets, the only payment being the promise to attend all of the lectures.

The lectures were as follows:

Professor Skinner, of New York,
"Remarkable Methods of Building Long and Lofty Bridges."

Professor W. P. Bradley, Wesleyan University,
"Liquid Air."

President David N. Beach, D. D., Bangor Theological Seminary,
"Tramping in the Scottish Border."

Professor A. B. Hart, Harvard University,
"Washington as a Literary Man."

Professor Baker, Harvard University,
"London Theatres in Shakespeare's Time."

Professor Drew, University of Maine,
"Survival of the Fittest."

There is no doubt whatever in the minds of the faculty that this course materially improved the intellectual tone of the student body. While the expense was not fully met by the subscriptions of the faculty and others, yet it was believed that the additional expense incurred was money well invested for the education of the students.

A similar course has been undertaken this year.

The lectures and subjects are as follows:

Professor Caleb T. Winchester, Wesleyan,
Subject:—The English Lakes and their Poets.

Professor Rufus B. Richardson, recently Director American School at Athens,
Subject:—The Excavation of Corinth. (Illustrated.)

Professor George T. Little, Bowdoin,
Subject:—Mountain Climbing. (Illustrated.)

Professor Charles Baskerville, College of the City of New York,
Subject:—Radium (with demonstrations and illustrations).

Professor Frank C. Allen, Massachusetts Institute of Technology,
Subject:—The Development of the Railroad. (Illustrated.)

Professor Samuel N. Spring, University of Maine,
Subject:—Some Aspects of Forestry. (Illustrated).

Located as we are, it would seem wise that a course of this character should be provided each year. I doubt if it can be continued unless some special financial provision can be made for it.

Buildings

Since the last annual report, Lord Hall, the new building containing laboratories of the mechanical and electrical engineering departments, wood and iron shops, and foundry, has been erected and dedicated. It is not strictly true to say that the building is entirely completed, for the class rooms and drawing room on the second floor are still unfinished; but the urgent need for the laboratories and shops compelled the building committee to see that these were prepared for occupany by the opening of the fall term of this year. It is hoped that the few rooms on the second floor will be completed soon.

The building known as University Hall in the village of Orono, which had been leased for a period of three years, was entirely consumed by fire, February, 1904. The financial loss of the University by this fire is estimated at about $2500, partially in furniture, and partially in repairs made to the house solely for our own convenience.

The building north of the campus, which had been leased for an additional dormitory, has been occupied during the present year by the Beta Theta Pi Fraternity, and will continue to be so occupied until their new chapter house is completed.

The extensive repairs and additions made to the building formerly known as the Experiment Station, which were rendered essential by the increased number of students in the agricultural college, have been completed, and the building was dedicated, with fitting ceremonies, on May 25, 1904. The whole building has been named Holmes Hall, in honor of Doctor Ezekiel Holmes, through whose efforts the institution itself was established. The dedicatory address was given by Honorable S. L. Boardman of Bangor, and addresses were made by President Butterfield of the Rhode Island College, and Honorable A. W. Gilman, Commissioner of Agriculture.

In addition to the rooms occupied by the Agricultural Experiment Station, there are now offices for the departments of agriculture and veterinary science, and recitation rooms for agriculture, horticulture, forestry, and biological chemistry. The department of forestry at present makes use of the same room as biological chemistry. Although the departments of the agricultural college are thus better provided for than ever before, it is evident, if the students in these departments increase as rapidly as during the past two years, that these quarters will soon be outgrown.

On November 22, 1904, occurred the dedication of Lord Hall. The program was as follows:

Exercises in Chapel:

Music by College Band.
Prayer.
Music.
Delivery of the Building to the State, by Hon. Henry Lord, President of the Board of Trustees.

Acceptance of the Building by Governor Hill.
Entrusting the Keys of the Building to the President and Faculty, by Senator Hale.
Music.
Dedicatory Address, by Hon. William T. Cobb.
Music.

The Phi Kappa Sigma chapter house has been completed since the last annual report, and was occupied at the close of the Christmas recess, 1903-1904.

The Sigma Alpha Epsilon fraternity has constructed a new chapter house on the west side of the main road near the river. It was begun in the spring of 1904, and completed in time to be occupied immediately after the opening of the fall term.

The house formerly occupied by the Beta Theta Pi fraternity has been removed to the north boundary of the campus, placed upon a stone foundation, and suitably repaired. It is now occupied by the Theta Epsilon society.

The Beta Theta Pi fraternity is constructing a new chapter house upon the site from which the old house was removed. It is expected to be completed sometime during the college year.

With the addition of these three chapter houses and with all available rooms in Orono and many in Oldtown and Bangor the students for the present year have been provided for. The problem of providing quarters for the students is constantly with us, and no doubt will continue to be a cause for anxiety with the continued growth of the institution.

Needs of the University

It is my belief that the safest efficiency of the State University is to be found not only by giving the best education possible to the students who attend at the institution itself, but by carrying the practical results of investigation at the University as far as possible to the people of the State in their homes.

Extension Work in Agriculture

There have been for several years very numerous requests from all parts of the State for special lectures and discussions on agricultural topics. As far as possible the members of our agricultural faculty have complied with these requests. Professors Munson and Hurd have frequently gone to considerable distance to attend voluntary meetings of farmers and have discussed with them the practical matters pertaining to their business. This work I believe to be one of the most useful functions of the University, but it cannot be continued without further increase of the faculty. If any means can be devised by which a thoroughly competent professor, who is well trained in the several departments of general farming, including dairying, horticulture, and crop production, could be obtained, he should have fully one half of his time devoted to going about the State wherever he should be demanded, to directly assist the farmers with

advice and practical demonstrations. A part of his time could be wisely used in giving rudimentary instruction in agricultural teaching in the various normal schools of the State, and the remainder to assisting in the work at the University. The Legislature of 1903 appropriated $3000, the same to be expended by the Commissioner of Agriculture for the salary and expenses of a special dairy instructor. It is my opinion that while this was a most commendable undertaking, it would have been wiser to have had this instructor directly connected with the University as an officer. Thus his useful labors would have brought the people into more direct communication with the University, and it is believed that his work might have been increased in efficiency if he had been at liberty to make use of the University equipment at various times throughout the year.

If the instructor above recommended could be obtained, and the dairy instructor also connected with the University, I believe that the advantage to the agricultural interests of the State would be very greatly increased.

Other Needs

In the annual report of the University for the year 1903, the heads of the departments made very full recommendations for new apparatus and facilities which seemed to be in demand. Without repeating them in this report, I recommend their re-perusal with view to realizing at this time the full amount of money which could be wisely used by the institution.

In my report for 1903 occurs the following paragraph:

"A need which is greater even than for buildings of any nature is that of increased income. It was quite possible to provide in a reasonably effective manner for the instruction of three hundred and fifty or four hundred students with the present income of the University, but it is an injustice to all the sudents to attempt to provide for a twenty-five per cent greater student body with the same number of teachers and the same amount of supplies as sufficed for the smaller number. I recommend that the attention of the Trustees be devoted to plans for the obtaining of an increased income, at least by 1907."

I now believe that it is impossible to wait until 1907 for an increased income. The expenses of the past year, which have been absolutely necessary, have been so great that there must evidently be a considerable shortage at the end of the fiscal year. The number of students has more than doubled since the State made the appropriation of $20,000 a year for ten years. The necessary increase of the teaching force and a very inadequate addition to the quantity of apparatus would make $10,000 a year additional an inadequate provision.

Needs of Buildings

Although the most pressing need at present is for additional income, still it is not inappropriate to repeat in each report the most obvious necessities of the institution.

There is no laboratory for elementary chemistry. About 110 students are now taking this work, and it is necessary to have them use the same laboratory with more advanced classes, much to the detriment of both classes. A new chemical laboratory, or a large addition to the present one, must be built very soon.

There is great need of additional apparatus and assistance in instruction in the department of Biology.

There is also great need of increased apparatus in the department of Mechanical Engineering.

The report of the professor of Electrical Engineering shows a distinct need for a considerable increase of apparatus in that department.

In the surveying work in the coming spring the department of Civil Engineering will find the most pressing need for several new and expensive instruments, and next year it will be extremely difficult to carry on the work of the department without at least one more instructor.

The number of students in the Agricultural College is increasing so rapidly that we must have one or two new assistants very soon.

A considerable sum of money is needed for making new walks, or making most extensive repairs on the present walks in all parts of the campus.

The always present and continually more pressing need of more dormitory room is felt.

The department of Physics now occupying several rooms in the building intended for Civil Engineering, ought, for its own good, as well as for the good of the department of Civil Engineering, to have a separate building.

The department of Horticulture also needs a storage house, barn, and sheds, and a considerable amount of tools and apparatus.

The School of Law is sadly cramped for room. They have the same accommodations as when there were thirty-five students, and this year there are eighty-one. It is almost impossible to handle the large number in the two classrooms which are available.

Respectfully submitted,

GEO. E. FELLOWS,

President.

REPORT OF THE TREASURER

To the Trustees of the University of Maine:

The Treasurer has the honor to submit the following report concerning the financial condition of the University, July 1, 1904.

RECEIPTS OF THE UNIVERSITY OF MAINE FROM JULY 1, 1903, TO JULY 1, 1904.

Cash balance July 1, 1903		$11,759 59
Bills Payable	$23,000 00	
Bills Receivable	1,782 23	
Botany	27 84	
Chemistry Maintenance	17 47	
Diplomas	417 06	
Alumni Hall Subscriptions	57 00	
Electrical Engineering, Maintenance	79 16	
Land Grant Fund	5,915 00	
Coburn Fund	4,000 00	
Interest and Discount	122 10	
Light Station	255 40	
Library Fines	18 67	
Morrill Fund	25,000 00	
Phi Gamma Delta Construction Account	120 00	
Kappa Sigma Construction Account	141 00	
Rents	2,022 25	
State	55,000 00	
Student Receipts	25,884 45	
Sundry Receipts	1,170 54	145,030 17
		$156,789 76

NET EXPENSES OF THE UNIVERSITY OF MAINE FROM JULY 1, 1903, TO JULY 1, 1904.

Current Expenses:	
Salaries	$51,945 64

Departments:		
Agriculture	$10,234 02	
Bacteriology and Veterinary Science	129 16	
Biology, Equipment and Maintenance	307 54	
Civil Engineering	384 64	
Electrical Engineering, Equipment	113 31	
Greek and Art	30 08	
Latin	11 15	
Law School	1,623 18	
Mathematics and Astronomy	49 71	
Mechanical Engineering, Equipment and Maintenance	505 72	
Military Science	84 86	
Pharmacy Maintenance	48 05	
Philosophy	46 37	
Physics, Equipment and Maintenance	270 65	13,838 44
		$65,784 08

General Expenses:		
Advertising	$607 33	
Bills Payable	24,500 00	
Care of Buildings	1,404 45	
Commons	1,188 05	
Commencement	111 77	
Freight and Express	252 08	
Furniture and Fixtures	123 11	
Grounds, Equipment and Maintenance	662 39	
Heating Buildings	5,428 15	
Insurance	348 32	
Incidentals	388 64	
Kidder Scholarship	30 00	
Library	1,889 90	
Lighting Buildings and Grounds	1,072 47	
Miscellaneous	1,194 36	
Mt. Vernon House and Incidentals	618 44	
Office	268 35	
Oak Hall Maintenance	340 71	
Postage and Stationery	413 53	
Prizes	60 00	
Reading Room	87 15	
General Repairs	1,917 59	
School Inspection	145 75	
Track	225 01	
Treasury	18 10	
Trustees' Expenses	100 00	
University Hall Incidentals	2,972 91	

Water Supply	2,259 56	
Sundry Expenses	419 17	$49,047 29
Cost of Maintaining the University for year		$114,831 37
Ice-house		$6 16
Lord Hall Construction Account		28,956 36
Station Repairs		5,326 23
Infirmary		696 66
Lecture Course		244 15
Mt. Vernon Summer Account		98 83
Oak Hall Annex		596 92
Summer School		58 00
Fraternity House		156 59
Cash Balance		5,818 49
		$156,789 76

REPORT OF THE COLLEGE OF LAW

President G. E. Fellows:

SIR:—I have the honor to submit the following report for the School of Law.

The total registration for the year 1904-05 up to date is 81 as against 71 last year, and as against 61 two years ago at about the same date.

The students for the present year are classified as follows: Graduate students 19, Seniors 21, Juniors 16, First Year men 19, and Special students 6. The number of new men appearing in this year's catalogue, as compared with last year's, is 31; but as some of these men have returned to the School after an absence of a year and more, the number of men that have never been in the School before is 27.

The different colleges of the country are represented in the Law School as follows: Bates 3, Bowdoin 3, Brown 1, Colby 4, Dartmouth 2, Harvard 1, Holy Cross 1, Maine 1, and St. Mary's 1, a total of 17, all holders of degrees in letters and sciences from their respective colleges, while there are four men with a nearly completed college training (three of whom entered this year), but without the degree, making a total percentage of college graduates and men with a college training of 25.9, as against 24 per cent. last year, 15 two, and 9 per cent., three years ago. This compares very favorably with the percentage of college men in the other law schools of the country, which is for the schools of the Association of American Law Schools 20, and for those outside the Association 14 per cent.

In this connection I wish to state that I attended the meetings of the Association of American Law Schools, of the Universal Congress of Lawyers and Jurists, of the American Bar Association, and of the National Conference of State Boards of Bar Examiners, all at St. Louis, Sept. 26-30th. At the National Conference of State Boards I was requested to deliver an address on "The Bar Examination from the Standpoint of the Law School Student." In this address I was able, in the presence of the delegates from the different state boards and of the deans of nearly all the leading law schools, to refer to the Law School of the University of Maine in the following terms: "As to Maine, the average of the students of the University of Maine School of Law at the bar examination last year was higher than that of the Harvard Law School men applying for admission to the same bar, while this summer

the marks of the students of the University of Maine were so much higher than those of the Harvard men as to constitute a notable feature of this year's bar examination in our State."

The different counties of Maine are represented in the Law School as follows: Androscoggin 2, Aroostook 4, Cumberland 3, Hancock 5, Kennebec 4, Knox 1, Oxford 4, Penobscot 27, Piscataquis 3, Somerset 1, Waldo 2, Washington 5, York 2. The representation of the State of Massachusetts in the Law School has risen from 8 last year to 15 this year, an increase largely due, perhaps, to the fact that not one of the Massachusetts men that came to the Law School to prepare himself for the examination in his own State, ever failed to pass, a fact noted by the members of the Massachusetts State Board, especially by their President, Hon. Hollis R. Bailey, of Boston. Connecticut, New Hampshire, and New York are each represented by one student. All the counties of Maine except three—Franklin, Lincoln, and Sagadahoc—are represented in the Law School, and nearly every one by an increased number of students.

If we leave Penobscot county, as the seat of the Law School, out of consideration, and treat Knox and Waldo as central counties standing by themselves, we find that the four eastern counties of the State, Aroostook, Hancock, Piscataquis, and Washington, which in 1902 sent nearly twice as many students to the Law School as the western counties, are this year sending 17 men to 16 sent by the western counties. Penobscot and the central counties of Waldo and Knox supply 30, while the remaining 18 come from parts of the country outside of Maine.

The above facts tend to show that the Law School is making its influence more uniformly and more generally felt throughout every part of the State.

At the Commencement last June the degree of Bachelor of Laws was conferred by the Trustees of the University upon 14 graduates of the School, and that of Master of Laws upon three former graduates, for work done for the advanced degree. Of the candidates for admission to the bar from the Law School, all but one passed the examination in Maine, in Massachusetts all without exception.

The work in the different divisions of the Practice Court of the Law School continues obligatory upon Seniors and Juniors, while properly qualified volunteers from the First Year men, as well as special students, are permitted to take part in it.

Towards the close of last school year Professor E. G. Lorenzen and Mr. E. C. Donworth resigned, the former to go to the George Washington University, Washington, D. C., the latter in order to go to Machias and enter into partnership with his father, Mr. C. B. Donworth, then about to be elected county attorney for Washington county. The work of Professor Lorenzen was divided among the members of the faculty, and Mr. Bartlett Brooks, a graduate of Harvard College and the Harvard Law School, was appointed Mr. Donworth's successor.

Three or four years ago the Law School demanded only half of the work it does now, and had on its Faculty two experienced men that gave their whole time to the work. Now, with twice the work, there is only one man on whom the whole burden and responsibility rests.

The chief needs of the Law School are the old ones: More suitable quarters, a more rapid rate of increase for the library, stronger efforts to make the existence of the Law School and the opportunities it offers as widely known throughout New England as possible, and two other men to give their whole time to the school.

Respectfully submitted,

W. E. WALZ,

Dean of the College of Law.

REPORT OF THE DEAN (IN THE UNDERGRADUATE COLLEGE)

President G. E. Fellows:

SIR:—Since my appointment as Dean in June, 1903, the duties of that office have gradually developed so that, at present, they demand a considerable fraction of my time.

The Dean acts as Student Adviser for all first-year students, and is chairman of the Committee on Registration of Freshmen, and of the general Registration Committee. During the summer vacation I acted as chairman of a committee to examine all certificates for admission. The completion of this work, as well as that which would naturally have devolved upon me at the opening of the fall term, was prevented by an attack of appendicitis, which kept me in my house for eight weeks. This was my first serious detention from college work since my appointment as instructor in 1887.

I wish to make grateful acknowledgment of your kindness in assuming, during the period of my illness, the routine duties of the Dean, the generosity of Professor Weston in teaching a division of the junior class in calculus, and that of Mr. Buck in carrying some extra hours of instruction. One division of the sophomore class in analytic geometry was placed in charge of Mr. G. K. Huntington of the senior class, who did very satisfactory work.

Since my return to work in November, I have had one or more personal interviews with every student having entrance conditions, advising them regarding the best time and manner for working off such conditions. All first-year students who have been reported to the Committee on Delinquent Students by their instructors, as having rank below 75 per cent in any of their work have been sent to the Dean for advice. This practice was also followed last year, reports being expected from each instructor at least twice each term. In many cases, the improvement of the students' work after this interview has been very marked. In other cases, students who were clearly trying to carry too much work have had their registration revised. Students in all classes who have three or more uncanceled notifications are, in the absence of the President, referred to the Dean for admonition. During this time it has been necessary to report to the Faculty two students for censure because of neglect of work after admonition. It gives me pleasure to state that in all these interviews I have met with a courteous response on the part

of the students. In addition to the enforced conferences above mentioned, a great many have been held with students who voluntarily called for advice.

With the beginning of the present college year two important changes in our method of admitting students went into effect, namely: admission by points, instead of by specified subjects, twenty-six points being required for admission to all four-year courses, as explained in the catalogue; and acceptance of certificates from those schools only which have been approved by the New England College Entrance Certificate Board. Both of these changes operated to diminish the size of this year's entering class, the former because many of our high schools have not yet adapted their courses to the point system, or because they graduate students whose course has comprised considerably less than twenty-six points; the latter because graduates of schools that were on our former list, but have not yet been approved by the Board, either failed to pass our examinations, or went to a college not affiliated with the Board, or were deterred by the fear of entrance examinations, from attempting a college course. I believe, however, that the new requirements honestly and fairly enforced for a few years will result not only in a better fitted freshman class, but also in one quite as large in numbers as we would have under a less careful process of admission. The various instructors of our present freshman class report them as on the average materially better prepared than other recent freshman classes.

Having examined with care the standing of all first-year students, I find that, on account of the changes in entrance requirements mentioned above, it was found advisable this year to admit a few students with somewhat heavier conditions than we shall probably again allow. But nearly all students classified as freshmen are graduates of a full four years course, and with possibly one or two exceptions are quite sure to remove all conditions before the beginning of the next college year. Every student admitted with conditions understands that what is now lacking of the full entrance requirements must be made up before he can attain sophomore standing.

Several who are now classified as special students, are likely to make up their entrance conditions by the end of the year and become candidates for a degree.

Respectfully submitted,

J. N. HART, *Dean.*

REPORT OF THE DEPARTMENT OF AGRICULTURE

President G. E. Fellows:

SIR:—I have the honor to submit the following report for the Agricultural Department:

The work of this department has been carried on according to the plan outlined in the report of last year. The tentative course in agriculture, which was drafted in September, 1903, has been rearranged, making it much more logical and, we believe, equal to the courses of a similar nature offered by other institutions. The instruction in this department now consists of giving eight courses comprising Soils, Farm Mechanics, Manures and Fertilizers, Farm Crops, two courses in advanced Agriculture, and a course in the History of Agriculture to the four year students, the course as now mapped out to the students in the two year School Course in Agriculture, and the instruction given in the short winter courses. In the teaching of soils to the four year students the work is seriously handicapped because of the lack of a laboratory where soil analysis may be conducted; it is as essential that some laboratory work should be given in this study, as it is in Chemistry. There is a space in the basement of Holmes Hall which at small expense could be fitted up for this purpose, the apparatus needed is quite inexpensive, and I would ask that before another college year opens this be done. A lantern or Reflectoscope would aid materially in teaching methods and practices in Agriculture. The classroom is already fitted with lantern attachment and an equipment including slides could be provided for about one hundred dollars.

During the past year an attempt has been made to do some extension work. In all, I have met with, and given addresses at, twenty-two Farmers' Institutes, Teachers' Associations, Fairs and Grange meetings. I believe there is no work so effectual and none that will raise the standard of Maine Agriculture so rapidly, as well as rapidly build up the department, as this work, and the University should follow the example of other institutions of the kind and secure a man who shall devote his entire time to this work.

Twenty-five people have applied for help through the correspondence course. In each case a course in systematic reading on agricultural subjects has been laid out for them. It is to be regretted that time does not allow this work to be followed up more closely in an effort to help those who cannot come to the University for instruction.

The department is co-operating with the State Superintendent of Public Instruction and the Commissioner of Agriculture, in the introduction of agricultural teaching in the normal and public schools of Maine. I

am engaged at present in preparing some pamphlets to be used in this work.

The management of the farm has been conducted as outlined in last year's report. As rapidly as possible, the farm is being divided into plots of not less than five acres. This will greatly facilitate doing the work as well as carrying on a systematic rotation of crops. The crops raised and harvested the past year were as follows: 100 tons of hay, 110 tons of silage corn, 8 acres of oats, 5 acres potatoes, 3½ acres winter rye, 1½ acres rutabagas. 1½ acres mangel-wurzels, 1 acre beans and about 8 tons oat hay. These were delivered to and consumed by other departments of the University.

The need of more storage room for farm implements has been relieved by the transferring of the building formerly used as a machine shop to the farm. As yet nothing has been done toward fixing this up for use; the second story should be divided into four rooms, one of which should be used for the storage of seeds, grains and feeds. A tool room in which small tools may be kept is also a necessity.

During the past year there has been added to the equipment either by donation or purchase the following implements: Grain drill with fertilizer and grass seed attachments from A. B. Farquhar Co., York, Pa., potato sprayer, John R. Shangle, Heightstown, N. J., Stevens fertilizer distributor from Belcher & Taylor, Chicopee Falls, Mass., hand grass seeder, fanning mill, second hand feed mill for grinding fertilizers. Kemp manure spreader (donated) Richardson Mfg. Co., Worcester, Mass., and self binder, mower, steel hay rake and wooden hay rake—all loaned by Adriance Platt & Co., Poughkeepsie, N. Y., through their State agent, Mr. Carsley, Dexter, Me. For these implements the department wishes at this time to express its thanks and appreciation.

As recommended last year, the farm is in need of considerable tile drainage to remove surplus water from what might be made valuable land. Not only would the land itself be much increased in value but the appearance of the farm would be much improved. Much of the excavating has already been done in the making of open ditches so that the expense will be confined chiefly to cost of tile, laying and filling the ditch. It will be necessary before another season's work begins to purchase some implements to replace those worn out, also a horse to take the place of one no longer able to do heavy work.

The growth of the number of students registered in the College of Agriculture has been most encouraging. Last year at the time of submitting the report there were seventeen in the agricultural courses; at the present time there are twenty-seven. It is to be hoped that this increase may continue so that we may be able to meet the frequent demands made upon the University to furnish graduates or others fitted to fill positions in scientific and practical Agriculture.

Respectfully submitted,

WILLIAM D. HURD,

Professor of Agriculture.

REPORT OF THE DEPARTMENT OF ANIMAL INDUSTRY

President G. E. Fellows:

SIR:—The buildings occupied by this department, with their furnishings and animals, make the facilities for instruction in animal breeding, feeding, judging and handling very good.

The cattle herd consists of thirty-five animals, including representatives of five pure breeds, viz.: Jersey, Ayrshire, Hereford, Shorthorn and Red Poll. The swine herd contains fifteen pure Berkshires and Chester Whites. There are fifty sheep, all pure blooded Shropshires, Hampshires, Oxford Downs, Cheviots and Horned Dorsets.

The Dairy Building is in fine condition and sufficiently equipped with modern machinery and fixtures for present instruction purposes.

The Poultry Plant has been increased by the erection of a fine breeding and stock house 16 by 120 feet in size. The large breeding and stock houses equipped with 225 trap nests, of our own planning and construction and containing a thousand pure bred hens, together with fifteen portable brooder houses provided with lamp brooders, give exceptional facilities for instruction in poultry breeding.

While the small buildings are excellent in which to raise chickens when there is no snow on the ground, they are practically useless for winter broiler raising, or early spring breeding, work which is of very great importance to every student, and particularly is such instruction being called for by short course men.

A house 100 feet long, heated with water, would make the whole plant quite complete, and sufficiently extensive for instruction purposes. Such a house could be constructed and completely equipped for five hundred dollars.

During the last year the instruction in this department has been very much extended by the establishment of the two year school course in Agriculture, which gives me two additional classes each day, and requires 22 hours actual teaching each week—full time work.

By my appointment one-half of my time is apportioned to the University for teaching, and one-half to the Experiment Station for investigation purposes. The time now devoted to teaching and caring for the animals, their products and the workmen makes it practically impossible for me to carry Station work and consequently the poultry breeding

investigations and experiments are at a complete standstill. To show something of the importance attached to the investigations which we have already made, I will cite the fact that the Bureau of Animal Industry, of the Department of Agriculture at Washington—unsolicited, placed a thousand dollars at the disposal of our Station, last August, with which to extend this work this year. I hope some arrangements may be made so that I may have time to continue the investigations.

Respectfully submitted,

G. M. GOWELL,

Professor of Animal Industry.

REPORT OF THE DEPARTMENT OF BIOLOGY

President G. E. Fellows:

SIR:—The more important changes that have been made in the department since the last report are connected with the re-arrangement of the work in botany.

It has been arranged that Mr. M. B. Cummings, Instructor in Botany, shall devote considerable time to work in the department, and this has made it possible to remodel some of the courses previously given, and to offer a number of new courses. Courses have been added in Plant Physiology, Plant Pathology, Agricultural Botany, and Advanced Botany and more time will be given to general Botany and Plant Histology.

Apparatus for demonstrating special phases of plant growth is greatly needed, and it is hoped may be supplied in the near future.

During the past year an exchange of rooms was made so that the bacteriological laboratory now occupies a room that opens into the main biological laboratory. By this arrangement the room is now available for advanced work in Zoology and Botany at periods when it is not being used for classes in bacteriology. The extra space and equipment are greatly appreciated.

Two skeletons, one of a deer and the other of a goat, have been prepared and mounted for the museum by students of last year's graduating class, Messrs. E. B. Buker and F. H. Webster. They materially add to the working value of the museum, and it is hoped that they will form the basis of an illustrative collection of skeletons.

Respectfully submitted,

GILMAN A. DREW,

Professor of Biology.

REPORT OF THE DEPARTMENT OF CHEMISTRY

President G. E. Fellows:

SIR:—The work in this department has not undergone any marked changes since my last report.

Mr. H. M. Soper having accepted a position in technical work, his place has been acceptably filled by Mr. L. C. Smith, a graduate in the class of 1904. The work in Elementary Chemistry is in charge of Mr. Grant T. Davis, and that in Qualitative Analysis in charge of Mr. J. B. Reed; both these gentlemen have given entire satisfaction in their work. The text books in Elementary and Advanced Inorganic Chemistry have been replaced by others in which the subject is developed from the physico-chemical side.

The increased number of hours devoted to Industrial Chemistry has made it possible to go over the ground more thoroughly than in the past. We labor, however, under the great disadvantage of not having a properly equipped technical laboratory in which some of the operations could be carried out on a large scale.

Some of the most pressing needs of the department are: A proper laboratory for the class in Elementary Chemistry, a special room for water analysis and one for organic work, a better system of ventilation for existing laboratories.

Besides the above, much apparatus is still necessary to fully equip our laboratory for all kinds of chemical work. The library is also very deficient in books and journals for reference, which are absolutely necessary for the carrying on of original work of any kind.

I trust these various needs may receive early attention as they are of the utmost importance.

Respectfully submitted,

A. B. AUBERT,

Professor of Chemistry.

REPORT OF THE DEPARTMENT OF CIVIL ENGINEERING

President G. E. Fellows:

SIR:—The work of this department has been conducted along the same lines as indicated in my last report, with the exceptions herein noted.

During the year 1903-4 there were eighty-eight students in Civil Engineering in the three upper classes, divided as follows: seniors twenty-nine, juniors twenty-eight, sophomores thirty-one. Twenty-nine men graduated from this course last June, and although it has been an unusually hard year to obtain positions in this profession, the majority of the graduates have found employment.

As was mentioned in my last report, Freehand Drawing, Mechanical Drawing, Descriptive Geometry and Mechanics have up to this year been in charge of the head of this department. It was decided during the past year that the time had come to establish a new department embracing these subjects, and accordingly the trustees, on recommendation of the president, created the department of Mechanics and Drawing, and obtained Mr. Chas. P. Weston, a former graduate of this University and a graduate of Columbia University, as its head. This relieves the department of Civil Engineering of a burden, and it is felt that it will be possible to give much more strength to the courses in both of these departments by the present arrangement.

At no time since the establishment of the department, has the want of more equipment and more instructors been more keenly felt than during the past year. As stated in my last report, with the present force of instructors the field work in the spring has for the past few years been badly congested. This reached a maximum last spring when there were more men registered in sophomore and junior field work, and senior thesis work, than ever before. It was decided that something must be done to relieve the situation, and that as a last resort it would be better to discontinue one of the courses rather than to have the existing conditions. The final solution was the recommendation to the trustees, which recommendation was adopted by them, to have the junior field work arranged for a summer school, which would commence immediately after Commencement. This will be tried for the first time next June. Under this arrangement 10 hours per week, during the field season, will be available as extra time to be divided up between sophomore and senior field work. It is proposed to increase the time of the sophomore field work

from four hours, to six hours per week, and to divide them into two divisions. This allows less men to an instructor, and insures much more practice for each student with the instruments.

The course in Hydraulic Field Work has been changed to three hours per week for the fall term, and has been much strengthened. A new Price current meter, the same as used by the Geological Survey, has been added to the equipment, and through the kindness of former Professor Grover, the U. S. Hydrographic Gaging Station at Montague has been placed at the disposal of the department. Regular trips are taken to this Station, measurements made, and the results turned in to the Survey.

The new course in Railroad Engineering, which was added last year as an elective, has been made a requirement for graduation.

During the past year, through the efforts of the Junior Society of Civil Engineers, composed of members from the junior class, Mr. Frank W. Skinner, a consulting engineer from New York City, was obtained to give a course of lectures on engineering subjects. The lectures were largely attended, and it is hoped that the precedent established will help to continue this practice. The expense was divided between the University and the Society.

The most pressing needs of this department are a triangulation theodolite and more drawing and recitation room space. The instrument is necessary for the higher surveying which is to be carried on at the summer school, and it is earnestly hoped that such an instrument may be obtained before that time.

The present crowded conditions make it impossible to obtain the best results, or to offer all of the courses desired. It is recommended that, on the vacation of this building by the departments of Mechanical and Electrical Engineering, the present drawing room on the first floor be made into a recitation room, and one of the drawing rooms on the third floor be fitted up for the use of this department. This would give ample recitation room space for the use of both this department and the department of Mechanics and Drawing. By utilizing the old blue print room on the third floor, and a portion of the hall, a room for filing drawings, desk room for instructors, etc., for the two departments could be had at a small expense, and the space thus provided would be ample for many years to come.

During the past year Mr. H. P. Hamlin was Instructor in Civil Engineering, and Mr. P. D. Simpson was Tutor. Mr. A. L. Grover was Instructor in Drawing. Also Mr. A. C. Jewett, and Mr. A. W. Cole, Instructors in Mechanical Engineering, taught Mechanics and Descriptive Geometry respectively.

Respectfully submitted,

HAROLD S. BOARDMAN,

Professor of Civil Engineering.

REPORT OF THE DEPARTMENT OF CIVICS AND POLITICAL ECONOMY

President G. E. Fellows:

SIR:—During the past year I have given instruction in the academic department of the University in Political Economy, Civics, Anthropology, International Law, and Roman Law. In the Law School, in History of Law, Admiralty and Constitutional Law.

The work done has been essentially the same as in former years, and the progress made by the students has been satisfactory.

Respectfully submitted,

A. E. ROGERS,

Professor of Civics and Political Economy.

REPORT OF THE DEPARTMENT OF ELECTRICAL ENGINEERING

President G. E. Fellows:

SIR:—There has been no material change in the courses or the work of this department during the past year. The number of students has slightly increased. There are now between twenty-five and thirty in each class. The Electrical Laboratory in Lord Hall has been put in commission during the present term. It provides most satisfactory quarters for the courses in Laboratory Work. There is the same need of an increase in equipment as indicated in the report for 1903. No material additions to equipment have been made in the past five years. Two thousand dollars, or more, could be used to the very best advantage in the purchase of needed apparatus.

REPAIRS

The repairs and changes made under my care during the past year are in part as follows:

Alumni Hall has been connected with the main sewer system through 450 feet of 6-inch sewer pipe laid in cement. This replaces 4-inch sewer originally installed, which has given much trouble.

At the Mt. Vernon House there has been put down 325 feet of 5-inch sewer pipe laid in cement, replacing an equal amount of 4-inch pipe laid dry. This 4-inch pipe had given serious trouble on many occasions.

The main part of old shop building, 36x56, two-story, has been moved about 1000 feet to a point near stables on farm, and set on posts, to serve as a storage building for agricultural implements. The annex to old shop was torn down and material used in various ways. The engine in shop was left on its foundations as it was needed to help run dynamos. This engine has been covered by a small annex to light station.

The foundation of front steps to Coburn Hall has been rebuilt.

The old Beta House has been moved about 500 feet to a point near the north line of the grounds. It has been set upon a substantial foundation and provided with good basement. It has been connected with the main sewer system by 550 feet of 6-inch sewer pipe laid in cement; connected with the soft water system by 500 feet of 1-inch galvanized iron pipe and with the hard water system by 750 feet of ¾-inch galvanized

iron pipe. It is lighted from the lines of the Oldtown Electric Company.

In addition to the foregoing there has been the usual amount of smaller repairs, including carpenter work, masoning, painting, plumbing, etc.

Respectfully submitted,

HOWARD S. WEBB,

Professor of Electrical Engineering.

REPORT OF THE DEPARTMENT OF ENGLISH

President G. E. Fellows:

SIR:—Since giving you my last report the work in the department of English has been steadily improving. More systematic instruction is given in public speaking; the courses have been rearranged and are now in more logical order; four new courses have been added—two in English literature and two in argumentative writing and speaking, making the whole number of courses now offered the student twenty-one, or a total of about seven hundred seventy-five hours; and the work of instruction has been so divided that I am now relieved from rhetoric and oratory and can devote my whole attention to the teaching of English literature, in which subject I have at present five classes.

It is pleasant to report that at no time in the history of the University has the interest in the study of English been so great as for the last two years. Formerly English was wholly a required study. It is now, except for the first four courses, wholly elective. The result is that all our advanced courses are taken by only those who are interested in the subjects, and we get more satisfactory work. Quite a number of students are making English their major course for a degree.

Our chief need at present is more books. Our library is rich in works pertaining to science and technology, but it is rather poor in the direction of English literature. We have but a meagre collection of standard authors and almost no recent literature at all. We need more books of literary history, and above all, the Oxford Dictionary. In the study of our language it is often necessary to follow the history of a word and its changes of meaning from its earliest use. This we are frequently unable to do; as the ordinary dictionary gives, as a rule, only present day meanings and does not trace the history of words. The Oxford supplies the information needed. It is expensive, but invaluable. We need also Warner's Library of Literature. This work furnishes not only copious specimens of the writings of many authors not to be found in any but the larger libraries, but more than one thousand critical articles not elsewhere accessible to the student. Were these books on our shelves, they would materially aid in the teaching of English.

I wish to add in closing that no man could ask for more enthusiastic and faithful assistance than has been given me by Mr. Thompson and Mr. Edson.

Respectfully submitted,

H. M. ESTABROOKE,

Professor of English.

REPORT OF THE DEPARTMENT OF FORESTRY

President G. E. Fellows:

SIR:—I have the honor to make the following report to you of the work done in the Department of Forestry.

In the college year, 1903-4, thirty-seven students elected courses in forestry. Of this number four took forestry as their major subject with the intention of making it their profession. The number of major students in forestry at the opening of the present college year was ten.

One new course entitled "Thesis Work" has been added to the list. This subject calls for original investigation in forest management by the students in their fourth year under the direction of the Professor of Forestry. It forms the final step in an undergraduate training in forestry.

The practice work has been directed largely to the college wood lot and to the establishment of a small forest nursery. Special sample acres have been surveyed in the wood lot belonging to the University and experiments are being made to ascertain the best method of treating different types of forest in this vicinity. When this work has been carried out for a few years definite information of value to the owners of second-growth woodland will be obtained. A special opportunity to superintend the operations of forest tree-planting will be given to the students in the spring of 1905.

Valuable books on forestry have been secured for the library from time to time and many additions will be made during the present year.

A complete collection of the forest trees and shrubs of this locality is being made for the university herbarium. It is also the intention of the department to secure specimens of all the tree species of the United States. One hundred botanical specimens of the trees of the Philippine Islands have recently been added to the herbarium.

Respectfully submitted,

SAMUEL N. SPRING,

Professor of Forestry.

REPORT OF THE DEPARTMENT OF GERMAN

President G. E. Fellows:

SIR:—No important changes or additions are to be recorded in the work of the German Department during the academic year of 1903-4. Mr. Shute, Instructor in Modern Languages, and myself gave instruction in six courses during the first term, in seven courses during the second term. The course in first year German was given in two divisions. Mr. Shute's work in the department has been characterized by thoroughness, faithfulness, and willingness, and he enjoys the confidence of his students.

The division of the Modern Language Department into the Romance Languages Department and the German Department has proved as thoroughly successful as was predicted.

The head of the German Department has sought when feasible to present to students in his classes not alone the language and literature of Germany, but also a suggestive though necessarily elementary treatment of contemporary German civilization. In connection with the first year German a weekly course of lectures was given, in most cases illustrated by stereopticon views owned by the head of the department and projected by a very excellent lantern in Coburn Hall. This course of lectures was repeated as an elective during the spring term, one hour a week.

In connection with this use of the stereopticon, the department would earnestly suggest that a sum approximating fifty dollars be appropriated for the German Department, to be expended in the preparing of lantern slides that, with the stereopticon facilities now at hand, may illustrate the lives of Lessing, Goethe and Schiller, and also the times in which these German masters of literature lived. The request is well founded, the department believes; other departments in this and other universities and colleges are thus provided with stereopticon slides.

The Deutscher Verein, a social club at the University, composed of undergraduates who have attained a knowledge of German sufficient to enable them to understand spoken German fairly well, and to speak with moderate facility, has enjoyed a very successful second year of existence. Meetings have been held almost regularly at intervals of three weeks. Members of the Verein, members of our faculty and of sister institutions, have addressed the Verein. It numbered about twenty members at the close of the academic year.

Respectfully submitted,

ORLANDO F. LEWIS,

Professor of German.

REPORT OF THE DEPARTMENT OF GREEK

President G. E. Fellows:

SIR:—My report on the work of the Department of Greek brings little that differs from preceding reports.

The most important change introduced the past year by the faculty touching the Classical Course has placed Greek within the range of electives and makes this language no longer required for the B. A. degree. This step is in line with a very large number, and a growing number, too, of our best institutions. The result will be that fewer students will take Greek, while those who do elect it will do so from a desire to know Greek and something of Greek culture rather than to satisfy arbitrary demands for requirements in a particular course.

Another innovation in line with the recent change in the attitude towards the study of the classics has been the introduction of courses in elementary Greek. Students are now able to begin the study of Greek after coming to the University, the language being thus placed on the same basis as modern languages. The number electing this work the present year indicates that a wise move was made in providing this wider range of instruction in Greek.

Respectfully submitted,

J. H. HUDDILSTON,

Professor of Greek.

REPORT OF THE DEPARTMENT OF HISTORY

President G. E. Fellows:

SIR:—The Department of History, which is now in its third year, has passed through most of the irregularities incidental to the establishment of a new department.

The work of this department now includes European and United States history, and twelve courses are offered. Doctor Fellows's duties as president have prevented his taking more than one class every second year. Of the four courses offered each term by the assistant professor three have been open to students in general and the fourth only to those prepared for advanced work.

Five regular students are taking a major in history, and one special student who is not a candidate for graduation. The degree of B. S. (in History) was conferred last June upon Miss F. E. Buck, who had entered the junior class from another institution.

While there is no regular provision for giving graduate instruction, two students are pursuing such courses under the supervision of the department.

At the beginning of the present year a club was formed of the advanced students, and at its bi-weekly meetings subjects in connection with Russian and Japanese history have been taken up. This little club offers opportunities for investigation and for informal discussion somewhat different from that of the classroom.

As stated last year, the greatest need of the department is a working room fitted with tables where students may have ordinary conveniences for using several books at one time. The department library has received a number of new books but we have as yet very little original material such as letters, government documents, etc. While the equipment for general courses is fair it is far from being even passably efficient for a detailed study of specific periods or phases of historical development. For instance, we have almost nothing in United States history since the civil war.

Respectfully submitted,

CAROLINE COLVIN,

Assistant Professor of History.

REPORT OF THE DEPARTMENT OF HORTICULTURE

President G. E. Fellows:

SIR:—Since my last report, as you are aware, the Department of Horticulture has been relieved of botany and forestry, and is now working along two distinct lines—that of instruction and that of investigation. These two lines are coördinate and supplementary, and in a measure interdependent.

INSTRUCTION

The four years collegiate course in horticulture which has been offered tentatively for several years has been more clearly differentiated. While all of the instruction in practical horticulture which is given at the University may be obtained without taking the college course, it is believed that the general training afforded by the full four years course will be of inestimable value to the student, since the work is arranged on the principle that the training which develops the power of acquiring knowledge, and of using such knowledge when acquired, is of more value than the mere crowding of the mind with a store of facts.

The technical instruction in horticulture is given in nine courses, covering a period of two and one-half years, but many of those courses are based upon the principles studied in other departments. The following are the salient features of the distinctively horticultural work: General Horticulture, designed as a basis for all study of plants under cultivation; Fruit Growing; General and Ornamental Gardening; Handicraft, practical work in orchards, gardens and greenhouses, accompanying classroom instruction; Systematic Pomology; Literature of Horticulture; Evolution of Cultivated Plants; Horticultural Investigations, for those wishing to become teachers or Experiment Station workers in horticulture. A detailed description of the courses is given in the catalog of the University.

Students who desire to specialize in the direction of horticultural work, without taking the full college course, are admitted to the classes with the regular students, and the Professor of Horticulture outlines an elective course to suit the needs of individual cases. Students in the Agricultural Course are required to take certain of the courses, and are given the opportunity to elect others.

In the School Course in Agriculture, one year's instruction in the principles of plant culture, in fruit growing and in general and ornamental gardening is given. This work is not of college grade, but is designed especially for young men and women who are to make farming their life work.

Correspondence upon topics related to fruit growing and general gardening forms an important feature of the horticultural work, both in

college and station lines, and every effort is made to keep in touch with the needs of the farmers of the state as well as of the rural schools.

THE CAMPUS

The work upon the campus, which is made an important feature of the instruction in ornamental gardening, has, during the past two years, been mainly in the way of maintenance. A new concrete walk, however, has been built from the front of Coburn Hall to Alumni Hall, and with the completion of Lord Hall and the removal of the old Beta Theta Pi House a large amount of grading was necessitated. This work is practically completed and has been done by the regular laborers of the department at a very moderate cost. The actual cost of the work around Lord Hall has, up to date, been but $90.00, and that of the other building—the Theta Epsilon House—but $45.00, exclusive of team work, which has all been done by the department team.

It is now nine years since the board walks were laid from the President's house to the car station and from the entrance to Oak Hall. In many places the walks have been repaired, but at present they are both dangerous and unsightly. It is earnestly hoped that provision may be made for replacing these walks with concrete at a very early date.

The location of the Theta Epsilon House near the north line of the campus necessitates the opening of a new drive from that point. This has already been outlined, but the work cannot be completed until next spring. This may be done by the regular department laborers at a small expense.

INVESTIGATION

The work of investigation has been fully outlined in the annual report of the Experiment Station for 1903-4. In brief, it may be said, the investigations at present underway include studies in orchard culture; fertilizers for orchards; top-grafting apple trees; the spraying of orchards; studies in germination; studies in heredity; problems in greenhouse management; studies of the blueberry.

Mr. M. B. Cummings has continued to assist in the work of instruction, but in the transfer of botany to the Department of Biology his time is divided between the two departments. After the present term his time will be required wholly in the other department. Mr. A. M. Shaw, for several years the efficient foreman of the department, resigned August 1st, to engage in commercial work in Bangor. He has been succeeded by Mr. Arthur James.

A more complete statement of the nature and scope of the horticultural work has been published in the Maine Bulletin, Vol. 7, No. 2, October, 1904.

Respectfully submitted,

WELTON M. MUNSON,

Professor of Horticulture.

REPORT OF THE DEPARTMENT OF LATIN

President G. E. Fellows:

SIR:—I take pleasure in reporting continued and gratifying progress in the growth, efficiency, and repute of the Department of Latin.

The present freshman class in Latin is the largest and best that has yet entered the University. It is also noteworthy that an unusually large proportion of those here taking the first year of Latin continue the language throughout their course, making it the major subject of study for four years, thus fitting themselves to teach it successfully in the schools of the state.

The chief addition to the departmental equipment during the year has been that of a valuable series of lantern slides illustrating the history of the second Punic war, for use in the class reading Livy. Some other additions have been made to the very important collection of slides already at the service of the department. The use of these illustrations in connection with the daily work of the classes has proved itself most helpful and stimulating. In this respect, as in other matters of equipment, it is believed that this department already ranks with similar departments in the best institutions of New England.

The number and character of the fitting schools now represented among the students of Latin in this institution may fairly be considered a token of the appreciation shown—in various parts of the State, as well as outside the State—of the opportunities afforded by the University for a classical education. The history of so many other state universities is now repeating itself in Maine, in the steady growth of a due recognition by the public of the duty and ability of the State to afford its youth the facilities for the best possible higher education along each and every chosen line.

The greatest need of the department at present is for an increased library appropriation, that the classical library may keep pace with the other equipment already provided.

Respectfully submitted,

KARL POMEROY HARRINGTON,

Professor of Latin.

REPORT OF THE LIBRARIAN

President G. E. Fellows:

SIR:—Owing to the general financial stringency of the University, the funds available for the library have been cut down during the last year so that the number of volumes added is less than for several years previous. The total number of bound volumes in the library on December 31, 1904, is 26,217, a gain of 1,332 over the previous year.

From Gen. Charles Hamlin, Bangor, a gift of $100.00 was received to be used for the purchase of the English Ruling Cases for the law library. This was supplemented by $25.00 from Hon. L. C. Southard, '75, Boston, to be used for the same purpose. The balance required to obtain the set was taken from general library funds.

Miss Geneva R. Hamilton, Assistant Librarian since May, 1900, resigned last summer. She was well fitted for the duties of the position by temperament and training, and I sincerely regret losing her. Mrs. Clara E. Patterson was appointed her successor and she entered upon her duties June 15th last.

Last year as an experiment the library was kept open evenings and Sunday afternoons. The use made of it demonstrated the wisdom of the trial, and it may now be regarded as settled that the library shall be open at these times. Indeed, it is desirable that it be open continuously from morning until evening, without being closed during the noon hour and in the early evening.

The lack of sufficient stack room and reading room accommodations is felt more acutely each year. The need of a suitable library building is so apparent that no argument is necessary to demonstrate it. The use made of the library in its present unsatisfactory quarters is so great, by faculty and students alike, that all familiar with existing conditions strongly hope some way may be found speedily to provide a suitable library building.

Respectfully submitted,

RALPH K. JONES,

Librarian.

REPORT OF THE DEPARTMENT OF MATHEMATICS AND ASTRONOMY

President G. E. Fellows:

SIR:—There have been no changes of importance in the courses of instruction offered in this department since my report of one year ago. The number of students in the various classes also remains nearly the same. At the present time instruction is being given to 296 students, reciting in fifteen classes or divisions. In this statement a few names are counted twice, having work in two or more mathematical subjects.

During the year 1903-1904 the teaching force of the department consisted of Mr. Buck and Mr. Lambert, instructors; Mr. Conner, tutor; and myself. Mr. Lambert resigned in March, to accept a more lucrative position in the U. S. Coast Survey. At the end of the year Mr. Conner declined a re-appointment and took a position in the U. S. Hydrographic Survey. These places have been filled by the appointment of Mr. Harley R. Willard, M. A., a graduate of Dartmouth, and a teacher of several years' successful experience, as Instructor, and of Mr. Raymond K. Morley, M. A., a graduate of Tufts College, as Tutor. Both these gentlemen are serving very acceptably.

The most serious need of this department at the present time is a larger allowance for the salaries of the young men. This is necessary if we are to have the services of experienced teachers in mathematics. Young men of ability will not remain with us unless we can pay approximately what their services will command elsewhere. It would seem to need little argument to prove that at least two of the four men needed for teaching mathematics and astronomy should be appointed permanently.

A minor, but important want is that of a considerable addition to the books and periodicals in the mathematical section of the library.

Respectfully submitted,

J. N. HART,

Professor of Mathematics and Astronomy.

REPORT OF THE DEPARTMENT OF MECHANICAL ENGINEERING

President G. E. Fellows:

SIR:—During the past year the work of instruction in this department has been varied but slightly in its nature, one new course only having been introduced,—namely, Heating and Ventilation of Buildings. The teaching force has, however, been somewhat reduced, and at present includes, besides the head of the department, Mr. A. C. Jewett, Instructor in Mechanical Engineering, and Mr. A. W. Cole, Instructor in Machine Work and Machine Designs. Instruction in Forge Work is being given this term in a very efficient manner by three members of the senior class.

The number of students registering in the department this year has increased by fifteen per cent. over the number last year, including now nine seniors, nine juniors, sixteen sophomores, and five special students. Six men were graduated in June, 1904, and they have been uniformly successful in securing positions.

Such additions as have been made to the working equipment have come almost entirely as gifts to the University. They consist of a small steam pump by the Blakeslee Manufacturing Company, of Dee Quoin, Ill.; a three-inch Cochrane steam separator by the Harrison Safety Boiler Works, of Philadelphia; a two-inch steam separator by the Baum Separator and Machine Company, of Manheim, Pa.; a Metropolitan injector by the Hayden & Derby Company, of New York; a preserve tank for the hydraulic laboratory by the Hon. William Engel of Bangor. Also an aluminum sectional model of the Marsh steam pump, by the American Steam Pump Company of Battle Creek, Mich. Acknowledgment of the generosity of these firms is here made.

At the present time there are in the course of construction in the shops of the department apparatus for belt testing, two wood turning lathes, iron vises with which to equip the work benches in the new wood shop, and several small bench grinders. This work, together with many repair jobs, is given the students to supplement their regular exercise work, and adds materially to the value of the course, as well as being of direct profit to the department. During the last fiscal year the treasurer's books showed a credit for the shop of $112.36, the total receipts being $785.84. This record can be bettered when we are fully settled in the new quarters.

Since the last report of the department Lord Hall has been completed and made ready for use in those portions designed for shops and labora-

tories. The old equipment has been moved into place in the new wood shop, machine shop, and foundry, and a new equipment, furnished at a nominal price by the B. F. Sturtevant Company, installed in the forge shop. The testing machines have also been set up in the mechanical laboratory. Five electric motors have been purchased of the General Electric Company to run this machinery. The Sturtevant system of heating has been installed for the entire building and is working satisfactorily. The wiring of the building for lights and motors and for the electrical laboratory has been done by Charles E. Dole of Bangor in a first-class manner.

The department is now well provided with working rooms, but additional equipment is much needed. In the machine shop an increasing number of students makes several new engine lathes a necessity, and for the mechanical and hydraulic laboratories additional machinery and instruments, for which a conservative estimate of cost would be $3,500, are necessary for the carrying on of a systematic and complete course of study in the principles of mechanical engineering. It is also very essential that the teaching force in the department should include a man of the grade of assistant, whose time could be devoted to the laboratory work. It is hoped that steps toward the meeting of these needs may be taken during the coming year.

Respectfully submitted,

P. F WALKER,

Professor of Mechanical Engineering.

REPORT OF THE DEPARTMENT OF MECHANICS AND DRAWING

President G. E. Fellows:

SIR:—The establishment of this department is of such recent date that the present report covers but a brief period, for it was only with the beginning of the fall term of 1904 that the courses in Mechanics, Descriptive Geometry and General Drawing, required of all engineering students but previously scheduled in the Department of Civil Engineering, were assigned to the new department of Mechanics and Drawing.

In this department instruction is now being given in the following courses:

A five-hour course in Technical Mechanics for juniors in engineering, with a registration of sixty-seven, divided into three sections.

A two-hour course in Descriptive Geometry for sophomores in engineering, with a registration of ninety-eight, divided into four sections.

A four-hour course in General Drawing for freshmen, with a registration of ninety-four, divided into two sections.

In addition to these courses, an advanced course in Theoretical Mechanics is to be offered next year as an elective for seniors whose major work is in Engineering, Physics or Mathematics.

The services of Mr. A. L. Grover as an instructor are shared by this department with the Department of Civil Engineering, and assistance in the instruction of the department is also given by Mr. A. W. Cole and Mr. A. C. Jewett of the Department of Mechanical Engineering.

The drawing room accommodation is at present insufficient but it is possible that this congestion will be relieved when Lord Hall is completed.

Respectfully submitted,

CHARLES PARTRIDGE WESTON,

Assistant Professor.

REPORT OF THE DEPARTMENT OF MILITARY SCIENCE

President G. E. Fellows:

SIR:—The most important change in this department during the past year was the adoption of a new set of military rules.

These rules were adopted by the faculty last spring and went into effect at the beginning of the fall term.

Some of the important provisions of the new rules are the following:

1st.—The military department is placed on the same footing as other departments of instruction.

2d.—The first year's military work is a graduation requirement and is required of all freshmen. One credit is allowed for the work.

3d.—The other three years' work is elective and one credit is allowed for each year's work.

4th.—None are excused from military work on account of athletics, music, etc.

The course of instruction is prescribed by the President of the United States and is published in orders from the War Department. The last order was issued April 6, 1904. This order does not materially change the course prescribed in the previous order.

Under the new rules it is thought that better work will be done in the department and that its effect will soon be felt throughout the entire University.

Respectfully submitted,

CHAS. J. SYMMONDS,

Captain 12th U. S. Cavalry,

Professor of Military Science and Tactics.

REPORT OF THE DEPARTMENT OF PHARMACY

President G. E. Fellows:

SIR:—Since my last annual report, seven have graduated from the short course, but none from the long course. As has been previously pointed out, the number entering the long course is small, and of these a considerable proportion have in the past changed to the chemical course and graduated therefrom. A few also in the short course after its completion have completed the work and taken the degree of the chemical course. Both courses in pharmacy have therefore, to considerable degree, proved feeders of the chemical course. There have been also some accessions to the pharmacy course, but comparatively few, from students of other courses.

Owing to the relatively small pay and restricted field in lines purely pharmaceutical, compared with the wider possibilities in the various chemical industries, the tendency for the pharmacy student to complete his fitting in chemistry for the greater possible opportunities thereby afforded is natural and rational. Such supplementary fitting he is readily enabled to make because from the first so large a part of his work in the pharmacy course is purely chemical. For, as has been frequently pointed out, chemistry is pre-eminently the science fundamental and true key to the mysteries of this occult art; for which reason the time devoted to chemistry (in the present schedule of the short course) amounts to over seventy per cent. of the total work of the first year, exclusive of military science, and to about fifty-two percent. of the total work of the second year. We may say with confidence that few colleges of pharmacy in his country give as much attention to, or as great opportunities for thorough grounding in this fundamental science as does our own.

The number of students at present in this department is unusually small, being thirteen. Our status is much the same as in the Department of Agriculture, i. e., while this calling is in general pleasant and most needful for the public good, it is not so obviously for the personal good of its followers; and hence those choosing the calling are mostly those drawn to it by affinity rather than by hope of monetary reward. But as the monetary standard is the prevailing one, the numbers electing pharmacy and agriculture are relatively small. The drug journals and association proceedings are recently filled with plaints of the scarcity of drug clerks—good or bad—but under the restrictive influences of the state examinations, greater responsibilities, more hours, and less pay than may be readily had elsewhere, the situation does not seem to be

improving. Also this increased demand for clerks and the raised standards of the state boards do not noticeably increase the number of students in colleges of pharmacy, and doubtless for the reasons just stated. It is too much to expect a young man to spend several years of time, both in study and in apprenticeship, in preparation for a profession, involving great moral and legal responsibilities, which is paid merely by the standards of common labor. While this condition prevails the public must expect to be served in this calling in large part by unskilled and incompetent help.

There has been added to our meager equipment but a single article, a W. & T. suppository machine. Except the donated annual Proceedings of the American Pharmaceutical Association, there have been no additions to the department library for several years, although some standard works are urgently needed, e. g., Fenner's Formulary.

Several lines of pharmaceutical investigation have been in progress in the laboratory, partial abstracts of which have appeared in the trade journals, together with a few communications of a more general nature from the head of the department, in the journals and Proceedings of the American Pharmaceutical Association. Other departmental investigations are now under way. The department was represented by its head at the recent meeting of the State Pharmaceutical Association at Portland.

Opportunities for employment of graduates continue as formerly, to be ample and fairly satisfactory, students being quite generally pledged in advance of graduation.

Several changes in the curriculum, particularly in the short course, are determined, and will be announced in the forthcoming catalog. They may be briefly summarized by noting that the courses in General Botany and Plant Histology have been lengthened and a new course (largely elected by chemical students also) denoted Chemical Equations, has been added. These changes have necessitated the dropping of the short course in physics. There has also been added (although not a matter of catalog statement because included within the time of existing courses) a course in pharmaceutical arithmetic,—the urgent need of which was fully set forth in our last annual report.

As regards the uniform purpose of this department this may be said: some pharmacy colleges over-emphasize the purely scientific side to the neglect of the practical; others, of aim too low, neglect, or mis-present, the sound and necessary scientific foundations of the art; our own aim, never lost sight of, is, while not sacrificing scientific thoroughness, to present matter of strict practical utility, to the end that the State may have skilled compounders and competent dispensers, in harmony with the spirit and purpose of our state pharmacy law, as well as *pro bono publico*.

Respectfully submitted,

W. F. JACKMAN,

Professor of Pharmacy.

REPORT OF THE DEPARTMENT OF PHILOSOPHY

President G. E. Fellows:

SIR:—The courses offered in this department remain the same as given in my last report, namely: General Psychology, Experimental Psychology, Comparative Psychology, Advanced Psychology, History of Education, Principles of Pedagogy and School Management, Logic, Ethics and History of Philosophy.

These courses are strictly elective and are given yearly, except that Comparative Psychology and Ethics are given in even years, and Advanced Psychology and History of Philosophy, in odd years.

Students rarely enter upon these lines of study until their junior year. This seems to be the right time with reference to maturity of mind and preparation to prosecute such studies with satisfaction and success. It has the disadvantage, however, that with the large amount of required studies in the technical courses and the unavoidable conflict of hours, it is quite impossible for many students who are really desirous of availing themselves of what is offered in this department, to do so. No remedy of this condition of affairs is immediately in sight. Time, it is to be hoped, may furnish such a remedy. Notwithstanding this disadvantage, the number of students in this department is such as to show a very decided interest, on their part, in philosophical studies. This attitude of mind toward these studies I regard as important and one to be encouraged.

As the matter of opportunity in this department now stands, the essential thing on the part of the student to do, is to get started at the beginning of the junior year in General and Experimental Psychology, and also in the other branches that may be offered at the time and that cannot be taken up later. If this course is adopted, the student will find that all or nearly all that is offered in this department can be secured.

The working equipment in the psychological laboratory is a modest one, and yet, it has enabled students to carry on experiments and investigations of high efficiency and value. Addition to this equipment should be made from time to time, especially of the more refined and valuable pieces of apparatus required in advanced experimentation.

Respectfully submitted,

M. C. FERNALD,

Professor of Philosophy.

REPORT OF THE DEPARTMENT OF PHYSICS

President G. E. Fellows:

SIR:—No material changes have been made in the work of this department since my last report. Instructor Burbank, who resigned March 15, 1904, to take a position in the United States Government Survey, was succeeded by L. E. Woodman, M. A., for some time assistant and graduate student at Dartmouth. E. H. Bowen is filling the position of Tutor for the second year.

Three graduate students are registered for work in this department, leading to the degree of M. S. About the usual number of students are registered for undergraduate courses. The new courses in mechanics and heat offered to juniors in mechanical engineering, and in electricity and optics offered to juniors in chemistry, afford an opportunity for students in these departments to get a proper amount of physical laboratory work. It is hoped that other departments which do not provide for such work, may soon be able to do so.

A new electrical measurement laboratory and photometric room have been fitted up in the basement of Wingate Hall, which afford many facilities not hitherto enjoyed.

Instruction in general physics for engineering students is, this year, given by lectures, based upon a revision of my notes, published in 1900. After a long experience in teaching college physics both by lectures and with the text-book, I find myself still unable to pass judgment upon their relative advantages.

Very little in the way of apparatus or books has been added to the equipment in physics during the past year, but mention may be made of a sensitive radio-electrometer for the study of the behavior of radio-active substances.

In the summer school of 1904 eleven students elected courses in physics, and the work done gave good satisfaction.

In conclusion it ought to be noted that the grade of the work in physics has steadily risen during the last few years, due largely to better preparation in mathematics before entering upon the work.

Respectfully submitted,

JAMES S. STEVENS,

Professor of Physics.

REPORT OF THE DEPARTMENT OF ROMANCE LANGUAGES

President G. E. Fellows:

SIR:—The department offers this year five courses in French and two in Spanish. The course in Italian is omitted, as it is given only in alternate years.

Twenty-five hours of instruction per week are given, distributed as follows: first year French, one division, five hours per week, 30 students; second year French, three divisions, three hours per week, 116 students; third year French, three hours per week, 8 students; French conversation and composition, two hours per week, 5 students; French literature, one hour per week, 4 students; first year Spanish, three hours per week, 27 students; second year Spanish, two hours per week, 5 students.

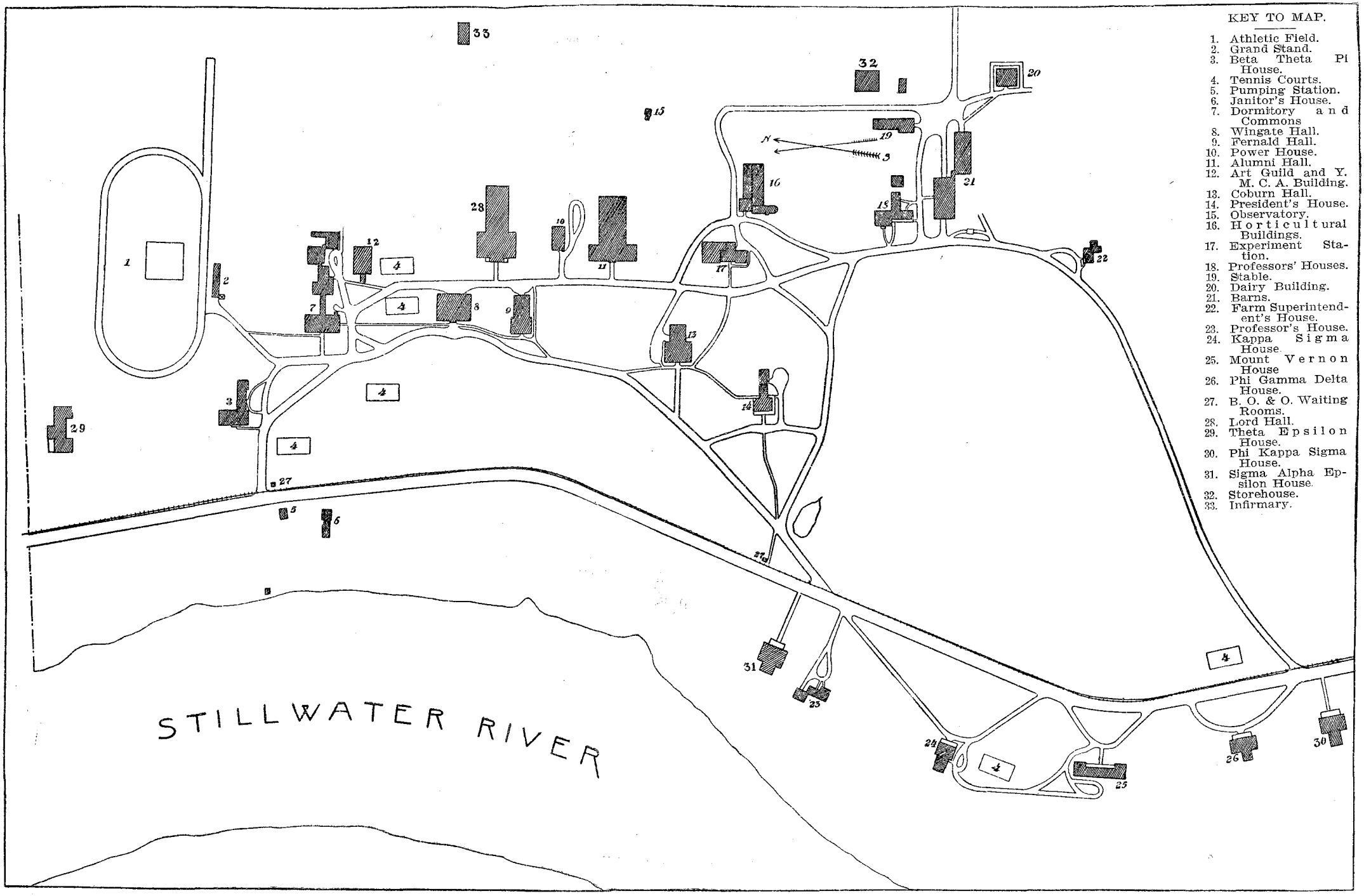
Altogether 195 students are taking work in the department this year. The Spanish is taught by myself. Mr. Shute assists in French; his work has been highly satisfactory.

The course in French conversation and composition and the course in French literature are new features in the curriculum.

Respectfully submitted,

J. B. SEGALL,

Professor of Romance Languages.


KEY TO MAP.
1. Athletic Field.
2. Grand Stand.
3. Beta Theta Pi House.
4. Tennis Courts.
5. Pumping Station.
6. Janitor's House.
7. Dormitory and Commons
8. Wingate Hall.
9. Fernald Hall.
10. Power House.
11. Alumni Hall.
12. Art Guild and Y. M. C. A. Building.
13. Coburn Hall.
14. President's House.
15. Observatory.
16. Horticultural Buildings.
17. Experiment Station.
18. Professors' Houses.
19. Stable.
20. Dairy Building.
21. Barns.
22. Farm Superintendent's House.
23. Professor's House.
24. Kappa Sigma House.
25. Mount Vernon House
26. Phi Gamma Delta House.
27. B. O. & O. Waiting Rooms.
28. Lord Hall.
29. Theta Epsilon House.
30. Phi Kappa Sigma House.
31. Sigma Alpha Epsilon House.
32. Storehouse.
33. Infirmary.
STILLWATER RIVER

CATALOGUE

OF THE

University of Maine

1904-1905

ORONO, MAINE

AUGUSTA, MAINE
KENNEBEC JOURNAL PRINT
1904

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CALENDAR

FALL TERM, 1904

September 19, Monday,	Arrearage examinations begin.
September 20, Tuesday,	Entrance examinations begin.
September 21, Wednesday,	Registration begins, 1.30 P. M.
September 22, Thursday,	Fall term begins.
November 22, Tuesday,	Meeting of the Board of Trustees.
November 23, Wednesday,	Thanksgiving recess begins, 12 M.
November 28, Monday,	Thanksgiving recess ends, 7.45 A. M.
December 2, Friday,	Sophomore prize declamations.
December 23, Friday,	Christmas recess begins, 5.30 P. M.
December 30, Friday,	Arrearage examinations begin (Spring term studies).

1905

January 2, Monday,	Christmas recess ends, 12 M.
February 3, Friday,	Fall term ends.

SPRING TERM, 1905

February 4, Saturday,	Registration.
February 6, Monday,	Spring term begins.
April 19, Wednesday,	Easter recess begins, 5.30 P. M.
April 24, Monday,	Arrearage examinations begin (Fall term studies).
April 26, Wednesday,	Easter recess ends, 7.45 A. M.
June 10, Saturday,	Junior exhibition.
June 11, Sunday,	Baccalaureate address.

June 12, Monday,	Convocation.
June 12, Monday,	Class day.
June 12, Monday,	Reception by the President.
June 13, Tuesday,	Meeting of the Board of Trustees.
June 13, Tuesday,	Receptions by the fraternities.
June 13, Tuesday,	Address before the Phi Kappa Phi Society.
June 14, Wednesday,	COMMENCEMENT.
June 14, Wednesday,	Commencement dinner.
June 14, Wednesday,	Meeting of the Alumni Association.
June 14, Wednesday,	Commencement concert.
June 15, Thursday,	Entrance examinations begin.
June 26, Monday,	Summer School session begins.

FALL TERM, 1905

September 18, Monday,	Arrearage examinations begin.
September 19, Tuesday,	Entrance examinations begin.
September 20, Wednesday,	Registration begins, 1.30 P. M.
September 21, Thursday,	Fall term begins.
November 28, Tuesday,	Meeting of the Board of Trustees.
November 29, Wednesday,	Thanksgiving recess begins, 12 M.
December 4, Monday,	Thanksgiving recess ends, 7.45 A. M.
December 8, Friday,	Sophomore prize declamations.
December 22, Friday,	Christmas recess begins, 5.30 P. M.
December 30, Saturday,	Arrearage examinations begin (Spring term studies).

1906

January 2, Tuesday,	Christmas recess ends, 12 M.
February 2, Friday,	Fall term ends.

SPRING TERM, 1906

February 3, Saturday,	Registration.
February 5, Monday,	Spring term begins.
June 13, Wednesday,	COMMENCEMENT.

CALENDAR OF THE COLLEGE OF LAW

1904

October 5, Wednesday, Fall term begins.

December 21, Wednesday, Fall term ends.

1905

January 11, Wednesday, Winter term begins,

March 22, Wednesday, Winter term ends.

March 29, Wednesday, Spring term begins.

June 14, Wednesday, COMMENCEMENT.

October 4, Wednesday, Fall term begins.

December 20, Wednesday, Fall term ends.

1906

January 10, Wednesday, Winter term begins.

March 21, Wednesday, Winter term ends.

March 28, Wednesday, Spring term begins.

June 13, Wednesday, COMMENCEMENT.

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THE UNIVERSITY OF MAINE

ESTABLISHMENT

By an act of Congress, approved July 2, 1862, it was provided that there should be granted to the States, from the public lands, "thirty thousand acres for each Senator and Representative in Congress," from the sale of which there should be established a perpetual fund, "the interest of which shall 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 the 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.*" The act forbade the use of any portion of the principal or interest of this fund for the purchase, erection, or maintenance of buildings and required each State taking the benefit of the provisions of the Act "to provide within five years not less than one college" to carry out the purposes of the Act.

Maine accepted this grant in 1863, and in 1865 constituted "a body politic and corporate, by the name of the Trustees of the State College of Agriculture and the Mechanic Arts." The Trustees were authorized to receive and hold donations, to select the professors and other officers of the college, to establish the conditions for admission, to lay out courses of study, to grant degrees, and to exercise other usual powers and privileges.

The Governor and Council were given the right "to examine into the affairs of the college, and the doings of the trustees, and to inspect all their records and accounts, and the buildings and premises occupied by the college."

It was provided that in addition to the studies especially required by the Act of Congress, the college should teach such other studies as its facilities would permit.

The Legislature of 1897 changed the name of the institution to "The University of Maine."

ENDOWMENT AND INCOME

The State of Maine received, under the Act of Congress above referred to, two hundred and ten thousand acres of public land, from which the University has realized an endowment fund of $118,300. This has been increased by a bequest of $100,000 from Abner Coburn of Skowhegan, who was for many years president of the Board of Trustees. The town of Orono contributed $8,000, and the town of Oldtown $3,000, for the purchase of the site on which the buildings stand. The State has appropriated about $350,000 for the material equipment.

Under an Act of Congress approved March 2, 1887, the University receives $15,000 annually for the maintenance of the department known as the Agricultural Experiment Station.

Under an Act of Congress approved August 30, 1890, the University receives $25,000 annually for its more complete endowment and maintenance.

Under an Act of the Legislature, approved March 20, 1897, the University receives $20,000 annually from the State for current expenses. Student fees and miscellaneous receipts complete the income.

LOCATION

The University has a beautiful and healthful location in the town of Orono, Penobscot county, half way between the villages of Orono and Stillwater, three miles from the city of Oldtown, and nine miles from the city of Bangor. The Stillwater river, a branch of the Penobscot, flows in front of the buildings, forming the western boundary of the campus. Orono is upon the Maine Central Railroad and is easy of access from all parts of the State.

The Bangor, Orono and Oldtown Electric Railroad runs through the University grounds. Visitors may find it convenient to take the electric cars at Bangor, Veazie, or Oldtown, as the electric road does not run to the railroad station at Orono. Baggage may be sent to Orono by the Maine Central Railroad.

The College of Law is located in the Exchange Building, Bangor, at the corner of Exchange and State streets.

THE BUILDINGS AND THEIR EQUIPMENTS

WINGATE HALL.—One of the most conspicuous buildings on the campus, Wingate Hall, named in honor of William P. Wingate of Bangor, long an honored member of the board of trustees, is a three-story brick structure, rectangular in form, with a handsome clock tower. It was erected for the departments of civil and mechanical engineering, but is at present occupied in part by other departments. On the ground floor are two large designing rooms, recitation rooms, instrument rooms, and the

offices of the professors in the engineering departments. On the second floor are the offices and recitation rooms of the professors of physics, Greek, and Latin, the physical laboratories, and the physical apparatus room. On the third floor are large, well lighted drawing rooms. In the basement are the electrical laboratory of the department of physics, the photometer room, and the cement testing laboratory. There is another photometer room for the use of students in optics.

OAK HALL.—North of Wingate Hall is Oak Hall, a substantial four-story brick building used as a dormitory for men, named in honor of Lyndon Oak of Garland, for many years a useful member of the board of trustees. It contains forty-nine study rooms for students, and is supplied with bath rooms. It is heated by steam, supplied with water, and lighted by electricity. An annex added during the summer of 1903 furnishes accommodations for thirty students more.

FERNALD HALL.—This building, named in honor of Merritt C. Fernald, LL. D., president of the University from 1879 to 1893, is a two-story brick building, situated south of Wingate Hall. It contains fifteen rooms devoted to the departments of chemistry and pharmacy. On the first floor are the quantitative and pharmaceutical laboratories, with offices and private laboratories for the professors of chemistry and pharmacy; upon the second floor are lecture rooms, the qualitative laboratory, the office and private laboratory of the instructor in qualitative analysis, a store room and a recitation room. Under the roof are arranged the photographic studio, laboratory, and dark rooms. In the basement is an assay laboratory, the laboratory for beginners, and store rooms. The department is well supplied with apparatus.

COBURN HALL.—Directly south of Fernald Hall is Coburn Hall, named in honor of Abner Coburn of Skowhegan, the chief benefactor of the University. It is a brick building, three stories in height. In the basement and on the first floor are located the reading rooms and the library, and two recitation rooms. On the second floor are the botanical and zoological laboratories, and recitation rooms for the departments of biology, English, and modern languages. Over the library is the museum. The collec-

tions are large and constantly increasing. On the third floor are recitation rooms for the departments of civics and history, philosophy, and modern languages, the modern language seminary room, and the psychological laboratory.

ALUMNI HALL.—To the northeast of Coburn Hall stands Alumni Hall, erected in 1900. The front part contains on the ground floor the offices of the president, secretary, and cashier, a board room, two recitation rooms for the use of the military and mathematical departments, and the office of the professor of mathematics; the second floor contains the university chapel with a large pipe organ in the choir gallery. In the basement under the drill hall are the offices of the military instructor and the physical director, the baseball cage, bowling alleys, lockers, lavatories, rooms for storage, etc. The dimensions of the drill hall and gymnasium are 100 by 62 feet. This room is encircled by a 9-foot running track suspended from the roof. As a gymnasium it is equipped with complete apparatus of the most approved kind.

THE OBSERVATORY.—The astronomical observatory stands upon a slight elevation to the east of Coburn Hall. The equatorial room is equipped with an eight-inch refractor of the best modern construction, with finding circles, driving-clock, filar micrometer and other accessories. In the transit-room is a Repsold vertical circle of two-inch aperture. These instruments, together with sextants, sidereal chronometer, etc., furnish excellent facilities for instruction in both descriptive and practical astronomy.

LORD HALL.—The Legislature of 1903 appropriated the sum of $35,000 for the construction and equipment of a new building for the departments of mechanical and electrical engineering. This building consists of a main part 82x56 feet in dimensions and two stories in height, and an ell 125x42 feet partly of two stories and partly of one story. It contains three recitation rooms, a large drawing room, the shops, suitable laboratories, and offices for the professors and instructors in the two departments concerned. The mechanical laboratory contains a Riehle testing machine of 60,000 pounds capacity; an oil testing machine manufactured by

Tinius, Olsen & Co., of Philadelphia, and other oil testing apparatus; belt testing apparatus; steam separators, calorimeters, and injectors. The hydraulic laboratory in the basement contains steam pumps for testing, a pressure tank, and other apparatus for experimenting in the flow of water in pipes, weir measurements, etc. The forge room is newly equipped with down draft forges, manufactured by the B. F. Sturtevant Co., of Boston. The dynamo laboratory is provided with six direct-current dynamos, two alternating-current dynamos, a rotary converter, transformer, ammeters, voltmeters, wattmeters, rheostats, switches, etc., affording accommodations for fifteen students in a section.

HOLMES HALL.—This is a two story brick building, 81x48 feet, standing south of Alumni Hall. The north wing contains the recitation rooms for horticulture and agriculture, the bacteriological laboratories, and the office of the Professor of Agriculture. The remainder of the building is occupied by the Maine Agricultural Experiment Station and is arranged as follows:

On the ground floor are three large laboratories used in the analysis of foods, feeding stuffs and fertilizers; a reagent room; the office of the chemists; and the office and laboratory of the bacteriologist. The general office of the Station, the director's office, the mailing room and reading room, the agricultural museum, the entomological laboratory and the photographic dark room are on the second floor.

In the basement are rooms for the boiler, for the gas machine, for the grinding and preparation of samples, for the calorimeter, and for a kitchen used in the experiments upon the food of man, and rooms for the storage of fuel, chemicals and glassware. The large attic is used for the storage of samples and publications. With the exception of the thermometers and rain gauge the meteorological apparatus is in this building. The building is heated by steam, supplied with gas and electricity, and is thoroughly equipped with apparatus for the work of agricultural investigation.

THE POWER HOUSE.—A wooden building, 30 feet by 56 feet, just north of Alumni Hall, contains two boilers, of one hundred and fifty, and one hundred horse power, respectively, a fifty

horse power Corliss engine, a fifteen horse power Otto gasoline engine, and the dynamos, which comprise the lighting plant. Students in the Electrical Engineering Course receive instruction in the care and running of this equipment.

THE HORTICULTURAL BUILDING.—The greenhouses, offices and laboratories for horticultural work lie just east of Holmes Hall. The greenhouses cover about 4000 square feet of surface, are heated with hot water, and furnish ample opportunity for the demonstration of the practical culture of flowers and vegetables under glass. In this building is an herbarium of economic plants, which is of increasing interest and value.

THE DAIRY BUILDING.—The Dairy Building, 50 feet by 42 feet, contains a milk room, a butter room, a cheese room, a cold storage room, a cheese curing room, a lecture room, the office of the professor of animal industry, and a laboratory. It is supplied with all necessary appliances for teaching the most approved methods of handling milk, cream, butter and cheese. The building is heated with steam and supplied with hot and cold water. Power is furnished by a six horse power engine.

THE MT. VERNON HOUSE.—This is a wooden building, completed in 1898, to furnish dormitory accommodations for women. It is situated near the recitation and laboratory buildings, upon a site overlooking the campus and commanding a beautiful view of the river, villages, and mountains. It is two stories in height, built in the old colonial style, and consists of a long central portion and two wings. It contains a parlor, dining room, kitchen, bath room, and sixteen study rooms, each intended for two students. The rooms are large, well lighted, heated by a combined system of hot air and hot water, and provided with electric lights. A special feature is the long hall on each floor, extending sixty-six feet upon the front of the building, and wide enough to serve as an assembly or study room. The building, and the students who live in it, are under the supervision of a competent matron.

THE FRATERNITY HOUSES.—Eight of the student fraternities occupy club houses. Six of the houses are on the campus, and two in the village of Orono. They are large, well arranged

houses, affording rooms for about twenty-five students each. Several of the fraternities maintain their own boarding establishments under the supervision of matrons.

THE ART MUSEUM.—The collection of casts, framed pictures, photographs, and engravings belonging to the University Guild occupies quarters in a frame building a little northeast of Wingate Hall. Its main room for exhibition purposes measures 30x40 feet, and contains about three thousand reproductions of various works of art, chiefly of the renaissance period.

THE INFIRMARY.—A small wooden building has recently been erected on the back campus, to be used in caring for any cases of infectious disease that might appear among the students. It contains a ward for women, as well as one for men, with sanitary, comfortable, and convenient equipment for possible patients.

OTHER BUILDINGS.—In addition to the buildings already described, there are several others devoted to various purposes. Among these are the President's house, the Commons or general boarding house, and three residences occupied by members of the faculty.

THE ATHLETIC FIELD.—Alumni Field, so called because funds required for its construction were contributed by the Alumni Association, is located at the northwestern extremity of the campus, about 1,200 feet from the Gymnasium. It contains a quarter-mile cinder track, with a 220 yard straightaway, and is graded and laid out for foot ball, base ball, and field athletics.

THE LIBRARY

The library is located in Coburn Hall. It contains over twenty-seven thousand bound volumes and eight thousand pamphlets. Some fifteen hundred volumes of special value to the Experiment Station are kept in the Station building; and nearly three thousand law books, in the College of Law. Reference libraries are maintained in departmental rooms by those departments which require them.

More than half the volumes in the library have been added within the last few years. Accessions average about 2,500 annually, and the greater part of these are acquired by purchase. In large part purchases are made of books selected by heads of departments, and this method results in a collection of great working value.

The library is classified according to the Dewey system, slightly modified; there is a card catalogue, author and subject; access to the shelves is entirely unrestricted. Students may borrow three volumes at a time, to be retained three weeks, when they may be renewed unless previously called for; special permission to borrow a larger number may be obtained, when necessary, upon application to the librarian; there is a fine of two cents a day for books kept overtime. Officers and alumni of the University may borrow any reasonable number of volumes without time limit, except that all books must be returned at least nine days before Commencement, and the return of any volume may be required at any time by the library committee. Other responsible persons may obtain the privileges of the library upon application to the librarian. The librarian and his assistants are glad to give advice and assistance at any time.

During the fall term of each year a series of three lectures is given by the librarian upon, The Library and Its Use. Classifica-

tion and the Catalogue, and Reference Books and Their Use. Attendance upon these is required of freshmen, special students, and others in their first year of attendance at the University, with the purpose of giving them some idea of the opportunities the library offers them and suggestions that will aid them in its use.

The librarian also offers an elective course in the spring term, on bibliography, the development of books and libraries, and the principles of library administration. This course consists of lectures, with collateral reference work, one hour a week, and may count for credit towards graduation.

The library is a designated depository for the publications of the United States Congress, and also receives publications of different Departments not included in the depository set. All the publications of the State of Maine are received. Through the courtesy of Hon. L. D. Carver, State Librarian, public documents of a number of other States are received, in accordance with a series of duplicate exchange arranged by him.

Over three hundred and fifty of the most important literary, scientific and technical periodicals, both American and foreign, are regularly received. The leading papers of Maine, together with a selected list of daily papers published in the large cities, are on file.

The library is open daily from 8.00 A. M. to 12.00 M., and from 1.30 to 5.30, and 7.00 to 9.30 P. M., Sundays and legal holidays excepted. On Sunday it is open from 2.00 to 5.00 P. M.

MUSEUM OF NATURAL HISTORY

The museum is located in the wing of Coburn Hall and in an adjoining room in the main part of the building and consists of geological, zoological and botanical collections.

The geological collections embrace the L. H. Merrill collection of illustrative rocks, a general collection of the more important fragmental, crystalline, and volcanic rocks, a collection of the

more important building stones, a general collection of the more common minerals, a collection of economic minerals furnished by the National Museum, an educational series of rocks furnished by the U. S. Geological Survey, and a small collection of plant and animal fossils.

The zoological collections comprise a number of the larger mammals of the State, a small set of exotic mammals, a more complete working collection of native birds, illustrative collections of the other groups of vertebrates, a rather large set of the shells of native and exotic molluscs, and illustrative collections of the other groups, dry, alcoholic and prepared as microscopic objects.

The most important collection in the herbarium was presented to the University by Mr. Jonathan G. Clark of Bangor. This is the collection made by the late Rev. Joseph Blake, and includes more than 7000 species of both flowering and flowerless plants. It represents more especially the flora of Maine and other New England states, but includes many forms from the western United States, Mexico, and the West Indies, and a number from many of the European and Asiatic countries, and from Africa and Australia.

The late Professor Harvey left to the herbarium the general collections accumulated during his connection with the University, and his special collection of the weeds and forage plants of Maine, comprising 300 species. Other important collections are Collins's algae of the Maine coast, Halsted's lichens of New England, Halsted's weeds, Ellis and Everhard's North American Fungi, Cook's illustrative Fungi, Underwood's Hepaticae, Cummings and Semour's North American Lichens, and a collection of economic seeds prepared by the U. S. Department of Agriculture.

ORGANIZATIONS

FRATERNITIES.—The following fraternities are represented in the University: Φ Γ Δ, Β Θ Π, Κ Σ, Α Τ Ω, Φ Κ Σ, Σ Α Ε, Σ Χ, Δ Σ, Θ Ε, Ω Α Υ; Γ Η Γ, Σ Β Π (in the College of Law).

ASSOCIATIONS.—The following is a list of other organizations existing in the University; Philological Club, Deutscher Verein, University Guild, Debating Society, Electrical and Mechanical Society, Civil Engineering Society, Agricultural Society, Honorary Society (Phi Kappa Phi), Young Men's Christian Association, Athletic Association, Glee Club, Instrumental Club, Band.

THE PHILOLOGICAL CLUB.—The Philological Club meets on the first Monday evening of each month except January, during the academic year, for the presentation and discussion of original papers on philological and literary subjects.

THE UNIVERSITY GUILD.—The University Guild has for its object the building up of an art collection, and the promotion of a general interest, among the faculty, students, and friends of the University, in the study of the fine arts. The Guild occupies the Art Museum and holds meetings occasionally during the year. As rapidly as funds permit, casts and photographs of celebrated works of art are being added to the collection already begun.

The course in the history of Italian painting is open to members of the Guild.

JUNIOR ELECTRICAL AND MECHANICAL SOCIETY.—The Junior Electrical and Mechanical Society aims to unite the interests of the electrical and mechanical students and to keep its members in touch with the practical side of engineering. The society meets

each week and topics of practical interest are explained and discussed. All juniors in electrical or mechanical engineering are eligible to membership, and seniors are considered as honorary members.

PHI KAPPA PHI.—The Phi Kappa Phi is an honorary society. At the end of the fall term of the senior year the five members of the class having the highest standing are elected members, and at the end of the year the five next highest are added.

THE YOUNG MEN'S CHRISTIAN ASSOCIATION.—The Young Men's Christian Association, composed of students, has for its object the promotion of Christian fellowship and aggressive Christian work. Religious services are held in the Art Museum, and classes for the study of the Bible are conducted on Sunday.

UNIVERSITY PUBLICATIONS

THE ANNUAL CATALOGUE OF THE UNIVERSITY OF MAINE.—This contains descriptions of the courses of study, lists of the trustees, faculty, and students, and other information relating to the University.

THE SHORT CATALOGUE OF THE UNIVERSITY OF MAINE.—This is an abbreviated form of the catalogue.

THE ANNUAL REPORT OF THE TRUSTEES, PRESIDENT, AND TREASURER, TO THE GOVERNOR AND COUNCIL OF THE STATE.—The report of the trustees and president includes an account of the general affairs and interests of the University for the year, and the report of the Experiment Station. The report for the odd years contains the biennial catalogue of graduates.

THE UNIVERSITY OF MAINE STUDIES.—These are occasional publications containing reports of investigations or researches made by university officers or alumni.

THE UNIVERSITY CIRCULARS.—These are occasional pamphlets, issued for special purposes. Those now ready for distribution relate to: the Classical Course; the Courses in Agriculture; the Courses in Pharmacy; the College of Law; the Courses in Engineering; Student Expenses.

THE MAINE BULLETIN.—This is a publication issued monthly during the academic year, to give information to the alumni and the general public.

THE ANNUAL REPORT OF THE EXPERIMENT STATION.—This is Part II of the Annual Report of the University.

THE EXPERIMENT STATION BULLETINS.—These are popular accounts of the results of station work which relate directly to farm practice.

THE MAINE CAMPUS.—This is a journal published semi-monthly during the academic year by an association of the students.

THE PRISM.—This is an illustrated annual, published by the junior class.

MILITARY INSTRUCTION

Military instruction is required by law. The department is under the charge of an officer of the regular army, detailed by the President of the United States for this purpose. Cadet rifles, ammunition, and accoutrements are furnished by the War Department. The course has special reference to the duties of officers of the line. The students are organized into an infantry battalion of three companies, officered by cadets selected for character, soldierly bearing, and military efficiency. The corps is

instructed and disciplined in accordance with rules established by the President of the United States. These rules include the minimum course of instruction that must be covered and the minimum time that must be devoted to this instruction.

The uniform prescribed by the board of trustees is as follows:

For cadets, a dark blue blouse, cut military academy style, braided with black braid and without other ornament than the word MAINE embroidered in gold on each side of the collar; light blue trousers with dark stripe and campaign hat, army regulation style; for commissioned officers, the regulation fatigue unform prescribed for infantry officers of the United States Army; for non-commissioned officers, the same uniform as for cadets, with the addition of gilt chevrons on arms of blouse. The total cost of uniforms is $13.40. The uniforms are procured through an authorized tailor, and are made in the best manner of thoroughly good material. Cadets are required to wear the uniform when on military duty, and may wear the same at other times.

The three seniors who attain the highest standing in the military department are reported to the Adjutant General of the U. S. Army, and their names are printed in the U. S. Army Register. Cadets who have satisfactorily completed the course in military science receive at graduation a certificate of military proficiency and are reported to the Adjutant General of Maine.

Service in the military department is fully explained by the military rules (these do not apply to the College of Law and the School Course in Agriculture):

All students physically qualified are required to take one year's military work during their first year at the University, except that those admitted to advanced standing may elect other work equal to one credit. One credit is allowed for this work. Those physically disqualified are required to elect other work equal to one credit in lieu of military work. Graduation requirements include one year's military work, or a substitute under the above conditions. No fractional credit for military work will count towards graduation. Military instruction is arranged in a four years course.

The regular hour for military instruction is from 4.30 to 5.30 P. M. With the consent of the professor, students may receive instruction at any hour which will not interfere with other work,

and certain students may substitute theoretical for practical work.

The grades and relative rank of officers and non-commissioned officers will be determined by the professor, subject to the approval of the president.

PHYSICAL TRAINING

The gymnasium affords excellent opportunities for physical training and in-door athletics.

On the first floor are the baseball cage and bowling alley, lockers, baths and toilet rooms for the accommodation of three hundred and seventy-five students, with space to enlarge these accommodations when necessary.

The gymnasium proper is on the second floor, which has a floor space of 6,550 square feet, with a running track overhead. This main room of the gymnasium is equipped with a large variety of light and heavy gymnastic apparatus and many of the best patterns of modern developing appliances.

From December 1st to April 1st gymnasium work, consisting of drills with Indian clubs, dumb-bells, wands and bar-bells, also exercises on the heavy apparatus, and gymnasium games, is required of sophomores, except of those taking elective work in the military department.

PUBLIC WORSHIP

Religious services of a simple character are held in the chapel every day except Saturday and Sunday. All undergraduate students are required to be present. Students receive a cordial welcome at all services in the churches of the village. Voluntary religious services, under the direction of the Young Men's Christian Association, are held weekly.

GENERAL REGULATIONS

The regulations in regard to the selection of studies, standings and grades, absences from recitations and examinations, rhetorical exercises, entrance conditions, leave of absence, attendance upon chapel, penalties, examinations, and athletics, are printed in a small pamphlet, which may be obtained from the secretary.

By these regulations, the quota of regular studies for each student varies from a minimum of fifteen hours, to a maximum of twenty hours of class room work each week. In the application of this rule, two hours of laboratory work, or of other exercises not requiring preparation, count as one hour.

Excuses for absence from individual exercises are not required. Each student is expected to be present at all recitations and other exercises except when imperative reasons require absence. Of these reasons he is the judge; but a student who is absent from ten per cent. or more of the exercises in any study is not admitted to the final examination. A student who fails to pass at an examination, is absent from an examination, or is excluded from an examination, may make up his deficiency at the special examinations held at the times noted in the calendar. The arrearage examinations during the Christmas recess include only studies of the spring term; the examinations during the Easter recess include only studies of the fall term; the examinations at the beginning of the fall term include all the studies of the year. A student who fails to make up an arrearage before the study is again taken in class is required to attend recitations in that study.

Each student is given a report of his work shortly after the close of each term. Parents or guardians may obtain these reports upon application to the secretary.

SCHOLARSHIP HONORS

Honors for scholarship are of two kinds, general and special. General honors are awarded, at graduation, to students who attain an average standing, after the freshman year, of ninety on a scale of one hundred. Special honors are granted for the satisfactory completion of an honor course in addition to the work required for a degree. An honor course must involve at least ninety recitations or an equivalent. The methods of work are determined by the instructor, who should be consulted in each case by students desiring to take such a course. Honor courses are open to juniors and seniors who have attained an average standing of eighty per cent. in all previous work, and an average standing of ninety per cent. in all previous work of the department in which the honors are sought. A student cannot register for an honor course without the consent of the faculty, nor later than the fourth week of the fall term. Upon the completion of a course, the student's work will be tested by an examination or thesis, or both, under the direction of the faculty committee on honor courses; and the result, together with the instructor's report, will be laid before the faculty. Examinations for honors shall be held at such times and places as the committee on honors may appoint. They shall be distinct from any class examinations in the same course, which latter examinations the candidate for honors may or may not take, as he chooses. The honor examination shall be written and, at the discretion of the committee, also oral. The professors giving the courses shall submit to the committee papers for the honor examinations not later than one week before the date set for the examinations.

The students in honor courses involving laboratory or drawing-room work may be tested by examination or thesis or both, at the discretion of the committee. The note books kept in such

work shall be submitted to the committee and may take the place of a thesis in case they show practically the whole work of the course. The faculty may grant special honors to those students who receive the approval of the committee, but will not do so if the general work is unsatisfactory. Honors, and their nature, are stated upon the Commencement program and published in the annual catalogue.

The first 15 of the class in rank are authorized to prepare commencement parts; these parts must be submitted to a committee by the close of Easter recess, and from the parts submitted, a certain number are selected by the committee. These parts must be prepared for delivery to the satisfaction of a representative of the faculty.

DEGREES

The degree of Bachelor of Arts (B. A.) is conferred upon students that complete the Classical Course.

The degree of Bachelor of Science (B. S.) is conferred upon students that complete the Scientific, Chemical, Agricultural, Civil Engineering, Mechanical Engineering, Electrical Engineering, Mining Engineering, Forestry, or Pharmacy Course. The diploma indicates which course has been completed.

The degree of Pharmaceutical Chemist (Ph. C.) is conferred upon students that complete the Short Pharmacy Course.

The degree of Bachelor of Laws (LL. B.) is conferred upon students that complete the Law Course.

Advanced Degrees

For receiving an advanced degree the required preparation must include the attainment of the proper first degree.

The Master's degrees, viz., Master of Arts (M. A.), Master of Science (M. S.), and Master of Laws (LL. M.), are conferred upon holders of the corresponding Bachelor's degrees under either of the following conditions:

(1) One year's work in residence, of a minimum amount equal to not less than six credits (see p. 51), including examinations on a prescribed course of study in a major subject and not more than two minor subjects, and the presentation of a satisfactory thesis. In special cases all the work may be done in one department. The course for each candidate must be approved by the committee on advanced degrees not later than the first week in October. A registration fee of $5.00 is charged, and an additional fee of $15.00 for examinations and diploma is payable upon the completion of the work. The thesis must be submitted in type-written form, and on pages of a fixed size, not later than May 20. The major instructor, on application, will furnish detailed information concerning the form of theses. Candidates are expected to be present in person to receive their degrees.

(2) Two years' work in absence, with examinations at the University, the other conditions as in (1).

The professional degrees of Civil Engineer (C. E.), Mechanical Engineer (M. E.), and Electrical Engineer (E. E.), may be conferred upon graduates of the Civil Engineering, Mechanical Engineering, and Electrical Engineering Courses respectively on the presentation of a satisfactory thesis after at least three years of professional work subsequent to graduation. A fee of $10.00 is required, payable upon presentation of the thesis, which must be submitted not later than May 20. Candidates are expected to be present in person to receive their degrees.

STUDENT EXPENSES

Many students go through college with an annual expenditure of little more than $200, exclusive of the expense of clothing, traveling and vacation, and very many earn a part of this sum by vacation work. An estimate of the necessary annual expenses of a student in any department, except the College of Law, may be made from the following table. For the expenses of students

in the College of Law reference is made to the article on that College. It should be noticed that clothing, traveling, vacation, society and personal expenses are not included in the table. These vary according to individual tastes and habits. The table is made up for men students who room in Oak Hall and board at the Commons. The necessary expenses of other students are sometimes lower, but usually slightly higher. In all cases an allowance must be made for personal incidental expenses. The expenses of the first year are higher than those of later years.

ANNUAL STUDENT EXPENSES

Tuition, 2 terms at $15.00,	$30 00
Registration fee, 2 terms at $5.00,	10 00
Incidentals, 2 terms at $10.00,	20 00
Laboratory fees, (average) about,	10 00
Text-books, about,	15 00
Board, 36 weeks at $3.00,	108 00
Heat and light for half room, and general care of dormitory	27 00
Total,	$220 00

The tuition charge is $15.00 a term, or $30.00 a year, and all students are subject to this charge except those in the courses in agriculture, for none of which is any tuition charge made. Residents of Maine who need assistance and maintain a good record may obtain, from the University, loans to cover the tuition charge. The regulations in regard to these loans are stated on page 40.

The registration fee of $5.00 must be paid at the beginning of each term before the student enters any classes.

The incidental fee is $10.00 a term, or $20.00 a year, and covers heat and light for public buildings, reading-room charges, care of public rooms, and miscellaneous expenses.

A student obliged to leave the University within two weeks after the beginning of the term may have the foregoing amounts refunded with the exception of the registration fee. A student leaving within the first half of the term receives a rebate of one-

half the incidental expenses. Under no circumstances is the registration fee refunded.

The cost of text-books will average about $15.00 a year for the course. These may be bought from the librarian at cost, but must be paid for on delivery. The expense may be decreased by buying second-hand books and selling them after using them.

Students in the laboratories and shops pay certain charges to cover the cost of materials and maintenance. These charges are as follows:—botany, per term, $1.00; chemistry, per term, about $3.00; bacteriology, per course, $3.00; physics, per course, $2.00 to $4.00; pharmacy, per term, about $3.50; mineralogy, $2.00; biology, per course, $2.00; electrical engineering, per course, $2.50; mechanical engineering, per course, $2.00; shop, per course, $4.00 to $5.00. Laboratory charges in the civil engineering course are very few, but traveling expenses incurred in visiting engineering works will be nearly equivalent to the laboratory expenses of other courses.

The largest item of expense is for board. At the Commons, the university boarding house, the price is about $3.00 a week. Board may be obtained in clubs or private families at prices ranging from $2.50 to $3.50 a week.

The charges for rooms in Oak Hall are seventy-five cents a week for each student, when two occupy a room. This pays for heat and light, and for the lighting and care of the halls and public rooms of the dormitory. Students supply their own furniture. Furnished rooms, with light and heat, may be obtained in the village for $1.50 a week if occupied by one person, or $2.00 a week if occupied by two persons.

Women students that do not live at their own homes are required to room and board at the Mt. Vernon House. The price of board is $3.00 a week. For heat and light, and for the care of the public rooms, the charge is seventy-five cents a week.

Each student is required to deposit with the treasurer a bond, with two good names as sureties, in the amount of $150.00, to cover term bills. Blanks on which bonds should be made out will be furnished by the secretary upon application. Those who keep a sufficient deposit with the treasurer to cover the bills of one term will not be required to furnish a bond. The deposit required is $90.00 from those who board at the Commons,

or Mt. Vernon House, and $30.00 from others. This deposit is in addition to the registration fee. No student will be graduated who is in debt to the treasury.

A circular containing a fuller statement in regard to expenses, and treating of the opportunities for self-help, may be obtained upon application.

LOANS

Tuition Loans

Residents of Maine that need assistance and maintain a satisfactory record may borrow from the university treasury a sum sufficient to pay the tuition charge. This privilege is not extended to students in the College of Law.

Borrowers are required to give endorsed notes or other satisfactory security. The loans bear interest at six per cent. per annum, and are due $30.00 a year, beginning with the first year after graduation, but may be paid earlier. No member of the faculty is accepted as an endorser.

Loans are granted by a committee consisting of the president and two other members of the faculty. The number of loans may not exceed one-third of the number of students in the undergraduate departments. Loans are granted to cover the tuition charges of one year at a time.

The first grant of loans for each university year is made in the preceding June. Applications for loans are considered during May, and to insure attention at this time should be forwarded to the President not later than May 15. A second award is made in the fall term. Applications should be made not later than October 10. They must be made to the President upon blanks to be obtained from the Secretary of the Faculty. Awards made in June may be withdrawn from students who do not register, or claim their loans, by October 10.

The Kittredge Loan Fund

This fund, amounting to nearly one thousand dollars, was established by Nehemiah Kittredge of Bangor. It is in the control of the president and treasurer of the University, by whom it is loaned to needy students. In the deed of gift it was prescribed that no security but personal notes bearing interest at the prevailing rate should be required. Loans are made on the conditions that the interest shall be paid promptly, and that the principal shall be returned from the first earnings after graduation.

SCHOLARSHIPS AND PRIZES

The Kidder Scholarship was endowed by Frank E. Kidder, Ph. D., Denver, Colorado, a graduate of the University in the class of 1879, to be awarded to a member of the junior class to be selected by the President and the faculty.

The Western Alumni Association Scholarship, founded by that association, will be awarded to that student taking a regular course, and whose deportment is satisfactory, who shall make the best progress in all studies during his freshman year.

The Junior Exhibition Prize will be awarded to that member of the junior class who shall present the best oration at the junior exhibition. In the award of this prize both the composition and the delivery of the oration will be considered.

The Sophomore Declamation Prize, for excellence in elocution, will be awarded to the best speaker in the sophomore class.

The Libbey Prize, the gift of the Hon. Samuel Libbey, Orono, will be awarded to the student who shall present the best essay upon an agricultural topic. The essays must be handed to the professor of agriculture on or before the first Monday in June.

THE WALTER BALENTINE PRIZE, the gift of Whitman H. Jordan, Sc. D., Geneva, N. Y., a graduate of the University in the class of 1875, will be awarded to that member of the junior class who shall excel in biological chemistry.

THE KENNEBEC COUNTY PRIZE, the gift of the Hon. William T. Haines, Waterville, a graduate of the University in the class of 1876, will be awarded to that member of the senior class who shall write the best essay on applied electricity.

THE FRANKLIN DANFORTH PRIZE, the gift of the Hon. Edward F. Danforth, Skowhegan, a graduate of the University in the class of 1877, in memory of his father, Franklin Danforth, will be awarded to that member of the senior class in the agricultural course who shall attain the highest standing.

THE PHARMACY PRIZE will be awarded to that student in the Pharmacy Department who shall attain the highest standing in chemistry in the last year of his course.

THE HOLT PRIZES, the gift of Erastus Eugene Holt, A. M., M. D., LL. D., of Portland, will be given to the three students of the class of 1908, who show the greatest improvement in their rating. The rating will be determined from deductions made from the gymnasium and class records of the students at the beginning and end of their college course by the mathematical formula for the normal earning ability of the body, devised by Dr. Holt.

ADMISSION

GENERAL REQUIREMENTS.—Applicants for admission must pass the required examinations, or present satisfactory certificates of fitness, and file with the Treasurer a bond for $150 signed by two bondsmen, as security for the payment of term bills. A cash deposit covering the bills of one term will be accepted in place of a bond. In the College of Law the fees must be paid in advance, and no bond or deposit is required. The University admits men and women, both residents of Maine and non-residents.

ADMISSION TO ADVANCED STANDING.—Candidates for advanced standing are examined in the preparatory studies, and in those previously pursued by the classes they propose to enter, or in other equivalent studies. Certificates from approved schools are accepted for the preparatory work; but certificates are not accepted for any part of the college work, unless such work has been done in a college. College graduates who wish to enter a technical course are admitted to the junior class without examination.

SPECIAL RECOMMENDATIONS.—The attention of students preparing for the entrance examinations is called to the need of careful work in mathematics. A good preparation in algebra and geometry is most important for those who expect to enter engineering courses. The schools should give a part of the work in algebra and geometry, or a review of these subjects, during the last year.

Students preparing for the Classical course should devote special attention to Latin composition, Roman history, and constant practice in pronouncing Latin according to the Roman method.

PRELIMINARY EXAMINATIONS.—A candidate who wishes to be examined on part of his work in advance of the year in which he proposes to enter the University may receive credit for such examination, provided he has completed not less than one-half of his preparatory work.

SPECIAL STUDENTS.—Persons, not candidates for a degree, who wish to take special studies, may be permitted to do so, if upon examination they give satisfactory evidence that they are prepared to take the desired studies. If they subsequently desire to become candidates for a degree, or to take a regular course, they will be required to pass the other entrance examinations. This privilege is intended for students of unusual maturity or previous advancement in particular subjects, not for those who are incompetent to pursue a regular course.

No examinations are required for admission to the special and extension courses in agriculture.

For admission to the College of Law, see page 136.

ENTRANCE EXAMINATIONS

Entrance examinations are held at Orono, beginning two days before the opening of the fall term, and on the day after Commencement. To save expense to candidates, examination papers will be sent to any satisfactory person who will consent to conduct examinations on the days appointed in June. Papers will not be sent at any other time. The questions are to be submitted under the usual restrictions of a written examination, and the answers returned to the University accompanied by the endorsement of the examiner. Applications for such examinations must be made out on blanks to be obtained from the Secretary of the Faculty.

ENTRANCE REQUIREMENTS

The requirements for admission are those adopted by the Maine Association of Colleges and Preparatory Schools:

To gain admission into any of the courses leading to the degrees of B. A. or B. S., 26 points must be offered by the candidate, according to the following schedules (to count 2 points, a subject must be pursued for one school year, with five recitation periods a week):

For the B. A. Course

Required Subjects

College Entrance English	counts 4	points
Latin	" 8	"
Algebra	" 4	"
Plane Geometry	" 2	"
Roman History	" 1	point
	19	

Optional Subjects (7 Points to be Chosen)

(If Greek is not taken, French or German must be; and if Greek is taken, Greek History must be taken also. Not less than 4 points of any modern language will be accepted.)

Each year of Greek	counts	2	points
" " " French	"	2	"
" " " German	"	2	"
*Chemistry	"	2	"
*Physics	"	2	"
Solid Geometry	"	1	point
Greek History	"	1	"
English "	"	1	"
American History and Civil Government	"	1	"

FOR THE B. S. COURSE

Required Subjects

College Entrance English	counts	4	points
Algebra	"	4	"
Plane Geometry	"	2	"
Solid Geometry	"	1	point
		11	

Optional Subjects (15 Points to be Chosen)

(Of these, two years of one modern language, one year of science, and one year of history must be taken. Not less than 4 points of any modern language will be accepted.)

Each year of French	counts	2	points
" " " German	"	2	"
" " " Latin	"	2	"
" " " Greek	"	2	"
Advanced Mathematics (higher Algebra and Plane and Spherical Trigonometry)	"	2	"

* The work in these sciences must include certified notebooks exhibiting the results of experimental work performed by the student.

*Chemistry	counts	2	points
*Physics	"	2	"
Physiography	"	1	point
Physiology	"	1	"
Roman History	"	1	"
Greek "	"	1	"
English "	"	1	"
American History and Civil Government	"	1	"

Candidates for the SHORT COURSE IN PHARMACY (two years) are examined on—*Elementary Subjects,* Descriptive Geography, Arithmetic, English Grammar, Physiology; *History,* United States; *Mathematics,* Algebra through simple equations of the first degree.

For the requirements for admission to the College of Law, see the article on the College of Law, page 136.

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* The work in these sciences must include certified notebooks exhibiting the results of experimental work performed by the student.

REQUIREMENTS IN DETAIL

The following statements will show in detail the requirements in each subject.

LANGUAGE

ENGLISH.—Inasmuch as the examination in English is designed quite as much to test the candidate's ability to express himself well in his mother tongue as to test his knowledge of the books prescribed, he is urgently advised to pursue a thorough course in English composition, in which at least a part of the subjects written upon are from his own observation and experience. He is further urged to cultivate, in all his writing, habits of correctness in spelling, grammar, sentence structure, punctuation, and paragraphing. The examiner will regard mere knowledge of the books as less important than the ability to write good English.

Grammar. The usual school course.

Reading and Practice. The candidate is expected to read intelligently all the books prescribed. He should read them as he reads other books; he is expected to have only a general

knowledge of their substance, but to have freshly in mind their most important parts. To test his knowledge and his power of clear and accurate expression, he will be required to write one or two paragraphs on each of several topics set before him on the examination paper. In place of this test the candidate may present an exercise book, certified by his instructor, containing compositions or other written work done in connection with the reading of the books.

In 1905 this part of the examination will be based upon: Shakespeare's Merchant of Venice and Julius Cæsar; the Sir Roger de Coverley Papers in The Spectator; Goldsmith's Vicar of Wakefield; Coleridge's Ancient Mariner; Scott's Ivanhoe; Carlyle's Essay on Burns; Tennyson's Princess; Lowell's Vision of Sir Launfal; George Eliot's Silas Marner.

In 1906, 1907, and 1908 it will be based upon: Shakespeare's Macbeth and The Merchant of Venice; The Sir Roger de Coverley Papers in The Spectator; Irving's Life of Goldsmith; Coleridge's The Ancient Mariner; Scott's Ivanhoe and The Lady of the Lake; Tennyson's Gareth and Lynette, Lancelot and Elaine, and The Passing of Arthur; Lowell's The Vision of Sir Launfal; George Eliot's Silas Marner.

Study and Practice. This part of the examination presupposes a careful study of the works named below. The examination will be upon subject-matter, form, and structure; and will also test the candidate's ability to express his knowledge with clearness and accuracy.

In 1905 it will be based upon: Skakespeare's Macbeth; Milton's Lycidas, Comus, L'Allegro, and Il Penseroso; Burke's Speech on Conciliation with America; Macaulay's Essays on Milton and on Addison.

In 1906, 1907, and 1908 it will be based upon: Shakespeare's Julius Cæsar; Milton's L'Allegro, Il Penseroso, Comus, and Lycidas; Burke's Speech on Conciliation with America; Macaulay's Essay on Milton, and Life of Johnson.

FRENCH.—*First Year.* Pronunciation; rudiments of grammar, including inflection of the regular and irregular verbs, plural of nouns, inflection of adjectives, participles and pronouns, use of personal pronouns, common adverbs, prepositions, and conjunctions, word order, and elementary syntax; abund-

ant easy exercises; 100-175 pages of graduated texts; practice in translating into French variations of sentences read; dictation, and reproduction from memory of sentences from text. Super's, or Whitney's Reader is recommended.

Second Year. 250-400 pages of easy modern prose; constant practice in translation of easy variations of the text into French; abtracts of the text; continuation of grammar; dictation.

The following texts are recommended: (1) Perrault's Contes de Fées, or Daudet's Easier Short Stories; (2) Erckmann-Chatrian's Mme. Thérèse or Conscrit de 1813, or About's Roi des Montagnes, or Mérimée's Colomba; (3) Labiche's Voyage de M. Perrichon, or Labiche et Martin's La Poudre aux Yeux.

Third Year. (See p. 49.) 400-600 pages of ordinary difficulty; constant practice in French paraphrases, abstracts, reproductions from memory; study of grammar of moderate completeness; dictation.

The following texts are recommended: (1) Sandeau's Mlle. de la Seiglière, or Augier et Sandeau's Le Gendre de M. Poirier; (2) Corneille's Le Cid or Horace; (3) Racine's Athalie or Andromaque; (4) Molière's L'Avare or Le Bourgeois Gentilhomme; (5) Hugo's Hernani, or Coppée's Poems.

GERMAN.—*First Year.* Pronunciation: memorizing and frequent repetition of easy colloquial sentences; grammar: article, commonly used nouns, adjectives, pronouns, weak verbs and more used strong verbs, more common prepositions, simpler uses of modal auxiliaries, elementary rules of syntax and word-order; abundant easy exercises in composition; 75-100 pages of graduated texts from a reader; constant practice in translating into German easy variations of text, and reproduction from memory of sentences from text.

Second Year. Continued drill on rudiments of grammar; 150-200 pages of easy stories and plays; continued translation into German of easy variations on matter read and offhand reproduction, orally and in writing.

The following texts are recommended: (1) Andersen's Märchen or Bilderbuch, or Leander's Träumereien, about forty pages; (2) Hauff's Das Kalte Herz, or Zschockke's Der Zerbrochene Krug; (3) Hillern's Höher als die Kirche, or

Storm's Immensee; (4) a short story from Heyse or Baumbach or Seidl; (5) Benedix' Der Prozess.

Third Year.—(See below.) Grammar; less usual strong verbs, use of articles, cases, auxiliaries, tenses and moods (particularly the infinitive and subjunctive), word-order and word-formation; about 400 pages of moderately difficult prose and poetry; constant practice in paraphrases, abstracts and memory reproductions of passages read.

The following texts are recommended: (1) One of Riehl's Novelettes; (2) a part of Freytag's Bilder aus der Deutschen Vergangenheit; (3) a part of Fouqué's Undine, or a part of Schiller's Geisterseher; (4) a short course in Lyrics and Ballads; (5) one classical play by Goethe, or Schiller, or Lessing.

Candidates may present themselves for an examination in French or German based upon the Third Year Courses outlined above and upon obtaining a rank of 80% will be allowed to pursue advanced work in college. But this examination in the Third Year Course will not be received in lieu of any required examination for admission, or of work required for a certificate.

LATIN.—The grammar, including prosody; Cæsar's Gallic War, books I-IV; Cicero's four orations against Catiline, and those for Archias and for the Manilian Law; Vergil's Eclogues and the Æneid, books I-VI; the sight translation of Latin passages of moderate difficulty; the translation into Latin of simple English sentences, and of easy narrative passages based on the prose authors read. For the last a vocabulary of unusual words will be furnished. Equivalent readings will be accepted for those prescribed.

GREEK.—The grammar, including prosody; Xenophon's Anabasis, books I-IV; Homer's Iliad, books I-III; the sight translation of easy passages from Xenophon; the translation into Greek of easy passages based on the required books of the Anabasis. For the last a vocabulary of unusual words will be furnished. Equivalent readings will be accepted.

HISTORY

GENERAL HISTORY.—A knowledge such as may be obtained from Myer's General History.

ROMAN HISTORY.—A knowledge of Roman history, down to the death of Marcus Aurelius, such as may be obtained from Allen's Short History of the Roman People, or from Myers's Rome: Its Rise and Fall, or from Morey's Outlines of Roman History.

GREEK HISTORY.—Pennell's, or Morey's, or Myers's, History of Greece, to the capture of Corinth, 146 B. C.

ENGLISH HISTORY.—A knowledge such as may be obtained from Montgomery's, or Larned's History of England.

UNITED STATES HISTORY.—A knowledge such as may be obtained from Higginson's, or Fiske's, or Larned's History of the United States.

MATHEMATICS

ALGEBRA.—The elements, equations of the first degree, radicals, the theory of exponents, quadratic equations, ratio and proportion, arithmetical and geometrical progression, the binomial theorem. Candidates for the short course in pharmacy will be examined on no topics beyond simple equations of the first degree. A satisfactory preparation may be obtained from Newcomb's, Wells' Academic, or Wentworth's School Algebra.

PLANE GEOMETRY.—The first five books of Wells', or of Wentworth's Geometry, or an equivalent. Numerical exercises, original propositions and the neat and careful construction of figures should not be neglected. The examination will include original propositions for demonstration or construction.

SOLID GEOMETRY.—Books VI-IX of Wells', or books VI-VIII of Wentworth's Geometry, or an equivalent. The examination will be planned to test the candidate's ability to apply the theorems to the computation of surfaces and volumes, as well as his readiness in demonstration.

*CHEMISTRY.—The necessary ground is covered by the following text-books: Fisher, Remsen, Roscoe (inorganic part), Shepard, Storer and Lindsay, Williams.

PHYSICAL GEOGRAPHY (PHYSIOGRAPHY).—A satisfactory preparation may be obtained from Appleton's Physical Geography.

*PHYSICS.—A satisfactory treatment of this subject may be found in Avery's, or Gage's Physics.

PHYSIOLOGY.—Cells and tissues, skeleton, muscles, blood and circulation, respiration, nutrition and digestion, lymphatic system, excretory organs, nervous system, special senses, hygiene.

Elementary Subjects

Descriptive Geography.—The usual school course. Required for short pharmacy course only.

Arithmetic.—The usual school course, including the metric system of weights and measures. Required for the short pharmacy course only.

ADMISSION BY CERTIFICATE

Certificates for admission to the freshman class without examination are accepted only from graduates of schools approved by the New England College Entrance Certificate Board (except in the case of schools outside of New England). They will not be accepted from non-graduates except in extraordinary cases, and then only provided the candidate is expressly recommended for admission by the principal of the school from which he comes. Certificates must be made out on blanks furnished by the University.

Certificates from schools approved by the above-mentioned Board will be accepted at any of the institutions co-operating to maintain it. Any Superintendent or Principal desiring to have a school under his charge placed upon the approved list should apply before April 1st to the Secretary of the Board, Professor Nathaniel F. Davis, 159 Brown St., Providence, R. I.

REQUIREMENTS FOR GRADUATION

The college year is divided equally into a fall term and a spring term. Five recitation hours a week of successful work for one term entitle a student to one credit. The minimum regular work for a term is fifteen hours a week (exclusive of physical training and military science), leading to three credits. Six or seven credits thus represent the minimum work of a year.

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*The work in these sciences must include certified notebooks exhibiting the results of experimental work performed by the student. These notebooks should be presented at the examination.

In making up the quota of studies, laboratory work, and other studies not requiring preparation, count as half time—that is, two hours in the laboratory are counted as equivalent to one hour. The hours devoted to such studies are marked with a dagger (†) in the detailed description of courses of instruction.

Except in the College of Law and the Short Pharmacy Course, candidates for graduation are required to complete a four-years course of study by securing from twenty-five to thirty credits, according to the course chosen (see pp. 133-137).

DEPARTMENTS OF INSTRUCTION

AGRICULTURE

PROFESSOR HURD.

Ag 1. SOILS.—Lectures and recitations beginning with the fundamental principles of agriculture. The nature, origin, and classification of soils, with the principles of field mapping. The different soils and their relation to crops. The factors determining fertility and the physical properties of ideal soils. The conservation of soil moisture. The objects, benefits, and methods of tillage. Conditions requiring, necessity for, and advantages of drainage. *Two hours a week.* Fall Term.

Ag 2. SOILS.—A course to be taken in connection with course 1, consisting of field excursions for the study of the soils of this section, the collecting of samples for laboratory work, and the mechanical analysis of them in the laboratory. †*Two hours a week.* Fall term.

Ag 3. AGRICULTURAL ENGINEERING AND FARM MECHANICS.—Farm surveying and drainage. The platting of farms and the measurement of land. Levelling for drains, estimating size of tile required, cost of drain, etc. The making of roads, with practice in the construction of roads on the college farm.

A study of the simpler laws of mechanics used in operating farm implements; the principles of draft, the handling in the field, taking apart, and putting together, of the different classes of farm implements in possession of the department. The relative merits of wind, gasoline, steam and electricity, as sources of power on the farm. Farm management and operations. The keeping of

farm accounts, the planning of a season's work, the management of men and teams, and estimated cost of the different operations.

The planning, designing, location and construction of farm buildings, including water supply, sewerage, etc. † *Fours hours a week.* Fall term.

Ag 4. MANURES AND FERTILIZERS.—A study of the value, preserving and storing of natural manures. The sources of, buying, mixing, and the applying of commercial fertilizers. Lime and liming. *Two hours a week.* Spring term.

Ag 5. FIELD CROPS.—Lectures and recitation work on the history, distribution, uses, chief characteristics, and adaptability of the principal farm crops. The best methods of producing them, including crop rotations, preparation of the land, fertilizing and seeding, a study and treatment of the injurious insects and diseases affecting them, and the harvesting, marketing, and storing of crops. *Three hours a week.* Fall term.

Ag 6. ADVANCED AGRONOMY.—Elective, advanced work for those who have completed the required work of the first three years. Lectures and recitations along lines of Experiment Station work. The application of plant breeding to the improvement of farm crops. The student will carry out original investigations along some chosen line under the direction of the instructor. *Three hours a week.* Fall term.

Ag 7. ADVANCED AGRONOMY.—A continuation of course 6. *Two hours a week.* Spring term.

Ag 8. GENERAL AGRICULTURE.—A history of agriculture from the earliest times, including that of the Jews, Egyptians, and Romans, to the present day. The beginnings of British agriculture, and the development of modern agriculture with especial reference to that of England, Germany, France, and other foreign countries. The agriculture of the United States, its influence on social conditions, its relation to the State and Nation. The importance of our leading products, and their effect on the world's commercial life. The agriculture of the different

sections. Rural life and rural development. Lectures; to be supplemented by illustrative material. Elective, and open to all students of the University. *Two hours a week.* Spring term.

ANIMAL INDUSTRY

PROFESSOR GOWELL.

An 1. ANIMAL BREEDING.—Lectures and recitations on the principles of breeding, including heredity, atavism, variation, prepotency, in-breeding, line-breeding and cross-breeding. Studying the histories, development and economic values of the different classes and breeds of cattle and horses. *Two hours a week.* Spring term.

An 2. LABORATORY ANIMAL BREEDING.—Studying the different breeds; practice in the use of score cards in judging animals. *Two hours a week.* Spring term.

An 3. ANIMAL BREEDING.—A continuation of course 1. Sheep, swine and poultry breeding; the handling and care of breeding and growing animals; the adaptation of the different breeds to prevailing conditions—judging by score cards; the use of incubators and brooders. The work consists of lectures and recitations, with laboratory exercises in the animal and poultry quarters. *Three hours a week.* Fall term.

An 4. ANIMAL FEEDING.—Food requirements of different kinds of animals. Compositions of foods, and the nutrients furnished by them; feeding formulas; calculating rations; valuation of foods; pasturing; soiling; methods of feeding. *Two hours a week.* Fall term.

An 5. DAIRYING.—Lectures and recitations upon the composition and formation of milk; its sanitary production; aeration; Pasteurization; sterilization; creaming, fermenting; the manufacture of butter and cheese. *Two hours a week.* Spring term.

An 6. LABORATORY DAIRYING.—Practice in handling and testing milk and cream for acidity and solids; curing cream; making butter and cheese; operating dairy machinery. *Ten hours a week for four weeks.* Spring term.

An 7. ADVANCED ANIMAL INDUSTRY.—A study of investigations in breeding, feeding, dairying and poultry management made at the Experiment Stations of the country; and the practical application of the findings to the everyday work of the department. *The time varies.* Fall term.

An 8. ADVANCED ANIMAL INDUSTRY.—A continuation of course 7. *The time varies.* Spring term.

BIOLOGY

PROFESSOR DREW; PROFESSOR RUSSELL; MR. CUMMINGS.

The subjects given below are arranged numerically, but not in the order in which it is best for students to pursue them. It is desirable that all intending to take biology should begin with courses 1 and 2.

Bl 1. GENERAL BIOLOGY.—This course is devoted to the study of the general principles governing the activities of living things, both plants and animals. It is open to all students, and should form the basis for other work in either zoology or botany. It is to be taken in connection with course 2. *Two hours a week.* Fall term. PROFESSOR DREW.

Bl 2. LABORATORY BIOLOGY.—To be taken in connection with course 1. † *Two hours a week.* Fall term. PROFESSOR DREW; MR. CUMMINGS.

Bl 5. ZOOLOGY.—(Invertebrate annimals).—Representatives of the invertebrate groups of animals are studied in the laboratory, class-room and field, where attention is given to their habits, comparative anatomy, and to some extent to their embryology and classification. This course is to be taken in connection with course 6, and is not complete without courses 7 and 8. Courses 1 and 2 are required as a preparation. *Two hours a week.* Fall term. PROFESSOR DREW.

Bl 6. LABORATORY ZOOLOGY.—To be taken in connection with course 5. †*Six hours a week.* Fall term. PROFESSOR DREW.

Bl 7. Zoology (Vertebrate Animals).—A continuation of course 5. Types of the vertebrates are studied and their structures compared. A few weeks are devoted to the embryology of the frog. This course is to be taken in connection with course 8. It must be preceded by courses 1, 2, 5 and 6. *Two hours a week.* Spring term. Professor Drew.

Bl 8. Laboratory Zoology.—To be taken in connection with course 7. † *Six hours a week.* Spring term. Professor Drew.

Bl 9. Physiology.—Attention is given to the physiological activities of the human body, with enough anatomy to render the physiological discussions intelligible, and enough hygiene to serve as a guide for the intelligent care of the body. It is recommended that this course be preceded by courses 1 and 2. *Two hours a week.* Spring term. Professor Drew.

Bl 11. Entomology.—Insects are studied with special reference to their habits, life-histories and structure. Attention is given to their economic importance, and the methods of controlling them. †*Four hours a week.* Spring term. Professor Drew; Mr. Cummings.

Bl 13. Geology.—A study of the structure and history of the earth, and the processes by means of which geological changes are brought about. *Three hours a week.* Fall term. Professor Drew.

Bl 14. Advanced Zoology.—This course offers an opportunity for special zoological work along lines best suited to the future plans of the student. It may consist of field work, laboratory work, or reading, or a combination of all three. *The time varies, and the work may be continued a number of terms.* Fall and spring terms. Professor Drew.

Bl 15. Veterinary Science.—Lectures, demonstrations and clinics, illustrated by models, natural preparations, and living animals. *Three hours a week.* Given in the spring term of even years. Professor Russell.

Bl 16. ANIMAL ANATOMY.—A laboratory course intended to make the student familiar with the location and appearance of the organs of the bodies of our domestic animals. †*Ten hours a week for nine weeks.* Given in the spring term of odd years. PROFESSOR RUSSELL.

Bl 17. BACTERIOLOGY.—An elementary laboratory course, including the preparation of culture media and a critical study of the morphological and biological characteristics of a few typical bacteria. Students in agriculture give special attention to the bacteriology of the dairy. †*Ten hours a week for nine weeks.* Spring term. PROFESSOR RUSSELL.

Bl 18. ANIMAL HISTOLOGY.—A laboratory course in normal animal histology. Starting with perfectly fresh material, the work consists in the preparation, hardening, embedding, cutting, staining and mounting of the various normal tissues and organs of animals. †*Ten hours a week for nine weeks.* First part of spring term. PROFESSOR RUSSELL.

Bl 19. LABORATORY BACTERIOLOGY.—An advanced course. †*Ten hours a week for nine weeks.* Spring term. PROFESSOR RUSSELL.

Bl 20. ORGANIC EVOLUTION.—Some of the more important facts on which the theory is based are presented for consideration, and subjects for individual reading and essays are assigned. *One hour a week.* Spring term. PROFESSOR DREW.

Bl 21. GENERAL BOTANY (Flowering Plants).—The course includes a brief consideration of the fundamental principles of the structure, physiological functions, habits and systematic relations of flowering plants. This course must be taken in connection with course 22, and should follow courses 1 and 2. *One hour a week.* Spring term. MR. CUMMINGS.

Bl 22. LABORATORY BOTANY.—To be taken in connection with course 21. †*Four hours a week.* Spring term. MR. CUMMINGS.

Bl 23. GENERAL BOTANY (Flowerless Plants).—Type forms of algae, fungi, lichens, liverworts, mosses, and ferns are studied in the laboratory and in the field. Attention is given to their structures, life histories and habitats, as well as their relations to the higher forms of plants. This course must be preceded by courses 1 and 2, and should be preceded by courses 21 and 22. † *Four hours a week.* Fall term. MR. CUMMINGS.

Bl 25. PLANT HISTOLOGY.—The minute structure of plants, including the anatomy of the cell, is studied, and attention is given to growth, variation and adaptation of cellular structures, and the formation and distribution of tissue systems. Killing, staining and mounting plant tissues forms part of the work. This course is to be taken in connection with course 26 and must be preceded by courses 21 and 22. *One hour a week.* Fall term. MR. CUMMINGS.

Bl 26. LABORATORY PLANT HISTOLOGY.—To be taken in connection with course 25. †*Four hours a week.* Fall term. MR. CUMMINGS.

Bl 27. PLANT PHYSIOLOGY.—Attention is given to the physiological activities of plants: the processes of nutrition and reproduction; the phenomena of respiration, transpiration and growth; response to various stimuli, such as light, heat, moisture and gravity. This course must be preceded by courses 21 and 22 and should be preceded by courses 23, 25 and 26. It is advisable to take this course in connection with course 28. *One hour a week.* Spring term. MR. CUMMINGS.

Bl 28. LABORATORY PLANT PHYSIOLOGY.—To be taken in connection with course 27. †*Two hours a week.* Spring term. MR. CUMMINGS.

Bl 29. AGRICULTURAL BOTANY.—This course deals with the plants of the farm and consists of three parts. 1. Seeds.—Structure, function and dispersal. Buying, selling and testing and identification. 2. Weeds.—Origin and distribution; their benefits, disadvantages and methods of eradication: systematic

study of Maine weeds. 3. Grasses—Origin and distribution of the important grasses; their duration, reproduction and pollination: identification of species. This course must be taken in connection with course 30. *Two hours a week.* Fall term. MR. CUMMINGS.

Bl 30. LABORATORY AGRICULTURAL BOTANY.—To be taken in connection with course 29. †*Two hours a week.* Fall term. MR. CUMMINGS.

Bl 31. PLANT PATHOLOGY.—Attention is given to the diseases of plants resulting from the attacks of fungi and those induced by unfavorable environment. The causes, symptoms and treatment of the common diseases of familiar plants are considered. This course must be taken in connection with course 32. *One hour a week.* Given in the spring term of odd years. MR. CUMMINGS.

Bl 32. LABORATORY PLANT PATHOLOGY.—To be taken in connection with course 31. †*Two hours a week.* Spring term. MR. CUMMINGS.

Bl 37. ADVANCED BOTANY.—This course offers an opportunity for special work in botany along lines best suited to the future plans of the student. It may consist of field work, laboratory work, or reading, or a combination of all three. *The time varies and the work may be continued a number of terms.* Fall and spring terms. MR. CUMMINGS.

Ch 30. BIOLOGICAL CHEMISTRY.—For description of this course see p. 65. *Five hours a week.* Fall term. PROFESSOR MERRILL.

Fy 2. FOREST BOTANY.—For description of this course see p. 75. *Two hours a week.* Fall term. PROFESSOR SPRING.

Fy 3. FOREST BOTANY.—For description of this course see p. 76. *Two hours a week.* Spring term. PROFESSOR SPRING.

Fy 4. FOREST BOTANY, FIELD AND LABORATORY WORK.—For description of this course see p. 76. † *Four hours a week.* Fall term. PROFESSOR SPRING; MR. CUMMINGS.

Fy 5. FOREST BOTANY, FIELD AND LABORATORY WORK.—For description of this course see p. 76. † *Four hours a week.* Spring term. PROFESSOR SPRING; MR. CUMMINGS.

Ht. 8. THE EVOLUTION OF CULTIVATED PLANTS.—For description of this course see p. 85. *Two hours a week.* Fall term. PROFESSOR MUNSON.

CHEMISTRY

PROFESSOR AUBERT; PROFESSOR MERRILL; MR. DAVIS; MR. REED; MR. SMITH.

Ch 1. GENERAL CHEMISTRY.—Recitations and lectures on the general principles of chemistry, illustrated by charts, experiments, etc. To obtain credit for this course, it must be accompanied by course 3, and followed by courses 2 and 4, unless a special excuse is obtained. The text-book is Jones's Elements of Inorganic Chemistry. *Two hours a week.* Fall term. MR. DAVIS.

Ch 2. GENERAL CHEMISTRY.—A continuation of course 1. *Three hours a week.* Spring term. MR. DAVIS.

Ch 3. LABORATORY CHEMISTRY.—Practical work to accompany course 1. The text-book is Smith's Laboratory Outline of General Chemistry. † *Two hours a week.* Fall term. MR. DAVIS.

Ch 4. LABORATORY CHEMISTRY.—A continuation of course 3, to accompany course 2, with elementary Qualitative Analysis for those who advance far enough. † *Two hours a week.* Spring term. MR. DAVIS.

Ch 5. ADVANCED INORGANIC CHEMISTRY.—Lectures and recitations, illustrated by specimens. The text-book is Jones's Principles of Inorganic Chemistry. *Two hours a week.* Fall term. PROFESSOR AUBERT; MR. SMITH. No credit, unless course 6 is taken, except by special arrangement. Open to students that have taken courses 1, 2, 3 and 4.

Ch. 6. ADVANCED INORGANIC CHEMISTRY.—A continuation of course 5. *Three hours a week.* Spring term. PROFESSOR AUBERT; MR. SMITH.

Ch 7. ELEMENTARY ORGANIC CHEMISTRY.—The marsh gas series. Lectures and recitations, illustrated by specimens. The text-book is Remsen's Organic Chemistry. *Three hours a week.* Fall term. This course must be followed by course 8, and preceded by courses 1, 2, 3, 4, 5 and 6, except for those especially admitted. PROFESSOR AUBERT; MR. SMITH.

Ch. 8. ELEMENTARY ORGANIC CHEMISTRY.—The unsaturated compounds and the benzene series. A continuation of course 7. *Three hours a week.* Spring term. PROFESSOR AUBERT; MR. SMITH.

Ch 12. CHEMICAL PREPARATIONS.—The preparation and purification of typical organic and inorganic substances. Open to students that have taken courses 1, 2, 3, 4, 5, 6, 7 and 8. Text-book, Aubert's Organic and Inorganic Preparations. *Five hours a week.* Fall term. PROFESSOR AUBERT.

Ch 13. DESCRIPTIVE MINERALOGY.—The text-book is Moses and Parson's Elements of Mineralogy. *Three hours a week.* Spring term. PROFESSOR JACKMAN.

Ch 14. QUALITATIVE ANALYSIS.—A laboratory study of the chief elements and their derivatives with a view to a clear understanding of their properties. Supplemented by class room work. The text used is Prescott and Johnson's Qualitative Analysis. *Not less than † eight hours per week, unless by special arrangement.* Fall term. Open to students that have taken courses 1, 2, 3 and 4, except for students in the Short Pharmacy Course. It is generally advised that course 5 be taken with this course, and it must be followed by course 15. MR. REED.

Ch 15. QUALITATIVE ANALYSIS.—A continuation of course 14, with the application of analytical methods to the determination of unknown substances of increasing complexity. Elementary

analysis by means of the spectroscope is given. Course 6 is usually an accompanying study, except for students in the Short Pharmacy Course. *Time, the same as course 14.* Spring term. MR. REED.

Ch 16. QUANTITATIVE ANALYSIS.—Gravimetric determinations. The text is Appleton's Quantitative Analysis. *Not less than † eight hours per week, unless by special arrangement.* For satisfactory preparation, the student should have taken courses 1, 2, 3, 4, 14 and 15; and he should add courses 18 and 19. PROFESSOR AUBERT; MR. SMITH.

Ch 18. QUANTITATIVE ANALYSIS.—Analysis of complex alloys, minerals, etc. The text used is Clowes and Coleman's Quantitative Analysis. *Not less than † eight hours per week, unless by special arrangement.* Fall term. Open to students that have taken course 16 and its requirements. PROFESSOR AUBERT.

Ch 19. VOLUMETRIC ANALYSIS AND ASSAYING.—Acidimetry, alkalimetry, oxydimetry; gold and silver assaying. Text, *time,* and general requirements the same as for course 18. PROFESSOR AUBERT.

Ch 20. AGRICULTURAL ANALYSIS.—The analysis of fodders, fertilizers, milk, and other products. The methods are those recommended by the Association of Official Agricultural Chemists. Except in special cases, the *time* and requirements are the same as for course 18. PROFESSOR AUBERT.

Ch 21. TOXICOLOGY AND URINALYSIS.—The determination of the more common poisons; the analysis of urine. Text, Aubert's Urinalysis and Toxicology. *Time,* and general requirements, the same as for course 18. PROFESSOR AUBERT.

Ch 22. THESIS WORK.—The Thesis must embody the result of original work in analysis or research. † *Fifteen hours a week for eleven weeks.* Spring term. Open to students that have taken courses 1, 2, 3, 4, 5, 6, 7, 8, 12, 14, 15, 16, 18, 19, 20, 21, 23, 24 and 28. PROFESSOR AUBERT.

Ch 23. ORGANIC CHEMISTRY.—An advanced course. Text-book, Joannis' Cours de Chimie, Vol. III. *Three hours a week.* Fall term. PROFESSOR AUBERT.

Ch 24a. INDUSTRIAL CHEMISTRY.—General processes of technical chemistry, and selected topics, including the principal manufactured products of special interest. Lectures and recitations. Text-books, Thorp's Outlines of Industrial Chemistry and Fischer's Lehrbuch der Chemischen Technologie. *Two hours a week.* Fall term. Open to students that have completed courses 5, 6, 7 and 8. PROFESSOR AUBERT.

Ch 24b. INDUSTRIAL CHEMISTRY.—A continuation of course 24a. *Two hours a week.* Spring term. PROFESSOR AUBERT.

Ch 25a. TECHNICAL ANALYSIS.—An advanced course in analysis of ores and industrial products. Open to students that have completed courses 16, 18, 19, and their requirements. † *Five hours a week.* Fall term. PROFESSOR AUBERT.

Ch 25b. TECHNICAL ANALYSIS.—Organic technical products, and advanced mineral analysis. † *Five hours a week.* Spring term. PROFESSOR AUBERT.

Ch 26. PHYSICAL CHEMICAL METHODS.—The determination of molecular weights by the vapor density, boiling point, and freezing point methods. The use of the refractometer and the polariscope. † *Five hours a week.* Spring term. PROFESSOR AUBERT.

Ch 28. DYEING.—The practical application of dyes to cotton, wool and silk. † *Fifteen hours a week for two weeks.* Spring term. PROFESSOR AUBERT.

Ch 29. AGRICULTURAL CHEMISTRY.—A course on the chemistry of soils and fertilizers. It includes the relation of soils to heat and moisture; the mechanical condition of soils best suited to plant growth, and the objects to be gained by cultivation; the origin, composition, preparation and use of commercial fertilizers; the supply, composition, care and use of farm manures,

and the general considerations which pertain to the maintenance of soil fertility. *Five hours a week.* Given in the spring term of even years. Open to students that have completed courses 1, 2, 3, and 4. MR. REED.

Ch 30. BIOLOGICAL CHEMISTRY.—Lectures and recitations on the composition of the air, soils, natural waters, and plants; the source and assimilation of plant food; the composition of the animal body and of food materials; the chemical changes involved in the digestion and assimilation of food; the chemistry of milk and dairy products; and the chemical processes and methods of investigation by which these subjects are studied. *Five hours a week.* Fall term. PROFESSOR MERRILL.

CIVICS

PROFESSOR ROGERS.

Cv 1. CONSTITUTIONAL LAW AND HISTORY.—An outline of Anglo-Saxon institutions, the development of the English Constitution, the growth and political conditions of the American colonies, the Articles of Confederation, the adoption of the Constitution, and the comparative study of the Federal and the State Constitutions from the historical and legal standpoints. The text-book is Rogers's Our System of Government. *Five hours a week.* Spring term.

Cv 2. POLITICAL ECONOMY.—Instruction is given by lectures. Topical readings and investigations are required. *Five hours a week.* Fall term.

Cv 3. ADVANCED POLITICAL ECONOMY.—A continuation of course 2. *One hour a week.* Spring term.

Cv 4. INTERNATIONAL LAW.—The text-book is Lawrence's International Law. *Five hours a week.* Fall term.

Cv 5. PUBLIC FINANCE.—A study of taxation and public expenditures. *Four hours a week.* Spring term.

Cv 6. COLONIAL PROBLEMS.—*Three hours a week.* Given in the spring term of even years.

Cv 7. SOCIOLOGY.—The text-book is Giddings's Sociology. *Three hours a week.* Given in the spring term of odd years.

Cv 8. ROMAN LAW.—*Two hours a week.* Spring term.

Cv 9. ANTHROPOLOGY.—A study of primitive man and of the origin and growth of civilization. The text-book is Tylor's Anthropology. *Three hours a week.* Fall term.

CIVIL ENGINEERING

PROFESSOR BOARDMAN; PROFESSOR WESTON; MR. HAMLIN; MR. GROVER.

Ce 1. PLANE SURVEYING.—Recitations on the general principles of plane surveying, the laying out of land, the dividing of land, surveying of public lands, direct leveling, and the variation of the magnetic needle. The text-book is Raymond's Surveying. *Two hours a week.* Spring term. PROFESSOR WESTON; MR. HAMLIN.

Ce 2. FIELD WORK IN SURVEYING.—The use of the chain, compass, transit, and level. Instruments are adjusted, original surveys made, and old lines retraced. Plats are prepared of the surveys made in the field. The text-book is Field Manual by Pence and Ketchum. † *Six hours a week.* Spring term. PROFESSOR WESTON; MR. GROVER.

Ce 3. RAILROAD CURVES AND EARTHWORK.—Lectures and recitations on the theory of railroad curves, switches, turnouts, slope stakes and the calculation of earthwork. The text-book is Allen's Railroad Curves and Earthwork. *Three hours a week.* Fall term. MR. HAMLIN.

Ce 4. RAILROAD WORK.—The survey of a railroad about three miles long. The preliminary and location surveys are made, including the running in of the curves, establishing the grade,

setting the slope stakes, and the calculation of the earthwork. † *Six hours a week.* Fall term. PROFESSOR WESTON; MR. GROVER.

Ce 5. HIGHWAY ENGINEERING.—The location, construction, and improvement of country roads under different conditions of soil, climate, and traffic. *One hour a week.* Fall term. PROFESSOR WESTON.

Ce 6. DRAWING.—Problems in projections. Dimension and detail drawing, and tracing. Special attention is given to lettering. Fall term. † *Four hours a week.* MR. GROVER.

Ce 7. DRAWING.—Isometric and cabinet projections, perspective, tracing and lettering. Stereotomy, giving the application of the methods of descriptive geometry to the preparation of drawings for arches, retaining walls, bridge abutments, piers, etc. † *Ten hours a week for eight weeks.* Spring term. MR. GROVER.

Ce 8. SANITARY ENGINEERING.—Drainage of land; plumbing of houses; drainage and sewerage of towns; sewage disposal; water supply and purification. The text-book is Folwell's Sewerage. *Two hours a week.* Fall term. MR. HAMLIN.

Ce 9. SURVEYING.—The plane table, topographical surveying, precise leveling, the elements of geodesy, the measurement of a base line, triangulation. This course is given during the first two weeks following commencement, *and counts as* 100 *hours.* Required of juniors.

Ce 10. HYDRAULICS.—The weight, pressure and motion of water; the flow of water in open channels, mains, and distribution pipes; distribution systems, the construction of water works for towns and cities. The text-book is Merriman's Hydraulics. *Three hours a week.* Spring term. MR. HAMLIN.

Ce 11. HYDRAULIC FIELD WORK.—The measurement of the flow of rivers is illustrated by the use of the current meter, and various forms of floats. Trips are made to the United States

Geological Survey gaging station located on the Penobscot river between Howland and Montague, where discharge measurements are made, the data thus obtained being used together with that obtained from the Survey to plot the rating curve, etc. The measurements are reported to the Survey. The charge for this course is $5.00. † *Three hours a week.* Fall term. PROFESSOR BOARDMAN; MR. HAMLIN.

Ce 12. STRUCTURES.—A detailed study of the properties of materials used in engineering structures; their resistance to bending, breaking, extension and compression, under the various conditions of practice; the theory of stresses in framed structures; the usual systems of loading; the principles of designing. *Five hours a week.* Fall term. PROFESSOR BOARDMAN.

Ce 13. STRUCTURES.—A continuation of course 12; including the study of problems in connection with masonry structures; natural and artificial foundations; the stability of dams and retaining walls; the designing of bridge piers and abutments; the theory of the masonry arch. *Five hours a week.* Spring term. PROFESSOR BOARDMAN.

Ce 14. DESIGNING.—Designs for some of the common types of wooden and steel structures, and preparation of drawings for the shop. † *Ten hours a week.* Fall term. PROFESSOR BOARDMAN; MR. HAMLIN.

Ce 15. DESIGNING AND THESIS WORK.—A continuation of course 14 and the preparation of a thesis. † *Fifteen hours a week.* Spring term. PROFESSOR BOARDMAN; MR. HAMLIN.

Ce 16. HYDRAULIC ENGINEERING.—Rainfall, evaporation, and stream flow. Water meters, water wheels and motors. The development and utilization of water power. The collection, purification and distribution of water for city supplies. *Two hours a week.* Fall term. PROFESSOR BOARDMAN.

Ce 17. HYDRAULIC ENGINEERING.—A continuation of course 16. *Two hours a week.* Spring term. PROFESSOR BOARDMAN.

Ce 18. SANITARY SCIENCE.—Lectures on the causes and prevention of disease, sanitation and the public health, and the relations of the engineer to this work. *One hour a week.* Fall term. MR. HAMLIN.

Ce 19. RAILROAD ENGINEERING.—A course discussing the economics of railroad location, also the subjects of brakes, signals, rolling-stock, yards, stations, etc. *Two hours a week.* Spring term. PROFESSOR BOARDMAN.

ELECTRICAL ENGINEERING

PROFESSOR WEBB; MR. GANONG.

Ee 1. ELECTRICITY AND MAGNETISM.—This course continues the subject of electricity and magnetism begun in physics. The work is taken up by text-book, lectures and problems. The text-book, is Silvanus Thompson's Electricity and Magnetism. *Two hours a week.* Fall term. Required of juniors in Electrical Engineering. MR. GANONG.

Ee 2. ELECTRICITY AND MAGNETISM AND DYNAMO DESIGN.—A continuation of course 1, with the application of principles to the problems of dynamo design. The work is taken up by text-book, lectures and problems. The text-book is Sheldon's Dynamo Electric Machinery. *Three hours a week.* Spring term. Required of juniors in Electrical Engineering. MR. GANONG.

Ee 3. ELECTRICAL MACHINERY.—A course on the design and construction of direct current generators and motors. The work is taken by lectures and problems. *Three hours a week.* Fall term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 4. ALTERNATING CURRENT MACHINERY.—In this course are considered the principles involved in the design, construction and operation of alternating current generators, motors, transformers and rotary converters. The text-book is Jackson's Alternating

Currents and Alternating Current Machinery. *Five hours a week for the first nine weeks.* Spring term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 5. DESIGN OF DIRECT CURRENT MACHINES.—This course is taken up in the drawing room. Each student is required to make the calculations and drawings of a direct current dynamo. † *Four hours a week.* Fall term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 6. DESIGN OF ALTERNATING CURRENT MACHINES.—A drawing room course similar to course 5. The calculations and drawings are made for an alternating current generator. † *Five hours a week for nine weeks.* First half of spring term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 7. LABORATORY WORK, DIRECT CURRENTS.—Tests of electrical instruments. Experimental work with generators and motors. Power and photometric tests of electric lamps. Care and management of the college lighting plant. The charge for this course is $3. † *Four hours a week.* Fall term. Required of seniors in Electrical Engineering. MR. GANONG.

Ee 8. LABORATORY WORK, ALTERNATING CURRENTS.—A course similar to course 7. Tests of alternating current instruments. Experimental work with generators, motors, transformers and rotary converters. † *Five hours a week for nine weeks.* First half of spring term. The charge for this course is $2.50. Required of seniors in Electrical Engineering. MR. GANONG.

Ee 9. DYNAMOS.—The general principles and theory of design. Different types of machines. Practical considerations in the construction and operation of direct current generators and motors. Connecting and starting up of generators and motors. Illustrations by laboratory experiments. The text-book is Crocker's Electric Lighting. *Two hours a week.* Fall term. Required of juniors in Mechanical Engineering. MR. GANONG.

Ee 10. DYNAMO LABORATORY WORK.—Practice in the connecting and running of direct current generators and motors. Tests

for regulation, heating, efficiency and insulation. † *Five hours a week for nine weeks.* Offered for seniors in Mechanical Engineering. The charge for this course is $2.50. MR. GANONG.

Ee 12. LABORATORY WORK, DIRECT CURRENTS.—Introductory to course 7. † *Two hours a week.* Spring term. Junior year. The charge for this course is $2.

Ee 13. ALTERNATING CURRENTS.—Theory of alternating currents. The text-book is Jackson's Alternating Currents and Alternating Current Machinery. *Three hours a week.* Fall term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 14. ELECTRICAL ENGINEERING.—Polyphase alternating currents and wiring. Theory and construction of telegraph and telephone instruments. Methods of operating and testing. The course is taken by lectures. *Three hours a week for nine weeks.* Last half of spring term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

Ee 16. THESIS WORK.—The designing of electrical apparatus, laboratory investigation, or commercial testing, with results presented in proper form. † *Fifteen hours a week for nine weeks.* Last half of spring term. Required of seniors in Electrical Engineering. PROFESSOR WEBB.

ENGLISH

PROFESSOR ESTABROOKE; MR. THOMPSON; MR. EDSON.

Two credits in English are required for graduation. Courses 3 and 4, which are prescribed for freshmen, give 1 1-5 credits. The remaining 4-5 credit is regularly obtained by taking courses 1 and 2; but students especially interested in other courses in English may, upon consultation with the instructors, make certain substitutions (see under courses 6, 9, 17, and 18). Course 1

is regularly taken during the freshman year and course 2 during the sophomore year; however, upon sufficient grounds either course may be postponed for one year.

Eh 1. PUBLIC SPEAKING.—The purpose of this course is to give the student a practical knowledge of the fundamental principles of effective public speaking. The first term's work consists in voice training by means of practice work in classes, reading aloud for interpretation, and the acquirement of ease in pose and gesture. During the second term the training thus acquired will be applied to the delivery of model public orations and especially to speeches of the student's own composition. Special attention will be given to the correction of individual faults. Provided their other work is satisfactory, the eight students obtaining the highest grades in this course are chosen to compete in the sophomore prize declamations. During the first term the sections will meet *once a week;* during the second, *once in two weeks.* The assignment of sections is made by the instructor in the second week of the term. MR. EDSON.

Eh 2. ENGLISH COMPOSITION.—This course—to be taken throughout the sophomore year—supplements the work of the freshman year by giving further practice in narrative, expository, and argumentative writing. *Monthly themes are required,* each containing from 1,000 to 1,200 words. There will be a conference on each theme. MR. THOMPSON; MR. EDSON.

Hh 3. ENGLISH COMPOSITION AND RHETORIC.—This course gives both theoretical and practical instruction. The theory is taught by class-room work based on Espenshade's Composition and Rhetoric. The practice is obtained by exercises written in the class-room, and by weekly themes. The themes are criticized in detail by the instructor, and those falling below the standard must be rewritten. In addition to the study of the text-book and the writing and rewriting of themes, certain outside reading from standard authors is required. This course is prescribed for freshmen. *Three hours a week.* Fall term. MR. THOMPSON; MR. EDSON.

Eh 4. ENGLISH COMPOSITION AND RHETORIC.—Extended study of narration, exposition, description and argumentation; construction of analytical outlines of selections from Burke, Webster, Macaulay, and others; practice in different kinds of composition; exercises in extemporaneous writing. The text-books are Cairns's Forms of Discourse, and Lewis's Specimens of the Forms of Discourse. This coures is prescribed for freshmen. *Three hours a week.* Spring term. MR. THOMPSON; MR. EDSON.

Eh 5. OLD ENGLISH.—Elements of Old English grammar; reading of easy prose and poetry. Constant reference is made to the relation of old English to modern English and modern German. The text-book is Smith's Old English Grammar. *Three hours a week.* Given in the spring term of even years. PROFESSOR ESTABROOKE.

Eh 6. ENGLISH COMPOSITION AND LITERATURE.—One two-page theme a week, and occasional longer themes, in connection with the study of selections from English prose writings. Among the writings studied will be selections from Addison, Swift, Johnson, Goldsmith, and Burke. *Two hours a week.* Fall term. MR. THOMPSON.

Eh 7. ENGLISH COMPOSITION AND LITERATURE.—A continuation of course 6. Among the writings studied will be selections from Macaulay, Carlyle, Ruskin, Newman, Matthew Arnold, and Stevenson. *Two hours a week.* Spring term. MR. THOMPSON.

Courses 6 and 7 are open to those who have taken courses 3 and 4; and students especially interested in courses 6 and 7 may, upon consultation with the instructor, substitute them for courses 1 and 2.

Eh 8. ENGLISH LITERATURE.—The text-book, Pancoast's Introduction to English Literature, is supplemented by frequent lectures, and by study in the library. A few masterpieces are studied in detail. Attention is given to historical and social conditions, and the students are required to prepare essays upon the characters and times studied. *Two hours a week.* Fall term. PROFESSOR ESTABROOKE.

Eh 9. ENGLISH LITERATURE.—A continuation of course 8. The authors studied are chiefly Elizabethan dramatists. *Three hours a week.* Spring term. PROFESSOR ESTABROOKE.

Eh 10. ENGLISH LITERATURE.—A continuation of course 9. Study of Elizabethan writers completed. Study of writers of the Restoration. *Two hours a week.* Fall term. PROFESSOR ESTABROOKE.

Eh 11. AMERICAN LITERATURE.—Study of the most important American authors of the nineteenth century. The text-book is Bronson's American Literature. *Three hours a week.* Spring term. PROFESSOR ESTABROOKE.

Eh 12. ENGLISH LITERATURE.—Study of the structure and qualities of the English novel. The text-book is Perry's Study of Prose Fiction. *Two hours a week.* Fall term. PROFESSOR ESTABROOKE.

Eh 13. ENGLISH LITERATURE.—A continuation of course 12. In this course selections from English novelists are read critically, in order to determine the characteristic qualities of each. At least one entire work of a selected author is carefully studied. *Three hours a week.* Spring term. PROFESSOR ESTABROOKE.

Eh 14. AMERICAN POETS.—This course is designed to make the student acquainted with the more important American poets, especially with Poe, Bryant, Longfellow, Emerson, and Lowell. The text-book is Bronson's American Literature. *Three hours a week.* Given in the spring term of odd years. PROFESSOR ESTABROOKE.

Eh 15. VICTORIAN POETS.—Tennyson, Browning, Rossetti, and Arnold. A study of selected poems, together with readings in the works of these poets and of contemporary poets. *Three hours a week.* Fall term. PROFESSOR ESTABROOKE.

Eh 17. FORENSIC WRITING.—A course in the principles of written argumentation with a view to spoken debate. Lectures

and written work. Open only to those who have taken courses 3 and 4, or an equivalent. *Two hours a week.* Fall term. MR. EDSON.

Eh 18. ORAL DEBATE.—A course in application of the principles of argumentation to spoken debate. Lectures and class room work. Open only to tnose who have taken course 17, or an equivalent. This course is not given unless elected by at least eight students. *Two hours a week.* Spring term. MR. EDSON.

Courses 17 and 18 may be substituted for courses 1 and 2.

Eh 19. FORMS OF ENGLISH POETRY.—The study of the foot, the line, the stanza; the ballad, the sonnet, the ode, the epic, the metrical romance, etc. *Two hours a week.* Fall term. PROFESSOR ESTABROOKE.

Eh 20. ENGLISH ROMANTIC POETS.—A general view of the English Romantic Movement, with a study of selected poems from the writings of Thomson, Collins, Gray, Goldsmith, Cowper, Burns, Wordsworth, Coleridge, Scott, Byron, Shelley, and Keats. *One hour a week.* Fall term. MR. THOMPSON.

Eh 21. ENGLISH ROMANTIC POETS.—A continuation of course 20. *One hour a week.* Spring term. MR. THOMPSON.

FORESTRY

PROFESSOR SPRING; MR. CUMMINGS.

Fy 1. GENERAL FORESTRY.—The importance and scope of the subject; direct and indirect value of the forest; relation of the forest to the State; relation of forestry to the other sciences, and of the individual branches of forestry to each other; forestry in the United States. *Three hours a week.* Spring term. PROFESSOR SPRING.

Fy 2. FOREST BOTANY.—A study of the morphology and functions of the organs of trees; the development of the tissues of woody plants; a systematic account of the trees of the United States, with special reference to those of commercial value.

Open to those who have taken Bl 21 and 22; to be taken in connection with course 4. *Two hours a week.* Fall term. PROFESSOR SPRING; MR. CUMMINGS.

Fy 3. FOREST BOTANY.—A continuation of course 2. To be taken in connection with course 5. *Two hours a week.* Spring term. PROFESSOR SPRING; MR. CUMMINGS.

Fy 4. FOREST BOTANY, FIELD AND LABORATORY WORK.—Excursions to identify and classify the trees and principal shrubs about Orono. Microscopic work in the study of structure and development of the organs of trees. †*Four hours a week.* Fall term. PROFESSOR SPRING; MR. CUMMINGS.

Fy 5. FOREST BOTANY, FIELD AND LABORATORY WORK.—A continuation of course 4. †*Four hours a week.* Spring term. PROFESSOR SPRING; MR. CUMMINGS.

Fy 6. SILVICULTURE.—A study of the facts which concern forest growth in the relation of the tree to external influences; characteristics of the forest, and of the forest regions of the United States; systems of reproducing forests naturally; thinnings and improvement cuttings. To be taken in connection with course 8. Open to those who have taken courses 2, 3, 4 and 5. *Two hours a week.* Fall term. PROFESSOR SPRING.

Fy 7. SILVICULTURE.—A continuation of course 6. To be taken in connection with course 9. *Two hours a week.* Spring term. PROFESSOR SPRING.

Fy 8. SILVICULTURE, FIELD WORK.—Special studies and practical work in the forest. †*Eight hours a week the first half of the fall term.* PROFESSOR SPRING.

Fy 9. SILVICULTURE, FIELD WORK.—A continuation of course 8. †*Eight hours a week, the last half of the spring term.* PROFESSOR SPRING.

Fy 10. FOREST MEASUREMENTS.—The determination of the contents of felled and standing trees and of the whole forest on a tract; methods of measurement in use in the United States;

calculation of rate of growth; construction of volume and yield tables. To be taken in connection with course 11. *Two hours a week.* Fall term. Open to those who have taken Ms 1, 2 and 4. PROFESSOR SPRING.

Fy 11. FOREST MEASUREMENTS, FIELD WORK.—Practice in taking measurements, and office work in computing the results. † *Four hours a week.* Fall term. PROFESSOR SPRING.

Fy 12. LUMBERING.—The industry considered from an economic standpoint; an account of the methods of lumbering in the different parts of the United States. In connection with this course the student is expected to spend two weeks in a lumber camp and prepare a written report on the operations of lumbering in that locality. *One hour a week.* Fall term. One-half credit is allowed for the time spent in the lumber camp and in preparing the report. Open to students taking forestry as a major subject. PROFESSOR SPRING.

Fy 13. FOREST MANAGEMENT.—Financial and economic considerations; the normal forest; principles and preparation of working plans. *Two hours a week, the first half of spring term.* Open to those who have taken courses 6, 7, 8, 9, 10 and 11. PROFESSOR SPRING.

Fy 13. THESIS WORK.—The preparation of a thesis in forest management. † *Ten hours a week.* Spring term. PROFESSOR SPRING.

GERMAN

PROFESSOR LEWIS; MR. SHUTE.

Gm 1. GERMAN.—Elementary course. Lange, German Method; Joynes-Meissner Grammer; Bierwirth, Beginner's German; Storm, Immensee; Heyse, Das Mädchen von Treppi; Gerstäcker, Germelshausen; Campe, Robinson der Jüngere; Schiller, Wilhelm Tell. Stereopticon lectures on European life and customs. *Five hours a week.* Fall term. PROFESSOR LEWIS; MR. SHUTE.

Gm 2. GERMAN.—A continuation of course 1. *Five hours a week.* Spring term. PROFESSOR LEWIS; MR. SHUTE.

Gm 3a. GERMAN.—Lessing, Minna von Barnhelm; Goethe, Hermann und Dorothea; Sudermann, Frau Sorge; Gore, Science Reader. Review of gramatical principles; Harris, German Composition. *Three hours a week.* Fall term. PROFESSOR LEWIS; MR. SHUTE.

Gm 3b. GERMAN.—A continuation of course 3a. *Two hours a week.* Spring term. PROFESSOR LEWIS; MR. SHUTE.

Gm 4a. GERMAN.—Schiller, Wallenstein; Goethe, Egmont; Lessing, Nathan der Weise; lectures; outside reading; themes. *Three hours a week.* Fall term. PROFESSOR LEWIS.

Gm 4b. GERMAN.—Goethe, Faust, Part I; lectures, themes, reference readings. *Three hours a week.* Spring term. PROFESSOR LEWIS.

Gm 5a. GERMAN.—History of German literature. Kluge, Deutsche National Litteratur. Lectures, recitations, themes in English and German; collateral reading. *Three hours a week.* Fall term. PROFESSOR LEWIS.

Gm 5b. GERMAN.—A continuation of course 5a. The extended study of a particular epoch. *Three hours a week.* Spring term. PROFESSOR LEWIS.

Gm 6a. GERMAN.—Composition and conversation. Open to students that have completed courses 1 and 2, or their equivalents. *Two hours a week.* Fall term. PROFESSOR LEWIS.

Gm 6b. GERMAN.—Composition and conversation. A continuation of course 6a. *Two hours a week.* Spring term. PROFESSOR LEWIS.

Gm 7a. GERMAN.—Advanced composition, rapid sight reading and conversation. *Two hours a week.* Fall term. PROFESSOR LEWIS.

Gm 7b. GERMAN.—A continuation of course 7a. *Two hours a week.* Spring term. PROFESSOR LEWIS.

At 5. HISTORY OF THE DRAMA.—A lecture course, with required collateral reading, themes, discussions. *Two hours a week.* Spring term. PROFESSOR LEWIS.

At 6. CONTEMPORARY GERMANY.—A lecture course, with frequent use of the stereopticon. Collateral reading, themes, discussions. *One hour a week.* Spring term. PROFESSOR LEWIS.

GREEK

PROFESSOR HUDDILSTON.

Gk 1. XENOPHON.—Hellenica, Books I-IV. Study of syntax, and daily exercises in writing Greek. *Four hours a week.* Fall term.

Gk 2. HOMER.—Odyssey, Books VI-XII. The reading of the remaining books, in English translation, is required. Assigned readings on the history of Greek poetry, "the Homeric question," and Homeric antiquities. *Four hours a week.* Spring term.

Gk 3. ATTIC ORATORS.—Some of the shorter orations of Demosthenes; selections from the minor Attic orators; parallel reading on the history of Greek prose literature, and the public economy and social life of Athens. *Two hours a week.* Fall term.

Gk 4. GREEK TRAGEDY.—Euripides's Medea and Sophocles's Antigone. The reading of several other plays in English translation is required; also, parallel reading on the history of the Greek tragic drama. *Three hours a week.* Spring term.

Gk 5. THUCYDIDES.—Book I. Assigned reading in Herodotus, and a comparative study of the three great historians of Greece. *Three hours a week.* Fall term. Open to students that have taken courses 1 and 3.

Gk 6. ARISTOPHANES.—The Clouds and the Knights; lectures and collateral reading on the development of Greek comedy. *Two hours a week.* Spring term. Open to students that have taken courses 2 and 4.

Gk 7. PLATO.—Selected dialogues. Lectures on the history of Greek philosophy with special reference to Plato and Aristotle. *Two hours a week.* Fall term. Open to students that have taken courses 3 and 5.

Gk 8. PINDAR.—The Olympian and Pythian Odes; supplementary reading on the history of Greek lyric poetry. *Two hours a week.* Spring term.

Gk 9. GREEK SCULPTURE.—Lectures, illustrated by photographs and lantern slides. This course does not presuppose a knowledge of Greek, but is intended to serve as a general introduction to the history of the fine arts. The interdependence of the arts and their relation to the life of the Greeks, as well as their relation to the world's subsequent art, are emphasized. *Two hours a week.* Given in the fall term of odd years.

Gk 10. GREEK SCULPTURE.—A continuation of course 9, including a study of Greek architecture. *Two hours a week.* Given in the spring term of even years.

Gk 11. NEW TESTAMENT GREEK.—This course is intended for those who have no acquaintance with ancient languages, and, with course 12, is expected to give considerable facility in reading the narrative portions of the Greek Testament. It is open to all students. *Three hours a week.* Given in the fall term of even years.

Gk 12. NEW TESTAMENT GREEK.—A continuation of course 11. Reading of the Gospels of John and Matthew; syntax. *Three hours a week.* Given in the spring term of odd years.

Gk 13. GREEK PRIVATE LIFE.—Lectures, illustrated with lantern slides and photographs. Assigned reading. *Two hours a week.* Given in the fall term of even years.

Gk 14. GREEK RELIGION.—A study of the chief divinities in ancient Greek religion. Lectures and assigned reading. Investigation of special topics by members of the class. *Two hours a week.* Given in the spring term of odd years.

Gk 15. GREEK PROSE COMPOSITION.—A course in writing Greek, intended to continue the work begun in Gk 1. *One hour a week.* Spring term.

Gk 18. GREEK PROSE COMPOSITION.—An advanced course consisting of the translation into Greek of narrative and rhetorical passages. *One hour a week.* Fall term.

Gk 19. GREEK PROSE COMPOSITION.—A continuation of course 18. *One hour a week.* Spring term.

For the accommodation of those students who have not presented Greek for entrance to college the two following courses in elementary Greek are offered.

Gk 20. ELEMENTARY GREEK.—The declensions, conjugations; Xenophon's Anabasis, Books I-II, and daily writing of composition in Greek based on the text. *Five hours a week.* Fall term.

Gk 21. XENOPHON AND HOMER.—Anabasis, Books III-IV; sight reading in Attic prose; selections from Homer's Iliad. *Five hours a week.* Spring term.

At 1. ITALIAN ART.—The revival of the fine arts in Italy, with special reference to the history of painting in Tuscany and

Umbria during the early Renaissance. Lectures and collateral reading. The work is illustrated by a large and growing collection of photographs and casts. *One hour a week.* Given in the fall term of even years.

At 2. ITALIAN ART.—A continuation of course 1, dealing chiefly with the masters of the high Renaissance in Florence and Rome. *One hour a week.* Given in the spring term of odd years.

At 3. ITALIAN ART.—Painting in the north of Italy, and the culmination of the Italian Renaissance in the Venetian masters. Lectures and collateral reading. *One hour a week.* Given in the fall term of odd years.

At 4. ITALIAN ART.—A continuation of course 3. *One hour a week.* Given in the spring term of even years.

HISTORY

PROFESSOR FELLOWS; ASSISTANT PROFESSOR COLVIN.

H 1. HISTORY OF THE UNITED STATES.—The period from the close of the Revolution to the Civil War. Formation of the constitution, and rise of political parties; growth of nationality; foreign relations; conflict between states and federal government; territorial expansion; question of nullification; the slavery struggle. *Three hours a week.* Fall term. PROFESSOR COLVIN.

H 2. HISTORY OF THE UNITED STATES.—A continuation of course 1. The constitution during the Civil War; foreign relations and questions of international law; theories, and actual process of reconstruction; results of the war; new problems. *Three hours a week.* Spring term. PROFESSOR COLVIN.

H 3. HISTORY OF ENGLAND.—From early times to the beginning of the Tudor period. Special attention is given to constitutional development. *Two hours a week.* Fall term. PROFESSOR COLVIN

H 4. HISTORY OF ENGLAND.—From the beginning of the Tudor period to the present. *Three hours a week.* Spring term. PROFESSOR COLVIN.

H 5. INDUSTRIAL AND SOCIAL HISTORY OF ENGLAND.—The rural manor, town guilds and foreign trading; Black Death and Peasants' Rebellion; breaking up of the medieval system; expansion of England; industrial revolution; government control; extension of voluntary association. *Two hours a week.* Given in the fall term of even years. PROFESSOR COLVIN.

H 6. EUROPE IN THE NINETEENTH CENTURY.—A general course emphasizing social and industrial conditions. *Two hours a week.* Given in the spring term of odd years. PROFESSOR FELLOWS.

H 7. MEDIEVAL HISTORY.—A general course covering the period from 395 to 1500 A. D. The disintegration of the Roman Empire; ecclesiastical institutions; feudalism; struggle between the papacy and the empire; rise of modern nations. *Three hours a week.* Fall term. PROFESSOR COLVIN.

H 8. MODERN HISTORY.—An introductory course covering the period from 1500 A. D. to the present time. A rapid survey of the Reformation, the absolute monarchy in France, the French Revolution, the Napoleonic era, and Europe in the nineteenth century. *Three hours a week.* Spring term. PROFESSOR COLVIN.

H 9. HISTORY OF MODERN CONTINENTAL EUROPE.—The period from the peace of Utrecht to the fall of Napoleon I. *Three hours a week.* Fall term. PROFESSOR COLVIN. Open to students that have taken courses 7 and 8.

H 10. HISTORY OF MODERN CONTINENTAL EUROPE.—The period since the fall of Napoleon I. *Two hours a week.* Spring term. PROFESSOR COLVIN. Open to students that have taken course 9.

H 11. THE RENAISSANCE AND THE REFORMATION.—The period from 1300 to 1648 A. D. *Two hours a week.* Fall term. PROFESSOR COLVIN. Open to students that have taken courses 7 and 8.

H 12. THE RENAISSANCE AND THE REFORMATION.—A continuation of course 11. *Two hours a week.* Spring term. PROFESSOR COLVIN.

HORTICULTURE

PROFESSOR MUNSON.

Ht 1. GENERAL HORTICULTURE.—A discussion of the general principles underlying the culture of domesticated plants. Lectures. *Two hours a week.* Spring term.

Ht 2. PRINCIPLES OF FRUIT GROWING.—A study of conditions and of methods of culture of orchards and small fruits. Lectures and text-book. *Two hours a week.* Fall term.

Ht 3. LABORATORY HORTICULTURE.—Practical work in orchard and gardens supplementing course 2. † *Two hours a week.* Fall term.

Ht 4. GENERAL AND ORNAMENTAL GARDENING.—The culture of garden vegetables in the field and under glass; market and home gardening; propagation of plants; the principles of landscape art and their application to rural conditions; rural school grounds and cemeteries; plans for improving home grounds. *Three hours a week.* Spring term.

Ht 5. HANDICRAFT.—Practical work in green-houses, gardens, and orchards, with familiar talks. † *Four hours a week.* Spring term.

Ht 6. SYSTEMATIC POMOLOGY.—Lectures and critical studies of the leading natural groups of fruits. Open to students who have taken Bl 21, and Ht 2. *One hour a week.* Fall term.

Ht 7. THE LITERATURE OF HORTICULTURE.—A study of the literature of gardens and of cultivated plants, with reviews of current periodicals. Open to juniors and seniors. *One hour a week.* Spring term.

Ht 8. THE EVOLUTION OF CULTIVATED PLANTS.—The origin, distribution and variation of cultivated plants, and a discussion of the current hypotheses of organic evolution as applied to their modification; studies in heredity, and the improvement of types. Open to juniors and seniors. *Two hours a week.* Fall term.

Ht 9.—HORTICULTURAL INVESTIGATIONS.—Advanced work for those desiring to become teachers or investigators. Open to seniors or to graduate students. *Time to be arranged.*

LATIN

PROFESSOR HARRINGTON.

Lt 1. LIVY AND CICERO.—Livy, History of Rome, selections from Books XXI and XXII; Cicero, De Senectute; Latin composition based upon the authors read. *Four hours a week.* Fall term.

Lt 2. HORACE.—Selections from the Satires, Epistles, Epodes and Odes; classical mythology. *Four hours a week.* Spring term.

Courses 1 and 2 are required of freshmen in the Classical Course.

Lt 3. PLAUTUS AND TERENCE.—The Captivi, Trinummus, or Menæchmi of Plautus; the Andria, Adelphœ, or Phormio of Terence; lectures on the development of Roman comedy. *Three hours a week.* Fall term.

Lt 4. CICERO AND TACITUS.—Selected letters of Cicero, the Agricola and Germania of Tacitus. *Three hours a week.* Spring term.

Lt 5. PLINY AND TACITUS.—Selected letters of Pliny the younger; readings in the Annals of Tacitus; studies in Silver Latinity. *Two hours a week.* Given in the fall term of odd years. Open to students that have taken courses 1-4.

Lt 6. ROMAN LYRIC POETRY.—Selections from Catullus, Horace, and the Latin hymns of the Christian church; original research. *Two hours a week.* Given in the spring term of even years. Open to students that have taken courses 1-4.

Lt 7. THE ROMAN ELEGIAC POETS.—Selections from Catullus, Tibullus, Propertius, and Ovid; original research. *Two hours a week.* Given in the fall term of even years. Open to students that have taken courses 1-4.

Lt 8. THE ROMAN ELEGIAC POETS.—A continuation of course 7. *Two hours a week.* Given in the spring term of odd years.

Lt 9. ROMAN SATIRE.—Selections from Ennius, Lucilius, Varro, Horace, Persius, Juvenal, Petronius; original research. *Two hours a week.* Given in the fall term of odd years. Open to students that have taken, or are taking, courses 5-6, or 7-8.

Lt 10. ROMAN SATIRE.—A continuation of course 9. *Two hours a week.* Given in the spring term of even years.

Lt 11. ROMAN PHILOSOPHY.—Lucretius (selections); Cicero (selections from the Academica, De Officiis, Tusculanæ Disputationes, De Finibus, De Natura Deorum); Seneca (De Providentia, De Vita Beata); lectures on the history and development of ancient philosophy; original research. *Two hours a week.* Given in the fall term of even years. Open to students that have taken, or are taking, courses 5-6 or 7-8.

Lt 12. ROMAN PHILOSOPHY.—A continuation of course 11. *Two hours a week.* Given in the spring term of odd years.

Lt 13. ROMAN LITERATURE.—General introduction to the subject; illustrative class-room readings; a choice of one of six courses of collateral reading of Roman authors. *Three hours a week.* Given in the fall term of even years. Open to students that have taken courses 1-4.

Lt 14. ROMAN LITERATURE.—A continuation of course 13. *Three hours a week.* Given in the spring term of odd years.

Lt 15. ROMAN RHETORIC AND ORATORY.—Quintilian (selections from the Institutio Oratoria); Tacitus (Dialogus de Oratoribus); Cicero (selections from the Brutus, De Oratore, Orator); a study of sample orations of Cicero, and of some of the fragments of Roman oratory. *Two hours a week.* Given in the fall term of odd years. Open to students that have taken courses 1-4.

Lt 16. ROMAN RHETORIC AND ORATORY.—A continuation of course 15. *Two hours a week.* Given in the spring term of even years.

Lt 17a. ROMAN TOPOGRAPHY.—Lectures on the development of the city of Rome and the present condition of its ancient ruins, preceded by a glance at the geography of the Italian peninsula. Illustrated by maps, photographs, and stereopticon views. *One hour a week.* Given in the fall term of odd years. Open to students that have taken courses 1-4.

Lt 17b. ROMAN TOPOGRAPHY.—A continuation of course 17a. *One hour a week.* Given in the spring term of even years.

Lt 18. ROMAN PRIVATE LIFE.—Text-book work, supplemented by collateral reading and lectures upon some of the more important and interesting customs and institutions of Roman everyday life. *One hour a week.* Given in the fall term of odd years. Open to students that have taken courses 1-4.

Lt 19a. LATIN WRITING.—Exercises in the translation of English into Latin with special reference to style. *One hour a week.* Given in the fall term of even years. Open to students that have taken courses 1-4.

Lt 19b. LATIN WRITING.—A continuation of course 19a. *One hour a week.* Given in the spring term of odd years.

Lt 20. ROMAN EPIGRAPHY.—The principles of the science, and the interpretation of selected inscriptions. *One hour a week.* Given in the spring term of even years. Open to students that have taken courses 1-4.

Lt 21. RAPID READING OF LATIN.—Practice in reading without translation. Selections from various authors. Especially adapted for students expecting to teach the language. *One hour a week.* Spring term. Open only to students whose major subject is Latin.

MATHEMATICS AND ASTRONOMY

PROFESSOR HART; MR. BUCK; MR. WILLARD; MR. MORLEY.

Ms 1. SOLID GEOMETRY.—Solid and spherical geometry, including original demonstrations and the solution of numerical problems.

The text-book is Wells' Solid Geometry. *Five hours a week for ten weeks.* Spring term. MR. BUCK; MR. MORLEY. Required of all freshmen in the B. A. course.

Ms 2. ALGEBRA.—A brief review of the theory of exponents, quadratic equations, the binomial theorem, and the progressions; indeterminate equations; logarithms, including practice in the solution of numerical exercises; undetermined coefficients; partial fractions; exponential and logarithmic series, and the computation of logarithms; permutations and combinations; theory of equations.

The text-book is Downey's Higher Algebra. *Five hours a week.* Fall term, first fourteen weeks. PROFESSOR HART; MR. WILLARD; MR. MORLEY.

Ms 4. PLANE TRIGONOMETRY.—The text-book is Crockett's Trigonometry. *Five hours a week.* Fall term, last four weeks; spring term, first eight weeks. PROFESSOR HART; MR. WILLARD; MR. MORLEY.

Courses 2, 4, and either 1, 19, or 6a are required of all candidates for the Bachelor's degree.

Ms 5. ANALYTIC GEOMETRY.—A brief study of the point, right line, and conic sections. For students in other than engineering courses who do not intend to elect mathematics beyond course 7. Open to students that have taken courses 2 and 4.

The text-book is Wentworth's Analytic Geometry. *Two hours a week.* Fall term. MR. BUCK.

Ms 6a. ANALYTIC GEOMETRY.—A study of the point, line, and circle. Open to students that have taken courses 1, 2 and 4.

The text-book is Ashton's Analytic Geometry. *Five hours a week.* Spring term, last ten weeks. PROFESSOR HART; MR. WILLARD; MR. MORLEY.

Ms 6b. ANALYTIC GEOMETRY.—A continuation of course 6a. Conic sections; elements of solid analytic geometry. *Five hours a week.* Fall term, first eight weeks. PROFESSOR HART; MR. BUCK; MR. WILLARD.

Ms 7. CALCULUS.—Differentiation of the elementary forms of algebraic and transcendental functions; successive differentiation; differentials; integration of the elementary forms; integration between limits. Open to students that have taken courses 1, 2, 4, and either 5, or 6a and 6b.

The text-book is Murray's Infinitesimal Calculus. *Five hours a week.* Fall term, last ten weeks. PROFESSOR HART; MR. BUCK; MR. WILLARD.

Ms 8. CALCULUS.—A continuation of course 7. Integration as a summation; various methods of integration. Applications of differential and integral calculus. *Five hours a week.* Spring term. PROFESSOR HART; MR. BUCK; MR. WILLARD.

Ms 9. DESCRIPTIVE ASTRONOMY.—The text-book is supplemented by informal lectures, and illustrated by lantern slides, the Trouvelot drawings of celestial objects, and work in the observatory. Open to students that have taken courses 1, 2 4, and, preferably, Ps 1 and Ps 5.

The text-book is Young's Manual of Astronomy. *Three hours a week.* Fall term. MR. BUCK.

Ms 10. PRACTICAL ASTRONOMY.—A course arranged to meet the needs of engineering students, and consisting mainly of problems in the conversion of time, the determination of terrestrial latitudes and longitudes, and the establishment of meridian lines. The data for these problems are taken largely from the

students' own observations, and the course is intended to emphasize the necessity of careful work in the field, as well as accurate and well arranged computations. The instruments employed are the sextant, artificial horizon, portable chronometer, theodolite, and vertical circle. Open to students that have taken courses 9, 4 and 19. *Two hours of recitations or lectures and two hours of observatory work a week.* Spring term. PROFESSOR HART.

Ms 11. ADVANCED ALGEBRA.—Determinants and the solution of higher equations. Open to students that have taken courses 1, 2 and 4. *Three hours a week.* Spring term. MR. BUCK.

Ms 12. ADVANCED INTEGRAL CALCULUS.—A course based upon Byerly's Integral Calculus. Open to students that have taken courses 6, 7 and 8. *Three hours a week.* Given in the fall term of odd years. PROFESSOR HART.

Ms 13. ADVANCED INTEGRAL CALCULUS.—A continuation of course 12. *Two hours a week.* Given in the spring term of even years. PROFESSOR HART.

Ms 15. DIFFERENTIAL EQUATIONS.—The text-book is Murray's Differential Equations. Open to students that have taken courses 7 and 8. *Two hours a week.* Given in the spring term of odd years. PROFESSOR HART.

Ms 16. PRACTICAL ASTRONOMY.—The theory and use of the sextant, universal instrument, transit, and equatorial. Open to students that have taken courses 6, 7, 8, 9, 19, and, preferably, 10. *Three hours a week.* Given in the fall term of odd years. PROFESSOR HART.

Ms 17. PRACTICAL ASTRONOMY.—A continuation of course 16. *Three hours a week.* Given in the spring term of even years. PROFESSOR HART.

Ms 19. SPHERICAL TRIGONOMETRY.—A continuation of course 4, with additional problems and applications to spherical astronomy. *Two hours a week.* Fall term. MR. MORLEY.

Ms 20. SOLID ANALYTIC GEOMETRY.—Lectures based on C. Smith's Solid Geometry. *Three hours a week.* Given in the fall term of even years. PROFESSOR HART.

MECHANICAL ENGINEERING.

PROFESSOR WALKER; MR. JEWETT; MR. COLE.

Me 1. WOOD WORK.—The care and use of tools; joinery; wood turning; pattern making. Charge for material, $4.00. † *Four hours a week.* Fall term.

Me 2. FORGE WORK.—Forging; welding; tool dressing. A set of lathe tools and cold chisels for use in machine work is made by each student. Charge for material, $5.00. Cost of hammer, calipers and scale, about $2.50. The text-book used is Bacon's Forge Practice. † *Four hours a week.* Spring term.

Me 3. DRAWING.—Reading and tracing detail drawings and penciling simple details. Especial attention is given to lettering. † *Two hours a week.* Fall term. MR. JEWETT.

Me 4. KINEMATICS.—Motion in machine construction; links; gears; cams; belts. The text-book is Jones's Kinematics. †*Six hours a week.* Spring term. MR. JEWETT.

Me 5. MACHINE WORK.—Exercises in filing and chipping; lathe work; exercises on planer, shaper and milling-machine; making of cut gears, machinist taps, etc. Charge for materials, $5.00 per term. Credit is given for work done in commercial shops on presentation of satisfactory proof. †*Nine hours a week* during the fall term and † *seven hours a week* during the spring term *for Mechanical Engineering students.* †*Four hours a week* throughout the year *for Electrical Engineering students.* MR. COLE.

Me 6. FOUNDRY WORK.—Moulding; pouring, etc. Work is assigned in connection with Me 5. MR. COLE.

Me 7. VALVE GEARS.—The steam engine valve motion, discussed by means of the Bilgram Diagram, with solution of practical problems in the drawing room. The text-book is Halsey's Valve Gears. †*Four hours a week.* Fall term. PROFESSOR WALKER.

Me 8. MACHINE DESIGN.—(a) Proportioning machine parts for strength with special reference to the steam engine; laying out work and crank effort diagrams; fly wheel design. The text-book is Jones's Machine Design, Part II. *Three hours a week.* Spring term. MR. COLE. (b) Designing as assigned to accompany course (a). †*Two hours a week.* Spring term. PROFESSOR WALKER.

Me 9. MATERIALS OF ENGINEERING.—Metallurgy of iron, steel, copper and the principal alloys. Physical properties of materials discussed and investigated by tests. The text-book is Smith's Materials of Machines. *Two hours a week.* Fall term. MR. COLE.

Me 10. FUELS.—Heating value, supply and distribution of various fuels; types of furnaces; methods of stoking. The text-book is Kent's Steam Boiler Economy. *Two hours a week.* Fall term. MR. JEWETT.

Me 11. STEAM ENGINEERING.—The fundamental principles underlying the development of steam power, including the methods of designing steam boilers and the Thermodynamics of gases and vapors. The work is taken up by use of notes with free use of Thurston's "Manual of the Steam Engine," Hutton's "Heat and Heat Engines," Spangler's "Steam Engineering," and Reeves' "Steam Tables," as references. *Three hours a week.* Fall term. PROFESSOR WALKER.

Me 12. STEAM BOILER DESIGN.—Complete design of some type of steam boiler, worked up in the drawing room. † *Six hours a week.* Fall term. PROFESSOR WALKER.

Me 13. HYDRAULIC MACHINERY.—Theory and design of turbine and other standard water wheels and water motors; practi-

cal problems in the drawing room on design of turbines. †*Four hours a week.* Fall term. PROFESSOR WALKER.

Me 14. MARINE MACHINERY.—A course of descriptive lectures on the types and processes of construction of machinery commonly seen on steamships. Taken by students specializing in Marine Engineering. *Two hours a week.* Fall term. PROFESSOR WALKER.

Me 15. MECHANICAL LABORATORY.—Testing materials, lubricants, steam boilers and engines, gasoline engines, etc. †*Three hours a week for juniors,* spring term. †*Four hours a week for seniors.* Fall and spring terms. PROFESSOR WALKER; MR. JEWETT.

Me 16. STEAM ENGINEERING.—A continuation of course 11, covering the methods of designing and testing steam engines. *Two hours a week.* Spring term. PROFESSOR WALKER.

Me 17. STEAM ENGINE DESIGN.—Detailed design of some type of steam engine, accompanying course 16. †*Twelve hours a week for nine weeks.* Spring term. PROFESSOR WALKER.

Me 18. STRUCTURES.—A study of steel building construction, and design of roof trusses by graphical methods of analysis. †*Four hours a week.* Spring term. MR. JEWETT.

Me 19. MARINE ENGINEERING.—The problem of ship propulsion and propeller design. Taken by students specializing in Marine Engineering. The text-book is Durand's Resistance and Propulsion of Ships. *Two hours a week.* Spring term. PROFESSOR WALKER.

Me 20. HEATING AND VENTILATION OF BUILDINGS.—A lecture course. *One hour a week.* Spring term. PROFESSOR WALKER.

Me 21. SEMINARY.—General discussion of leading articles appearing in current engineering literature. *One hour a week.* Fall and spring terms. PROFESSOR WALKER.

Me 22. THESIS.—The results of some investigation or design presented in proper form. The subject must be submitted at, or before, the close of the fall term. Students specializing in Marine Engineering submit their designs of steam machinery as a thesis. † *Twelve hours a week for nine weeks.* Spring term. PROFESSOR WALKER.

MECHANICS AND DRAWING

PROFESSOR WESTON; MR. GROVER; MR. JEWETT; MR. COLE.

Md 1. DRAWING.—Free-hand work in perspective and model drawing; lettering. † *Four hours a week.* Fall term. MR. GROVER.

Md 2. MECHANICAL DRAWING.—Instruction and practice in the care and use of drawing instruments, in the drawing of geometrical problems, and in the use of water colors. The text-book is Anthony's Mechanical Drawing. † *Four hours a week.* Spring term. MR. GROVER.

Md 3. DESCRIPTIVE GEOMETRY.—Elementary problems; tangents, intersection of planes, cylinders, cones, spheres, etc. The time is divided equally between the recitation room and drawing room. The text-book is Church's Descriptive Geomery. *Two hours a week.* Fall term. PROFESSOR WESTON; MR. GROVER; MR. COLE.

Md 4. DESCRIPTIVE GEOMETRY.—A continuation of course 3. *Two hours a week.* Spring term. PROFESSOR WESTON; MR. GROVER; MR. COLE.

Md 5. MECHANICS.—The principles of statics; the algebraic and graphic solution of statical problems, including simple trusses; exercises in finding the moment of inertia, center of gravity; the principles of dynamics, shearing force and bending moment. *Five hours a week.* Fall term. PROFESSOR WESTON; MR. JEWETT.

Md 6. MECHANICS.—A continuation of course 5. *Five hours a week.* Spring term. PROFESSOR WESTON; MR. JEWETT.

Md 7. ADVANCED MECHANICS.—General principles of kinematics, statics and kinetics; the mathematical theory of elasticity; the theory of the potential function, with applications to problems in gravitation, hydro-mechanics, etc. *Two hours a week.* Fall term. Elective for seniors whose major work is in engineering, mathematics or physics. PROFESSOR WESTON.

Md 8. ADVANCED MECHANICS.—A continuation of course 8. *Three hours a week.* Spring term. PROFESSOR WESTON.

MILITARY SCIENCE AND TACTICS

PROFESSOR SYMMONDS.

Mt. 1. MILITARY, FIRST YEAR'S COURSE.

(a) PRACTICAL:

1—U. S. Infantry Drill Regulations to include the School of the Battalion, Advance and Rear Guards, Outposts, Marches and Ceremonies.
2—Infantry Target Practice.
3—First Aid to the Injured.
4—Guard Duty.

(b) THEORETICAL:

1—U. S. Infantry Drill Regulations to include the School of the Company.
2—Manual of Guard Duty.
3—First Aid to the Injured.
4—Small Arms Firing Regulations.
5—Lectures on military subjects.

Required of all students, except as provided on p. 32. ***Five hours, or the equivalent, a week, counting one credit.***

Mt. 2. MILITARY, SECOND YEAR'S COURSE.

(a) PRACTICAL:

The same as course 1 (a).

(b) THEORETICAL:

1—U. S. Infantry Drill Regulations, School of the Battalion, Advance and Rear Guards, Outposts, Marches and Ceremonies.

2—Important Articles of War.

3—Records and Official Papers.

4—Lectures on Military subjects.

5—Small Arms Firing Regulations.

Open to all who have completed course 1. All will be non-commissioned officers. *Five hours, or the equivalent, a week, counting one credit.*

Mt 3. MILITARY, THIRD YEAR'S COURSE.

(a) PRACTICAL:

Duties consistent with rank in carrying out (a) in courses 1 and 2.

(b) THEORETICAL:

Assistant instructors over those taking course 1 (b).

Open to all who have completed course 2. All will be officers, or non-commissioned officers. *Five hours, or the equivalent, a week, counting one credit.*

Mt 4. MILITARY, FOURTH YEAR'S COURSE.

(a) PRACTICAL:

The same as for course 3 (a).

(b) THEORETICAL:

Assistant Instructors over those taking course 2 (b).

Open to all who have completed course 3. All will be officers. *Five hours, or the equivalent, a week, counting one credit.*

PHARMACY

PROFESSOR JACKSON.

Pm 1. ELEMENTARY PHARMACY.—The history of pharmacopœias, dispensatories, etc.; weights and measures, specific gravity, the pharmaceutical uses of heat, distillation, solution, filtration, etc.; official preparations; pharmaceutical problems, involving percentage solutions, parts by weight and measure,

chemical principles and equations, actual pharmacy operations. The text-book is Caspari's Pharmacy. *Five hours a week.* Fall term.

Pm 2. GALENICAL PHARMACY.—The chemical elements, official salts, and inorganic acids, their preparation and classification; organic compounds, their classification, official preparations; official drugs of the materia medica, their preparations, animal preparations; extemporaneous pharmacy, the principles of dispensing, store management, etc. The text-book is Caspari's Pharmacy. *Five hours a week.* Fall term.

Pm 3. LABORATORY PHARMACY.—Official preparations and tests. The operations of manufacturing pharmacy, including the preparation of granular and scale salts, infusions, syrups, tinctures, and other galenicals; official tests of chemicals, drugs, and preparations, for identity, strength and adulteration; drug assaying. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. †*Twelve hours a week.* Fall term.

Pm 4. PHARMACOPŒIA.—A complete review of the pharmacopœia, with special reference to the chemical and pharmaceutical principles involved in tests and preparations. The text-books are Caspari's Pharmacy and the U. S. Pharmacopœia. *Five hours a week.* Spring term.

Pm 5. INORGANIC PHARMACOGNOSY.—Nomenclature; practical exercises in the identification of specimens. The text-book is the U. S. Pharmacopœia. *Two hours a week.* Fall term.

Pm 6. ORGANIC PHARMACOGNOSY.—Nomenclature; habitat, etc.; practical exercises. The text-books are the U. S. Pharmacopœia and Maisch's Materia Medica. *Four hours a week.* Spring term.

Pm 7. MATERIA MEDICA.—Chemicals and drugs; their nature, uses, classification, therapeutic action, and doses; poisons, and antidotes. The text-book is Potter's Materia Medica. *Three hours a week.* Fall term.

Pm 9. PHARMACY READINGS.—Current pharmacy literature; research and reference readings; abstracting; reports. † *Five hours a week.* Spring term.

Pm 10. LABORATORY PHARMACY.—A continuation of course 3. † *Five hours a week.* Spring term.

Pm 11. PRESCRIPTIONS.—Critical examination of prescriptions from actual files, with reference to inelegance, and to physiological, pharmaceutical, and chemical incompatibility; doses; methods and order of compounding, etc. The text-book is Ruddiman's Incompatibilities in Prescriptions. *Three hours a week.* Spring term.

PHILOSOPHY

PROFESSOR FERNALD.

Pl 1. PSYCHOLOGY.—Among the topics considered are sensation, structure and functions of the brain, conditions of neural activity, consciousness, attention, conception, discrimination, association, memory, imagination, perception, reasoning, instinct, emotions and sentiments, will as volition, will as choice, and will in relation to character. The text-book is James's Psychology (Briefer Course). *Three hours a week.* Fall term.

Pl 2. LOGIC.—The object of this course is to give the student a just appreciation of the functions of language as a means of expressing thought, and a familiarity with the principles of deductive and inductive reasoning. The student is given frequent drills in the application of logical principles. The text-book is Ryland's Logic. *Three hours a week.* Spring term.

Pl 3. HISTORY OF PHILOSOPHY.—The text-book is Weber's History of Philosophy. *Three hours a week.* Given in the fall term of odd years.

Pl 4. PEDAGOGY.—The principles of psychology applied to the art of teaching. The order in which the several powers of the mind become active; their relative activity and development at successive school periods. The principles and methods of teach-

ing; oral instruction and the study of books; the recitation, its objects and methods; methods of testing, by questions, by topics; examinations; psychical facts applied to moral training. *Three hours a week.* Spring term. This course should be preceded by course 9.

Pl 5. COMPARATIVE PSYCHOLOGY.—The psychology of man and of the higher animals compared. A study of other minds than ours with reference to sense-experience, instinct and intelligence, association of ideas, memory, perception of relations, the power to reason, and the emotions. *Two hours a week.* Given in the spring term of even years. Open to juniors and seniors that have taken course 1.

Pl 6. ADVANCED PSYCHOLOGY.—Besides special topics in general psychology, this course is designed to include a discussion of such phenomena as sleep and dreams, the hypnotic state, thought transference, illusions and hallucinations. *Two hours a week.* Given in the spring term of odd years. Open to juniors and seniors that have taken course 1.

Pl 8. EXPERIMENTAL PSYCHOLOGY.—This course deals with mental processes from the standpoint of experimental study, and seeks to develop the power of introspection of these processes by modern evperimental methods. † *Two hours a week.* Fall or spring term; the same course is given each term. Open to students taking course 1, or that have taken course 1, to the limit of the psychological laboratory.

Pl 9. HISTORY OF EDUCATION.—Educational systems, methods, theories, and practices of the ancient oriental and classical nations, as also of the nations and peoples of medieval and modern times. A comparison of the school systems of the more advanced nations, especially of those of Germany, France, England, and the United States. The history of education aims to develop, for present and future service, an educational science based on the clear and definite teachings of the past. *Two hours a week.* Fall term. Open to juniors and seniors. Course 9 precedes course 4, in Pedagogy.

Pl 10. ADVANCED LABORATORY PSYCHOLOGY.—Experimental and research work. † *Two hours a week.* Spring term. Open to students that have taken course 8.

Pl 11. ETHICS.—Theoretical and practical ethics. A lecture course. *Two hours a week.* Given in the fall term of even years. Open to students that have taken course 1.

PHYSICS

PROFESSOR STEVENS; MR. WOODMAN; MR. BOWEN.

Ps 1. GENERAL PHYSICS.—Lectures on the dynamics of solids, liquids and gases; sound and light; experiments before the class; problems. *Five hours a week.* Fall term. PROFESSOR STEVENS; MR. WOODMAN.

Open to students that have taken Ms 4.

Ps 2. GENERAL PHYSICS.—A continuation of course 1; heat and electricity. *Five hours a week.* Spring term. PROFESSOR STEVENS; MR. WOODMAN.

Ps 3. ELEMENTARY PHYSICS.—A non-mathematical course, covering the ground of course 1. The recitations are supplemented by lectures and experimental demonstrations. The text-book is Hoadley's Brief Course in Physics. *Four hours a week.* Spring term. MR. BOWEN.

Ps 5. LABORATORY PHYSICS.—The subject usually included in an under-graduate course. Special attention is given to the reduction of observations, and the tabulation of results. †*Four hours a week.* Spring term. MR. WOODMAN; MR. BOWEN.

Open to students that have taken either course 1 or course 12.

Ps 6. LABORATORY PHYSICS.—A brief course for students in the short course in pharmacy. †*Two hours a week.* Spring term. MR. BOWEN.

Ps 7. OPTICS.—Lectures in continuation of course 1, based chiefly upon Preston's Light and Drude's Optics. *Three hours a week.* Spring term. PROFESSOR STEVENS.

Open to students that have taken Ms 8.

Ps 8. MATHEMATICAL PHYSICS.—A course in this subject is offered each year. This year a course in Nipher's Electricity and Magnetism is given. *Two hours a week.* Fall term. PROFESSOR STEVENS.

Open to students that have taken Ms 8.

Ps 9. MECHANICS AND HEAT.—Advanced laboratory work in continuation of course 5. † *Six hours a week.* Fall term. PROFESSOR STEVENS.

Ps 10. OPTICS.—Advanced laboratory work in continuation of course 5. † *Four hours a week.* Spring term. PROFESSOR STEVENS.

Ps 11. ELECTRICITY AND MAGNETISM.—Advanced laboratory work in continuation of course 5. The charge for this course is $2.50. † *Six hours a week.* Fall term. MR. WOODMAN; MR. BOWEN.

Ps 12. GENERAL PHYSICS.—A course covering the ground of course 1, with more attention to the experimental and historical aspects, and less to the mathematical. The text-book is Gage's Principles of Physics. *Five hours a week.* Fall term. MR. BOWEN.

Ps 14. THEORY OF ELECTRICAL INSTRUMENTS.—Lectures on the mathematical theory of instruments, and the methods of eliminating errors. *One hour a week.* Fall term. PROFESSOR STEVENS.

Ps 15. SPECIAL LABORATORY COURSE.—A course open to students that have completed courses 9, 10 and 11. A subject is assigned for original investigation, or the work of a published research is repeated. †*Four hours a week.* Fall term. PROFESSOR STEVENS.

Ps 16. SPECIAL LABORATORY COURSE.—A continuation of course 15. † *Six hours a week.* PROFESSOR STEVENS.

Ps 18. ELECTRICITY AND OPTICS.—Advanced laboratory work in continuation of course 5. † *Four hours a week.* Fall term. MR. BOWEN.

ROMANCE LANGUAGES

PROFESSOR SEGALL; MR. SHUTE.

Rm 1. FRENCH.—Elementary Course, Chardenal, Complete French Course, François and Giroud, Simple French. Labiche, Voyage de M. Perrichon; Moi; La Poudre aux Yeux; Les Petits Oiseaux; La Grammaire; La Lettre Chargée; La Cigale chez les Fourmis; La Cagnotte. Mme. Émile de Girardin, La Joie Fait Peur. About, Le Roi des Montagnes; De Vigny, Cinq-Mars. *Five hours a week.* Fall term. MR. SHUTE.

Rm 2. FRENCH.—A continuation of course 1. *Five hours a week.* Spring term. MR. SHUTE.

Rm 3a. FRENCH.—For students that have taken courses 1 and 2, or their equivalent. Fraiser and Squair's Grammar. Loti, Pêcheur d' Islande, Angier, Le Gendre de M. Poirier. Sandeau, Mlle. de la Seiglière. Pailleron, Le Monde où l'on s' ennuie. Daudet, Le Petit Chose. About, La Mère de la Marquise; L' Hommer à l'Oreille cassée. Hugo, Quatre-vingt-treize; La Chûte. Balzac, Le Père Goriot. Franc, Le Crime de Silvestre Bonnard. *Three hours a week.* Fall term. PROFESSOR SEGALL; MR. SHUTE.

Rm 3b. FRENCH.—A continuation of course 3a. *Two hours a week.* Spring term. PROFESSOR SEGALL; MR. SHUTE.

Rm 4a. FRENCH.—Corneille, Horace. Racine, Andromaque. Molière, Le Bourgeois Gentilhomme; L'Avare; Les Femmes Savantes; Tartuffe; Le Misanthrope. La Bruyère, Les Caractères. Beamarchais, Le Barbier de Séville; Le Mariage de Figaro. Taine, Introduction à l'Histoire de la Litt. Anglaise;

Les Origines de la France Contemporaine (extracts). Hugo, Ruy-Blas. Musset, Comédies. Rostand, Cyrano de Bergerac. *Three hours a week.* Fall term. PROFESSOR SEGALL.

Rm 4b. FRENCH.—A continuation of course 4a. *Three hours a week.* Spring term. PROFESSOR SEGALL.

Rm 5a. FRENCH.—Course in Conversation and Composition. Snow and Lebon, Easy French. François, Prose Composition, Introductory Course; Advanced Course. Kron-Rippmann, French Daily Life. *Two hours a week.* Fall term. PROFESSOR SEGALL.

Rm 5b. FRENCH.—A continuation of course 5a. *Two hours a week.* Spring term. PROFESSOR SEGALL.

Rm 6a. FRENCH.—The history of the literature of the nineteenth century. This course will be conducted entirely in French. *One hour a week.* Fall term. PROFESSOR SEGALL.

Rm 6b. FRENCH.—A continuation of course 6b. *One hour a week.* Spring term. PROFESSOR SEGALL.

Rm 9a. SPANISH.—Elementary Course. Loiseaux, Grammar. Hills and Ford, Grammar. Matzke, First Spanish Readings. Padre Isla's Gil Blas. Alarcón, El Capitán Veneno. Manuel Bretón de los Herreros, La Independencia. Mariano José de Larra, Partir á Tiempo. *Three hours a week.* Fall term. PROFESSOR SEGALL.

Rm 9b. SPANISH.—A continuation of course 9a. *Three hours a week.* Spring term. PROFESSOR SEGALL.

Rm 10a. SPANISH.—For students that have taken course 9. Loiseaux, Spanish Composition. Hills and Ford, Grammar. Miguel Ramos Carrión and Vital Aza, Zaragüeta. Galdós. Marianela. Valdés, José, Echegaray, Ó'Locura ó Santidad. Moratín, El Sí de las Niñas. Cervantes, Don Quixote. *Two hours a week.* Fall term. PROFESSOR SEGALL.

Rm 10b. SPANISH.—A continuation of course 10a. *Two hours a week.* Spring term. PROFESSOR SEGALL.

Rm 11a. ITALIAN.—An elementary course, elective for students that have completed course 2. Grandgent, Italian Grammar. Bowen, First Italian Readings. *Three hours a week.* Given in the fall term of odd years. PROFESSOR HUDDILSTON.

Rm 11b. ITALIAN.—A continuation of course 11a. Grandgent, Italian Composition. Goldoni, La Locandiera. De Amicis, Cuore. Manzoni, I Promessi Sposi. *Three hours a week.* Given in the spring term of even years. PROFESSOR HUDDILSTON.

ORGANIZATION OF THE UNIVERSITY

The University is divided into colleges, each offering several courses upon related subjects. The colleges are interdependent and together form a unit. The organization is as follows:

COLLEGE OF LIBERAL ARTS

- The Classical Course
- The Scientific Course

COLLEGE OF AGRICULTURE

- The Agricultural Course
- The Horticultural Course
- The Extension Courses
- The Agricultural Experiment Station

COLLEGE OF TECHNOLOGY

- The Chemical Course
- The Civil Engineering Course
- The Mechanical Engineering Course
- The Electrical Engineering Course
- The Mining Engineering Course
- The Forestry Course

COLLEGE OF PHARMACY

- The Pharmacy Course
- The Short Course in Pharmacy

COLLEGE OF LAW

COLLEGE OF LIBERAL ARTS

The aim of this college is to furnish a liberal education, and to afford opportunity for specialization along literary, philosophical, and general and special scientific lines. The college comprises:

The Classical Course

The Scientific Course

REQUIREMENTS FOR GRADUATION

Candidates for graduation are required to complete a four-years course of study by securing at least twenty-five credits. The credits are distributed as follows:

REQUIRED WORK.—1. English, one year, five hours a week, or the equivalent divided between two years.

2. Mathematics, one year, five hours a week.

3. Science (Chemistry, Physics, Botany, or Biology), one year, five hours a week, of which time an important part must be occupied with laboratory work.

4. Language (Greek, Latin, German, French), the equivalent of one year, five hours a week. A student beginning German or French must receive at least two credits in the subject to count it towards a degree.

5. Military Science and Tactics, one year, five hours a week.

MAJOR SUBJECT.—Each student must select, in some one department, work to be pursued three or four years, five recitations a week. In many cases the selection of a major subject need not be made before the beginning of the sophomore year. A student may change his major subject with the consent of the

professors in charge of the department which he leaves and the one which he wishes to enter; but no student will be graduated who has not finished all the work required for graduation in some one department, no matter how much work he may have done in other departments. The major subject must include work counting not less than six, nor more than eight credits. In the case of departments in which less work is offered than amounts to six credits, this amount must be made up from such other, related, departments as the professor under whose direction the major is taken may prescribe.

ELECTIVE WORK.—The remainder of the student's work may be selected from any undergraduate department or departments of the University. This must be done with the advice of the head of the department in which the student has chosen his major subject, that it may bear some useful relation to his other work.

THE CLASSICAL COURSE

This course is planned for those who desire general culture, and is especially adapted to the needs of those intending to become teachers. During the freshman year Latin must be included in the required work stated above. After the freshman year the student may give special attention to language, mathematics, natural science, history, philosophy or any other subject offered to undergraduates.

At graduation the student receives the degree of Bachelor of Arts. Upon the completion of one year's prescribed graduate work in residence, or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, he receives the degree of Master of Arts.

THE SCIENTIFIC COURSE

This course is arranged for those who seek a broad general training, based largely upon the study of mathematics, science, and modern languages.

The required studies are stated above. The elective studies may be selected so as to give special attention to modern languages, mathematics, natural science, history, philosophy, or any subject offered to undergraduates.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, he receives the degree of Master of Science.

Preparation for Medicine

Students in either of the above courses who desire to prepare for the study of medicine should take biology as their major subject and give special attention to chemistry and physics. Such students will receive help in laying out a course of study that will suit their future plans and insure their admission into any of the medical colleges of the country.

COLLEGE OF AGRICULTURE

The College of Agriculture comprises the Departments of Agriculture, Horticulture, and Animal Industry, and the Agricultural Experiment Station, and includes special courses in Agricultural Chemistry, Biological Chemistry, and Veterinary Science. The aim of this college is to prepare young men to become farmers or teachers, or investigators of agricultural subjects. Students in this college are not charged tuition.

The work of instruction and investigation is organized as follows:

THE COLLEGE COURSES

- The Agricultural Course
- The Horticultural Course
- The Special Course in Agriculture and Horticulture

THE EXTENSION COURSES

- The School Course in Agriculture
- The Winter Courses in Agriculture, Horticulture and Dairying
- The Short Course in Horticulture and Poultry Management
- The Correspondence and Lecture Courses

THE AGRICULTURAL EXPERIMENT STATION

The College Courses

The college courses are designed for those who wish to follow agriculture or horticulture as a business, or who purpose becoming teachers or investigators in related sciences. The instruction is arranged with a view to emphasizing fundamental principles and giving the student the largest amount of technical knowledge consistent therewith. To this end the theoretical instruction is associated with practical work and observation on the farm, in the orchard and garden, and in the various laboratories of the university; but time is not consumed in merely manual operations.

Certain studies are fundamental to all work in agricultural lines, and these are included among the subjects required in the four years courses. After these fundamental subjects are completed, the fullest latitude is allowed for election.

The Agricultural Course

The course in Agriculture emphasizes technical training in the branches pertaining to general farming, stock raising, dairying, poultry industry, and agricultural chemistry. The entire agricultural equipment, including the farm, the barns, the dairy, the agricultural machinery, the poultry plant, the flocks and the herds, is used for instruction. The following subjects are included among those offered in this course, and students are advised to take them in the order given:

Freshman Year

Fall Term		*Spring Term*	
Subject	Hours	Subject	Hours
Ag 1, Agriculture	2	An 1, Animal Industry	2
Ag 2, Agriculture † 2	1	An 2, Animal Indus. † 2	1
Eh 1, 3, English	4	Eh 1, 4, English	4
Ch 1, 3, Chemistry	3	Ch 2, 4, Chemistry	4
Bl 1, 2, Biology	3	Bl 9, Biology	2
Dr 1, Drawing	2	Bl 21, 22, Botany	3
Mt 1, Military † 5	2½	Mt 1, Military † 5	2½
	17½		18½

SOPHOMORE YEAR

Ag 3, Agriculture † 4.....2	Ag 4, Agriculture.....2
An 3, Animal Industry.....2	Ht 1, Horticulture.....2
Ch 14, Chemistry † 8.....4	Ch 29, Chemistry.....5
Modern Language....3	Modern Language....2
Eh 2, English.....1	Eh 2, English.....1
Ms 4, Mathematics.....5	Ms 1, 4, Mathematics.....5
17	17

JUNIOR YEAR

Ag 5, Agriculture.....3	An 5, Animal Industry.....2
An 4, Animal Industry.....2	An 6, Animal Industry † 6..3
Ht 2, Horticulture.....2	Ht 4, Horticulture.....3
Ht 3, Horticulture † 2.....1	Ht 5, Horticulture † 4.....2
Ch 30, Biological Chem.....5	Modern Language....2
Modern Language....3	Bl 15, Veterinary Science } 5
Bl 11, Entomology.....2	Bl 17, Bacteriology }
18	17

SENIOR YEAR

Ag 6, Agriculture, or }	Ag 7, Agriculture, or }
An 7, Animal Industry, or } 3	An 8, Animal Industry, or } 2
Ht 6, 8, Horticulture }	Ht 9, Horticulture }
Elective 12	Elective 13
15	15

The following subjects are included in a major in Agriculture:

Ag 1 to 7...Agriculture.....4 credits
Ht 1 to 8...Horticulture.....2 credits
An 1 to 8...Animal Industry.....2 credits
Ch 30.....Biological Chemistry.....1 credit

The student who wishes to make Agricultural Chemistry a feature of his work should elect qualitative and quantitative analysis.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, he receives the degree of Master of Science.

The Horticultural Course

The course in Horticulture provides training in the theory and practice of fruit growing, general and ornamental gardening and in experimental methods. The greenhouses, gardens, orchards, nurseries, and the university campus are freely used for purposes of instruction. Special attention is also given to related botanical and biological lines.

A wide freedom of election is allowed, but the following subjects must be taken:

Requirements for Graduation

Freshman Year

Fall Term		*Spring Term*	
Subject	Hours	Subject	Hours
Bl 1, Gen. Biology	2	Bl 21, Gen. Botany	1
Bl 2, Lab. Biology † 2	1	Bl 22, Lab. Botany † 4	2
Eh 1, 3, English	4	Eh 1, 4, English	4
Dr 1, Drawing † 4	2	Ms 1, 4, Trigonom., Solid Geom.	2½
Ms 2, Algebra	5		
Ch 1, Gen. Chemistry	2	Ch 2, Gen. Chemistry	3
Ch 3, Lab. Chemistry † 2	1	Ch 4, Lab. Chemistry † 2,	1
Mt 1, Military † 5	2½	Mt. 1, Military † 5	2½
	19½		18½

Sophomore Year

Eh 2, English	2	Eh 2, English	2
Bl 23, Crypt. Botany † 4	2	Bl 9, Physiology	2
Gm 1, German, or Rm 1, French	5	Gm 1, German, or Rm 1, French	5
Ch 14, Chemistry † 8	4	Ch 29, Chemistry	5
Ps 12, Gen. Physics	5	Ht 1, Horticulture	2
	18		16

JUNIOR YEAR

Ht 2, 3, Horticulture	3	Ht 4, 5, Horticulture	5
Ch 30, Biolog. Chem	5	Bl 11, Entomology	2
Gm 3a, German or Rm 3a, French	3	Gm 3b German or Rm 3b, French	2
Elective, at least	5	Elective, at least	7
	16		16

SENIOR YEAR

Ht 6, 8, 9, Horticulture	5	Ht 7, 9, Horticulture	6
Elective, at least	10	Elective, at least	9
	15		15

The instruction in Horticulture is given in nine courses, but many of these are based upon the principles studied in other departments. Course 1 is designed as a basis for all study of plants under cultivation. Courses 2, 3, 4 and 5 are primarily for the study of the principles and of the practical details of commercial fruit growing, market gardening, and the improvement of rural conditions. Course 7 aims to give a glimpse of the salient features in literature bearing upon the cultivation and amelioration of plants, and to direct the attention of students to sources of information. Course 8 is for those particularly interested in the problems of evolution and heredity, especially as affecting domesticated plants. In view of the close relation between farm and garden practice, it is expected that several of the courses in agronomy will be included among the electives.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, he receives the degree of Master of Science.

THE SPECIAL COURSE IN AGRICULTURE AND HORTICULTURE

The Special Course is designed for young men who cannot well spend four years in preparing themselves to become farmers, but who wish to secure special training in certain agricultural

subjects. No fixed schedule of studies is prescribed, but students may elect along the line of horticulture, or dairying or general farm crops and farm management.

For admission to this course applicants must be at least eighteen years of age, and must have a good common school education. No formal entrance examinations are required, but students will be admitted, upon recommendation of the Dean of the Faculty, after the professor in charge of the work elected shall have satisfied himself of the fitness of each candidate to take the studies desired.

The annual expenses for courses of one year or more are the same as those of students in the four years courses. *Tuition is free.*

The Extension Courses

The Extension Courses are designed to give in the shortest time possible at the University, or directly in the home, the best training in the practical business of agriculture and horticulture, and the greatest amount of knowledge that can be acquired in the time allotted. The extension courses include: The School Course; The Short Winter Course; The Short Course in Horticulture and Poultry Management; The Correspondence and Lecture Courses.

THE SCHOOL COURSE IN AGRICULTURE

The School Course in Agriculture is a two years course designed to train young men and women who wish to become practical farmers, dairymen, or gardeners, but who cannot devote time to high school and college training.

The School Course is distinctively extension work. While all of the agricultural equipment of the University will be used for purposes of instruction, the school classes are entirely separate and distinct from the college classes, and in no case will college credit be allowed for work done in the school.

Students not less than 15 years of age, who are prepared for advanced grammar or high school work, are eligible for registration in this course. The applicants must possess a knowledge of arithmetic, geography and English grammar.

Tuition is free.

The following is a schedule of the work as given:

First Year

FIRST TERM	SECOND TERM
Crop Production and Farm Mechanics	Crop Production and Farm Mechanics
Animal Industry	Animal Industry
Orchard and Garden	Garden and Orchard
English	English
Arithmetic and Farm Accounts	Veterinary Science
Forging	Carpentry

Second Year

FIRST TERM	SECOND TERM
Crop Production and Farm Mechanics	Crop Production and Farm Mechanics
Animal Industry	Animal Industry
Orchard and Garden	Agricultural Chemistry
Agricultural Chemistry	Forestry
Entomology	English
English	

THE WINTER COURSES

The winter courses in Agriculture, Dairying and Horticulture are designed for practical farmers who wish to fit themselves to be managers of farms, creameries or cheese factories. Special emphasis is given to dairying, and if the course is pursued two terms, and two seasons' satisfactory work is performed in a butter or cheese factory, the student will be granted a certificate of proficiency.

These courses begin on the Tuesday following the Christmas recess, and continue eight weeks.

The subjects taken up are: Chemistry of Plant and Animal Nutrition; Dairying; Dairy Practice; Feeds and Feeding; Breeds and Breeding; Crops and Crop Production; Bacteria of the Dairy; Diseases of Animals; Sheep Husbandry; Fruit Growing; Vegetable Gardening.

THE SHORT COURSE IN HORTICULTURE AND POULTRY MANAGEMENT

On the Tuesday following the close of the Winter Courses, the short course in Horticulture and Poultry Management begins. There is crowded into this short course all of the practical, helpful information possible. It is necessarily somewhat in the nature of an extended farmers' institute, and a special effort is made to outline future work for the students. The following subjects are taken up: Orchard Culture; Small Fruit Culture; Vegetable Gardening; Spraying; Insects and Plant Diseases; Breeds of Poultry; Egg Production; Buildings and Appliances, Incubation, Embryology. The afternoons are devoted to work in the orchard and greenhouses, in pruning, grafting, setting plants, making hot-beds and other practical subjects; or in the poultry houses and incubator rooms, in studying the breeding and handling of young chickens and growing fowl.

THE CORRESPONDENCE AND LECTURE COURSES

For those who are interested in improving the conditions of rural life, but who are unable to take regular work at the University, popular bulletins or suggestive papers are issued from time to time with the purpose in view of carrying directly to the home information which shall be of immediate value and shall emphasize the principles upon which agricultural practice is founded. These bulletins are suggestive rather than exhaustive, the object being to induce further study and to point to sources of information.

The bulletins will be sent to any individual who may desire them. Any town or community in the State which will organize a club of ten or more, or any grange which will take up systematic study and discussion of the topics, may receive the publications; and after a few weeks, if desired, an officer of the University will meet with such club or grange and discuss the questions that arise.

THE AGRICULTURAL EXPERIMENT STATION

The Maine Agricultural Experiment Station owes its existence to an act of Congress ,approved March 2, 1887, popularly known as the Hatch Act. The act of the legislature accepting the con-

gressional grant made the Station a department of the University of Maine.

The affairs of the Station are considered by an advisory council consisting of a committee of the trustees of the University, the president of the University, members of the Station staff, the Commissioner of Agriculture, and representatives from the State Pomological Society, the State Grange, and the State Dairymen's Association. The recommendations of the council are referred to the trustees for ratification. The Station receives $15,000 annually from the general government.

The inspection of fertilizers, the inspection of concentrated commercial feeding stuffs, and the testing of the graduated glassware used in creameries, are entrusted to the Station through its director, who is responsible for the execution of the public laws relating to these matters.

The Station publishes the account of its work in bulletin form. The bulletins for a year form a volume of about 200 pages and make up the annual report. Bulletins which contain matter of immediate value to practical agriculture are sent free of cost to the entire mailing list of the Station. On request, the name of any resident of Maine will be placed on the mailing list of the Station. Bulletins which contain the records of experiments involving the technical language of science, and containing detailed data, are sent to Station workers and others interested in the science of agriculture, but are not sent to farmers unless they are especially asked for.

COLLEGE OF TECHNOLOGY

The College of Technology provides technical instruction in chemistry and in various branches of engineering including forestry. The number of credits required for graduation in this college varies, according to the subject chosen as a major, from twenty-five to thirty. In such technical courses it is necessary to prescribe a large proportion of the work; but some elective studies may be chosen in the junior and senior years. Under each of the courses described below is given a tabulated statement of the subjects pursued and the amount of work required. The college comprises:

The Chemical Course
The Civil Engineering Course
The Mechanical Engineering Course
The Electrical Engineering Course
The Mining Engineering Course
The Forestry Course

At graduation in any of these courses the student receives the degree of Bachelor of Science. The diploma indicates which course has been completed.

The Chemical Course

This course is designed for those who plan to become professional chemists and analysts, managers or chemists of industries which require an extensive knowledge of chemistry, or teachers of chemistry. Attention is given to preparation for the work of the agricultural experiment stations.

Lectures and recitations are closely associated with practical work in the laboratories. The student is drilled in the use of chemical apparatus, in accurate observation, and in careful interpretation of directions.

Eleven credits are required for the completion of the major, and a total of thirty for graduation.

Requirements for Graduation

Freshman Year

Fall Term		*Spring Term*	
Subject	Hours	Subject	Hours
Rm 3a, French	3	Rm 3b, French	2
Eh 3, English Composition and Rhetoric	3	Eh 4, English Composition and Rhetoric	3
Ms 2, Algebra	5	Ms 4, Trigonometry	3
Ch 1, General Chemistry	2	Ms 6a, Analytical Geom.	2
Ch 3, Lab. Chemistry † 2	1	Ch 2, General Chemistry,	3
Md 1, Drawing † 4	2	Ch 4, Lab. Chemistry † 2	1
Eh 1, Public Speaking	1	Eh 1, Public Speaking	1
Mt 1, Military † 5	2½	Mt 1, Military † 5	2½
	19½		17½

Sophomore Year

Fall Term		*Spring Term*	
Gm 1, German	5	Gm 2, German	5
Ps 12, General Physics	5	Ps 5, Lab. Physics † 4	2
Ch 5, Advanced Inorganic Chemistry	2	Ch 6, Advanced Inorganic Chemistry	3
Ch 14, Qualitative Analysis † 8	4	Ch 15, Qualitative Analysis † 8	4
Eh 2, Themes	1	Eh 2, Themes	1
Bl 1, 2, General Biology	3	Elective	2
	20		17

Junior Year

Fall Term		*Spring Term*	
Gm 3a, German	3	Gm 3b, German	3
Ch 16, 18, Quant. Anal. † 12	6	Ch 8, Organic Chemistry,	2
Ch 7, Organic Chemistry	3	Ch 19, Volumetric Analysis & Assaying † 15	7½
Ch 30, Biological Chemistry	5		
Elective	2	Elective	6
	19		18½

SENIOR YEAR

Fall Term		*Spring Term*	
Ch 12, Chemical preparations....	† 14....7	Ch 24b, Industrial Chemistry 2	
Ch 20, Agricultural Analysis.....		Ch 28, Dyeing..	† 15..7½
Ch 21, Toxicology Urinalysis.....		Ch 22, Thesis...	
Ch 23, Organic Chemistry...3		Ch 25 Technical Analysis	
Ch 24a, Industrial Chemistry 2		Bl 9, Physiology.....2	
Bl 13, Geology.....3		Ch 13, Chemical Equations 2	
Elective 5		Elective 5	
	20		18½

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, he receives the degree of Master of Science.

THE CIVIL ENGINEERING COURSE

The course in Civil Engineering has been planned with the object in view of laying a firm foundation in the principles, both theoretical and practical, upon which the profession depends, so that on graduaton the student may be fitted to apply himself at once to engineering work.

Especial attention is given to mathematics, mechanics, drawing, and the care and use of engineering instruments; at the same time care is taken not to omit those subjects that tend to broaden the mind and form the basis of a liberal education.

It is impressed upon the student that the scope of civil engineering is so broad that he can never expect to become expert in all its branches, and that on completion of his course he should obtain a position in that branch which seems best suited to him, such that he may begin to obtain experience and judgment, without which he can never become successful. Students are encouraged to work during the summer months in engineering lines.

The methods of instruction are recitations, lectures, original problems, work in the testing laboratories, field practice, and designing, including the making of original designs and the preparation of the necessary drawings. Effort is made to acquaint the student with the best engineering structures, and with the standard engineering literature.

The engineering building contains recitation rooms, designing rooms, testing laboratories, drawing rooms, and instrument rooms, and is well equipped.

The following studies constitute the regular four years course. It is seen that beginning with the junior year the student is allowed to elect a certain part of his work, the election being made from any department in the University, with the consent of the head of his department.

Requirements for Graduation

Freshman Year

Fall Term		*Spring Term*	
Subject	Hours	Subject	Hours
Ch 1, Chemistry	2	Ch 2, Chemistry	3
Ch 3, Lab. Chemistry † 2	1	Ch 4, Chemistry † 2	1
Eh 1, Public Speaking	1	Eh 1, Public Speaking	1
Eh 3, English Composition	3	Eh 4, English Comp'tion	3
Md 1, Drawing † 4	2	Md 2, Drawing † 4	2
*Modern Language	3	*Modern Language	2
Ms 2, Algebra	5	Ms 4, Trigonometry } Ms 6a, Analytic Geom. }	5
Mt 1, Military Drill † 5	2½	Mt 1, Military Drill † 5	2½
	19½		19½

*Students beginning a new language must take a five hour course the first year, which will complete the modern language requirements. In this case Eh 3, English Composition will be taken in the sophomore year.

SOPHOMORE YEAR

Fall Term		*Spring Term*	
Ce 6, Drawing † 4	2	Ce 1, Surveying	2
Ce 18, Sanitary Science	1	Ce 2, Surveying (fld. wk.) † 6	3
Eh 2, English Composition	1	Md 4, Descriptive Geometry, 2	
Md 3, Descriptive Geometry, 2		Modern Language	3
Modern Language	3	Ms 8, Calculus	5
Ms 6b, Analytic Geom., Ms 7 Calculus	5	Ps 2, Physics	3
Ps 1, Physics	5	Ps 5, Physics † 4	2
	19		20

JUNIOR YEAR

Fall Term		*Spring Term*	
Ce 3, Railroad Curves, etc.	3	Ce 7, Drawing 8 wks. 10 h. Ce 9, Summer School 100 hours † 10	5
Ce 4, Railroad Fld. Wk. † 6.	3	Ce 10, Hydraulics	3
Eh 2, English Composition	1	Ce 19, R. R. Engineering	2
Md 5, Mechanics	5	Md 6, Mechanics	5
Elective	6	Elective	4
	18		19

SENIOR YEAR

Fall Term		*Spring Term*	
Ce 11, Hydraul. Fld. Wk. † 3.	1½	Ce 13, Structure	5
Ce 12, Structures	5	Ce 15, Designing & Thesis † 15	7½
Ce 14, Designing † 10	5	Elective	5
Elective	6		
	17½		17½

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of

a satisfactory thesis and examination at the University, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Civil Engineer.

The Mechanical Engineering Course

This course is designed to give the student such instruction and training as shall enable him to enter successfully any one of the many lines of work in the field of mechanical engineering, and at the same time to form the basis of a liberal education. Therefore the required work covers a wide range of subjects in both technical and general work, as appears in the list given below.

In the work of instruction, particular attention is given to drawing and designing, of which about 500 hours of actual time are required, in order to prepare the students to enter directly the draughting rooms of manufacturing concerns. The shop practice work is under the charge of experienced mechanics, and in the machine shop many instruments and small machines of value are constructed by the students. The laboratories are well supplied with apparatus for testing the strength of materials, the lubricating properties of oil, the driving power of belts, the efficiencies of steam separators, injectors, boilers, engines, pumps, and gasoline engines, the flow of water in pipes and over wiers, and the power consumed in driving shafting and machine tools.

During the senior year an option in Marine Engineering is offered, giving an opportunity for the student to specialize in the steam engineering work involved in ship propulsion.

Detailed descriptions of the subjects in the following list of required work may be found under "Courses of Instruction."

Requirements for Graduation.

Freshman Year

Fall Term		*Spring Term*	
Subject	Hours	Subject	Hours
Ch 1, Chemistry	2	Ch 2, Chemistry	3
Ch 3, Lab. Chemistry † 2	1	Ch 4, Lab. Chemistry † 2	1
Eh 1, Public Speaking	1	Eh 1, Public Speaking	1
Eh 3, English Composition	3	Eh 4, English Composition	3
*Modern Language	3	*Modern Language	3
Md 1, Drawing † 4	2	Md 2, Drawing † 4	2
Ms 2, Algebra	5	Ms 4, Trigonometry	3
Mt 1, Military † 5	2½	Ms 6a, Analytic Geometry	2
		Mt 1, Military † 5	2½
	19½		19½

Sophomore Year

Fall Term		*Spring Term*	
Md 3, Descriptive Geometry	2	Md 4, Descriptive Geometry	2
*Modern Language	3	*Modern Language	3
Me 1, Wood Work † 4	2	Me 2, Forge Work † 4	2
Me 3, Drawing † 2	1	Me 4, Kinematics † 6	3
Ms 6b, Analytic Geometry	3	Ms 8, Calculus	5
Ms 7, Calculus	2	Ps 2, Physics	3
Ps 1, Physics	5	Ps 5, Lab. Physics † 4	2
	18		20

* Students beginning a new language must take a five hour course during the first year. This will complete the modern language requirement. In this case Eh 3, English Composition will be taken in the sophomore year.

Junior Year

Fall Term		*Spring Term*	
Ee 9, Dynamos	2	Eh 2, Themes	1
Eh 2, Themes	1	Md 6, Mechanics	5
Md 5, Mechanics	5	Me 5, Machine Work; Me 6, Foundry Practice	† 7.3½
Me 5, Machine Work; Me 6, Foundry Practice	† 9.4½	Me 8a, Machine Design	3
Me 7, Valve Gears † 4	2	Me 8b, Designing † 2	1
Ps 9, Lab. Physics † 4	2	Me 15, Mechan. Lab. † 2.	1
Elective	3	Elective	5
	19½		19½

Senior Year

Fall Term		*Spring Term*	
Me 9, Materials of Engineering	2	Me 15, Mechanical Laboratory † 4 (First nine weeks)	1
Me 11, Steam Engineering	3	Me 17, Steam Engine Design † 12 (First nine weeks)	3
Me 12, Steam Boiler Design † 6	3	Me 22, Thesis † 12 (Second nine weeks)	3
Me 15, Mechanical Laboratory † 4	2		
Options		*Options*	
Ee 10, Dynamo Lab. † 4	2	Me 16, Steam Engineering	2
or		or	
Me 13, Hydraulic Mach'y	2	Me 18, Structures † 4 and Me 20, Heating and Ventilation 1	3
or		or	
Me 10, Fuels	2	Me 16, Steam Engineering 2 and Me 19, Marine Engineering 2	4
or			
Me 10, Fuels 2, and Me 14, Marine Machinery 2	4		
Elective	5	Elective	7
	17		16

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Mechanical Engineer.

The Electrical Engineering Course

This course is intended to provide a thorough preparation in the scientific principles involved in the practice of electrical engineering; to explain and illustrate the application of these principles to the design, construction, installation and running of apparatus with which the electrical engineer has to deal, and to give practice and experience in the care and running of the same. In addition to this purely electrical work the student takes up carpentry, forge work, machine work, mechanical drawing, mathematics, physics, mechanics, steam engineering and other subjects allied to engineering work. The general courses, required or elective, include English, language, logic, psychology, history, political economy, and constitutional law.

The equipment for laboratory work in electrical engineering is ample and includes most of the standard forms of instruments and machines.

Requirements for Graduation

Freshman Year

Fall Term		*Spring Term*	
Subject	Hours	Subject	Hours
Ch 1, Chemistry	2	Ch 2, Chemistry	3
Ch 3, Lab. Chemistry † 2	1	Ch 4, Lab. Chemistry † 2	1
Eh 1, Public Speaking	1	Eh 1, Public Speaking	1
Eh 3, English Composition	3	Eh 4, Eng. Composition,	3

Md 1, Drawing † 4.....2	Md 2, Drawing † 4.....2
* Modern Language..3	* Modern Language, 2
Ms 2, Algebra.....5	Ms 4, Trigonometry.....3
Mt 1, Military † 5.....2½	Ms 6a, Analytic Geom...2
	Mt 1, Military † 5.....2½
19½	19½

SOPHOMORE YEAR

Eh 2, Themes.....1	Eh 2, Themes.....1
Md 3, Descriptive Geom....2	Md 4, Descriptive Geom....2
Me 1, Wood Work † 4.....2	Me 2, Forge Work † 4.....2
Me 3, Drawing † 2.....1	Me 4, Kimmatics † 6.....3
Modern Language....3	Modern Language....2
Ms 6b, Analytic Geometry..3	Ms 8, Calculus.....5
Ms 7, Calculus.....2	Ps 2, Physics.....3
Ps 1, Physics.....5	Ps 5, Lab. Physics † 4.....2
19	20

JUNIOR YEAR

Ee 1, Electricity and Magnetism 2	Ee 2, Electricity and Magnetism 3
Md 5, Mechanics.....5	Ee 12, Lab. Work, D. C. † 2.1
Me 5, Machine Work † 4....2	Md 6, Mechanics.....5
Me 7, Valve Gears † 4.....2	Me 5, Machine Work † 4....2
Ps 11, Electrical Meas. † 6..3	Me 8a, Machine Design ‡...3
Elective.....5	Elective 5
19	19

* Students beginning a new language must take a five hour course the first year. This will complete the Modern Language requirement. In this case Eh 3, English Composition will be taken in the sophomore year.

‡ Me 8a may be replaced by Ce 1 and Ce 2, Plain Surveying and Field Work, 2 hours and † 4 hours respectively.

SENIOR YEAR

Ee 3, Electrical Machinery 3	Ee 4, Alt. Current Machinery, 5 hrs. 1st 9 wks.....2½
Ee 5, Design D. C. Machine † 4.....2	Ee 6, Design A. C. Machine † 5 hrs. 1st 9 wks.....1¼
Ee 7, Lab. Work, D. C. & A. C. † 4.....2	Ee 8, Laboratory Work A. C. † 5 hrs. 1st 9 wks.....1¼
Ee 13, Alternating Currents, 3	Ee 14, Electrical Engineering, 3 hrs. 2nd 9 wks.....1½
Me 11, Steam Engineering..3	Ee 16, Thesis † 18 hours, 9 wks.....4½
Elective.....5	Elective.....5
18	16

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed graduate work in residence, or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, he receives the degree of Master of Science. Three years after graduation, upon the presentation of a satisfactory thesis and proofs of professional work, he may receive the degree of Electrical Engineer.

THE MINING ENGINEERING COURSE

In the newly established department of mining engineering, the course of study for the first two years is identical with that in civil engineering, except that, during the second year, class and laboratory work in chemistry takes the place of the courses in mechanical drawing, descriptive geometry and surveying. It is expected that more specific and advanced instruction in this department will be provided at an early date.

THE FORESTRY COURSE

A complete undergraduate course in forestry is arranged, which may serve as the basis not only of practical work in forestry, but also of a liberal education. A knowledge of the principles of forestry in its different branches is given to the student, and some practice work is done in the forest. For students of agriculture this course offers work in silviculture which will give a training in the management of the farmer's woodlot.

The instruction in this department consists of lectures, recitations, laboratory and field work. The woodland belonging to the University, together with adjacent land covered by a young forest, furnishes a field for the study of many forest problems.

Requirements for Graduation

Freshman Year

Fall Term		*Spring Term*	
Subject	Hours	Subject	Hours
Bl 1, General Biology	2	Bl 21, General Botany	1
Bl 2, Lab. Biology † 2	1	Bl 22, Lab. Botany † 4	2
Eh 1, Public Speaking	1	Eh 1, Public Speaking	1
Eh 3, English Comp	3	Eh 4, English Comp	3
Md 1, Drawing † 4	2	Fy 1, General Forestry	3
Modern Language	3	Ms 4, Trigonometry / Ms 6a, Anal. Geometry	5
Ms 2, Algebra	5	Modern Language	2
Mt 1, Military † 5	2½	Mt 1, Military † 5	2½
	19½		19½

Sophomore Year

Bl 23, Gen'l Botany	2	Bl 27, Plant Physiology	1
Ch 1, Gen'l Chemistry	2	Bl 28, Lab. Physiology † 2	1
Ch 3, Lab. Chemistry † 2	1	Ch 1, Plane Surveying	2
Eh 2, English Comp	1	Ch 2, Plane Surveying Field Work † 6	3
Fy 2, Forest Botany	2	Ch 2, Chemistry	3
Fy 4, Lab. Forest Botany † 4	2	Ch 4, Lab. Chemistry † 2	1
Modern Language	3	Eh 2, English Comp	1
Ps 1, Physics	5	Fy 3, Forest Botany	2
		Fy 5, Lab. Botany	2
		Modern Language	3
	18		19

JUNIOR AND SENIOR YEARS

Fy 6 and 7, Silviculture.
Fy 8 and 9, Silviculture.
Fy 10 and 11, Forest Measurements.
Fy 12, Lumbering and Written Report.
Fy 13, Forest Management.
Fy 14, Thesis in Forest Management.
Electives as directed by the professor, (sufficient to make a total of twenty-five credits at the end of the course.)

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed graduate work in residence, or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, he receives the degree of Master of Science.

COLLEGE OF PHARMACY

The College of Pharmacy comprises:

The Pharmacy Course

The Short Course in Pharmacy

The Pharmacy Course

This course is offered in response to a demand for a thorough training, both general and technical, for those who are to become pharmacists. It aims to combine a broad general culture and a thorough preparation along its special lines, with the design of affording both the intellectual development necessary for the well rounded professional or business man, and the necessary technical training. To this end, it includes the same intruction in modern languages, civics, and the sciences, as is offered in other college courses. Thirty credits are required for graduation.

Those who intend to fit themselves for pharmaceutical work are urged to consider carefully the superior advantages of this course. The growing importance of the biological, sanitary, and medical sciences, and the pharmacist's relation to them, makes it increasingly necessary to his success that he be not only a well trained man in the technical branches, but an educated man in the broadest sense.

Instruction in pharmaceutical studies is given by means of lectures, recitations, and tests, supplemented by work in the laboratories of chemistry and pharmacy. It embraces qualitative, quantitative, and volumetric analysis, toxicology, bacteriology, prescriptions, the preparation of pharmaceutical compounds, and original investigations.

The library contains valuable reference literature in chemistry and pharmacy, and the best chemical and pharmaceutical journals.

Requirements for Graduation

Fall Term

Subject	Hours
Rm 3a, French *	3
Eh 1, Pub. Speaking	1
Eh 3, Eng. Composition	3
Ch 1, Gen. Chemistry	2
Ch 1, Lab. Chem. † 2	1
Ms 2, Algebra	5
Military † 5	2½
	17½

Spring Term

Subject	Hours
Rm 3b, French	2
Eh 1, Pub. Speaking	1
Eh 4, Eng. Composition	3
Ch 2, Gen. Chemistry	3
Ch 4, Lab. Chem. † 2	1
Ms 1, Solid Geom. / Ms 4, Trig. (10 w)	5
Military † 5	2½
	17½

Sophomore Year

Rm 4a, French	3
Ps 12, Gen. Physics	5
Eh 2, Eng. Composition	1
Ch 5, Inorg. Chemistry	2
Ch 14, Qual. Anal. † 8	4
Bl 1, Gen. Biol.	2
Bl 2, Lab. Biol. † 2	1
	18

Rm 4b, French	3
Ps 5, Lab. Physics † 4	2
Eh 2, Eng. Composition	1
Ch 6, Inorg. Chemistry	3
Ch 15, Qual. Anal. † 8	4
Bl 9, Physiology	2
Bl 21, Gen. Botany	1
Bl 22, Lab. Botany † 4	2
Elective	2
	20

Junior Year

Ch 7, Org. Chemistry	3
Ch 16, Quaint. Anal. † 8	4
Ch 30, Biol. Chem.	5
Bl 25, Plant Hist.	1
Bl 26, Lab. Plant Hist. † 4	2
Pm 5, Inorg. Pharmacog.	2
Elective	3
	20

Ch 8, Org. Chemistry	3
Ch 19, Vol. Anal. † 10	5
Ch 21, Tox. etc. † 2	1
Ch 31, Chem. Eq.	2
Bl 17, Bacteriol. (9w) † 10	2½
Pm 6, Org. Pharmacog.	4
Elective	2
	19½

* Students beginning German must take five hours per week for a year, which will complete the required work in modern language.

SENIOR YEAR

Pm 2, Pharmacy	5	Pm 4, Pharmacopeia	5
Pm 3, Lab. Pharm. † 10	5	Pm 10, Lab. Pharm. † 8	4
Pm 7, Mater. Med.	3	Pm 11, Prescriptions	3
Elective	5	Elective	2½
	18		19½

From courses in History, Philosophy and Civics a total of at least five hours must be chosen.

The number of hours required and elected need not exceed 150, or 30 credits.

At graduation the student receives the degree of Bachelor of Science. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis, and examination at the University, he receives the degree of Master of Science.

THE SHORT COURSE IN PHARMACY

This course, of two years, is designed for those who, for lack of time or for other reasons, are unable to take the course of four years. The more general educational studies of the full course are omitted, but as broad a range of subjects is offered as can be undertaken without sacrifice of thoroughness in the technical work. The course corresponds, in general, to the usual full course of pharmacy colleges. The work required of the student will occupy his whole time during the college year of nine months, and will usually exclude work in drug stores during term time. The brevity of this course does not warrant extending to other than advanced students the privilege of electives.

Requirements for Graduation

Freshman Year

Fall Term		*Spring Term*	
Subject	Hours	Subject	Hours
Ch 1, Gen. Chemistry	2	Ch 2, Gen. Chemistry	3
Ch 14, Qual. Anal. † 16	8	Ch 15, Qual. Anal. (9 w)	† 10. 5
Pm 1, El. Pharm	5	Ch 19, Vol. Anal. 9 w)	
Pm 5, Inorg. Pharmacoy	2	Ch 31, Chem. Eq	2
Military † 5	2½	Bl 21, Gen. Botany	1
		Bl 22, Lab. Botany † 4	2
		Pm 6, Org. Pharmacog.	4
		Military † 5	2½
	19½		19½

Sophomore Year

Ch 7, Org. Chem	3	Ch 8, Org. Chem	3
Pm 2, Pharmacy	5	Ch 21, Tox., etc. † 2	1
Pm 3, Lab. Pharmacy † 12	6	Pm 4, Pharmacy	5
Pm 7, Mat. Medica	3	Pm 9, Pharm. Read. † 5	2½
Bl 25, Plant Hist	1	Pm 10, Lab. Pharm. † 6	3
Bl 26, Lab. Plant Hist. † 4	2	Pm 11, Prescriptions	3
		Bl 17, Bacteriol (9 w)	2½
	20		20

Students who complete this course in a satisfactory manner receive the degree of Pharmaceutical Chemist.

COLLEGE OF LAW

FACULTY

GEORGE EMORY FELLOWS, PH. D., L. H. D., LL. D.,
President of the University.

WILLIAM EMANUEL WALZ, M. A., LL. B.,
Dean and Professor of Law.

ALLEN ELLINGTON ROGERS, M. A.,
Professor of Constitutional Law.

EDGAR MYRICK SIMPSON, B. A.,
Assistant Professor of Real Property and Corporations.

BERTRAM LEIGH FLETCHER, LL. B.,
Instructor in Agency.

GEORGE HENRY WORSTER,
Instructor in Insurance.

BARTLETT BROOKS, B. A., LL. B.,
Instructor in Contracts.

FOREST JOHN MARTIN, *LL. B.,*
Resident Lecturer on Common Law Pleading and Maine Practice.

HUGO CLARK, C. E.,
Resident Lecturer on Equity Pleading and Practice.

CHARLES HAMLIN, M. A.,
Lecturer on Bankruptcy and Federal Procedure.

LUCILIUS ALONSO EMERY, LL. D.,
Lecturer on Roman Law and Probate Law.

ANDREW PETERS WISWELL, LL. D.,
Lecturer on Evidence.

LOUIS CARVER SOUTHARD, M. S., LL. D.,
Lecturer on Medico-Legal Relations.

CHARLES VEY HOLMAN, LL. M.,
Lecturer on Wills and Mining Law.

RALPH KNEELAND JONES, B. S.,
Librarian.

The College of Law was opened to students in 1898. It occupies rooms in the Exchange Building, at the corner of State and Exchange streets, Bangor. In this city are held annually one term of the U. S. District Court, five terms of the Maine Supreme Judicial Court, one term of the Law Court, and daily sessions of the Municipal Court. The law library contains about 3,000 volumes, including the reports of the Supreme Court of the United States, Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Ohio, and the Court of Appeals of New York, the New York Common Law and Chancery Reports, the American Decisions, American Reports, American State Reports, the Complete Reporter System, the Lawyers' Reports Annotated, all the Law Encyclopædias, and a considerable number of text-books.

Admission

Graduates of any college or satisfactory preparatory school are admitted to the college as candidates for the degree of Bachelor of Laws, without examination. Other applicants must give satisfactory evidence of the necessary educational qualifications for the pursuit of the required course of study. These will be fixed in each case according to the rules of the Association of American Law Schools, of which association this school is a member.

Special students, not candidates for a degree, will be admitted without examination, and may pursue any studies for which they are prepared.

Students from other schools, which are members of the Association of American Law Schools, are admitted to classes in this institution corresponding to classes in the schools from which they come, upon the production of a certificate showing the satisfactory completion of the prior work in such schools.

Students from law offices are admitted to advanced standing upon passing a satisfactory examination upon the earlier subjects of the course.

Members of the bar of any state may be admitted to the senior class, without examination, as candidates for the degree of Bachelor of Laws, while graduate students may take one of the two courses leading to the degree of Master of Laws.

Methods of Instruction

The college is not committed exclusively to any one method of instruction, and recognizes the great value of lectures by able men, and the profit to be found in the use of standard text-books; but the greatest stress is placed upon the study of selected cases, and most of the work is carried on in this way. It is believed that through the case the student can best come at the controlling principles of the law, and that in no other way can he get so vital a comprehension of them. "Through the case to the principle," may perhaps adequately indicate the standpoint of the school in the matter of method.

Particular stress is placed upon the Practice Court, which is held once a week as a part of the work of the college, and in which every student is required to appear regularly. The questions of law are in all instances made to arise from the pleadings prepared by the students, and briefs, summarizing the points involved and the authorities cited, are submitted to the presiding judge.

The aim and spirit of the college are eminently practical, the purpose being to equip men for the everyday duties of the practicing attorney.

Course of Study

The course of study covers three years, in accordance with the requirements for admission to the bar in the State of Maine. The college year consists of thirty-two weeks, and is divided into the fall, winter, and spring terms, of eleven, ten, and eleven weeks respectively.

Expenses

The annual tuition fee is $60. The graduation fee is $10. There are no other charges.

Board and furnished rooms, with light and heat, may be obtained in the most convenient locations, at a price ranging from $3 to $7 a week. In other parts of the city lower rates may be obtained. It is believed that expenses in this department, as well as in other departments of the University, are lower than in any other New England college.

Degrees

At the completion of the three years course, the degree of Bachelor of Laws is conferred. Upon the completion of one year's prescribed work in residence, or two years' in absence, including the presentation of a satisfactory thesis and examination at the University, the degree of Master of Laws is granted.

COURSES OF INSTRUCTION

Lw 1. ADMIRALTY.—Text-book, Hughes on Admiralty. *Two hours a week.* Spring term. PROFESSOR ROGERS.

Lw 2. AGENCY.—Text-book, Huffcut's Cases on Agency. *Three hours a week.* Spring term. MR. FLETCHER.

Lw 3. BANKRUPTCY.—Lectures. *Two hours a week.* Winter term. GENERAL HAMLIN.

Lw 4. CARRIERS.—Text-book, McClain's Cases on Carriers. *One hour a week.* Fall term. PROFESSOR SIMPSON.

Lw 5. CARRIERS.—A continuation of course 4. *Two hours a week.* Winter term. PROFESSOR SIMPSON.

Lw 6. COMMON LAW PLEADING.—Lectures. *Two hours a week.* Winter term. MR. MARTIN.

Lw 7. COMMON LAW PLEADING.—A continuation of course 6. *One hour a week.* Spring term. MR. MARTIN.

Lw 8. CONFLICT OF LAWS.—Dwyer's Cases. *Three hours a week.* Spring term. PROFESSOR SIMPSON.

Lw 9. CONSTITUTIONAL LAW.—Boyd's Cases. *Two hours a week.* Winter term. PROFESSOR ROGERS.

Lw 10. CONTRACTS.—Keener's Cases on Contracts. *Four hours a week.* Fall term. MR. BROOKS.

Lw 11. CONTRACTS.—A continuation of course 10. *Three hours a week.* Winter term. MR. BROOKS.

Lw 12. CONTRACTS.—A continuation of course 11. *Two hours a week.* Spring term. MR. BROOKS.

Lw 13. CRIMINAL LAW.—Beale's Cases on Criminal Law. *Two hours a week.* Winter term. PROFESSOR SIMPSON.

Lw 14. CRIMINAL LAW.—A continuation of course 13. *Two hours a week.* Spring term. PROFESSOR SIMPSON.

Lw 15. DAMAGES.—Beale's Cases on Damages. *Three hours a week.* Winter term. MR. WORSTER.

Lw 16. DOMESTIC RELATIONS.—Smith's Cases on Persons. *Three hours a week.* Fall term. PROFESSOR SIMPSON.

Lw 17. EQUITY JURISPRUDENCE.—Bispham on Equity Jurisprudence and Shepard's Cases on Equity. *Four hours a week.* Fall term. PROFESSOR WALZ.

Lw 18. EQUITY JURISPRUDENCE.—A continuation of course 17. *Three hours a week.* Winter term. PROFESSOR WALZ.

Lw 19. EQUITY PLEADING.—Lectures. *Two hours a week.* Spring term. MR. CLARK.

Lw 20. EVIDENCE.—Thayer's Cases. *Four hours a week.* Fall term. MR. ————.

Lw 21. EVIDENCE.—A continuation of course 20. *Three hours a week.* Winter term. MR. ————.

Lw 22. EVIDENCE.—Lectures. *Number of hours not fixed.* Winter term. MR. CHIEF JUSTICE WISWELL.

Lw 23. EXECUTORS AND ADMINISTRATORS.—Lectures. *One hour a week.* Spring term. PROFESSOR SIMPSON.

Lw 24. FEDERAL COURTS.—Lectures. *One hour a week.* Spring term. MR. ————.

Lw 25. GENERAL REVIEW.—Gardner's Review. *One hour a week.* Fall term. PROFESSOR WALZ.

Lw 26. GENERAL REVIEW.—Gardner's Review. *One hour a week.* Winter term. PROFESSOR WALZ.

Lw 27. GENERAL REVIEW.—Gardner's Review. *One hour a week.* Spring term. PROFESSOR WALZ.

Lw 28. History of Law.—Lectures. *One hour a week.* Fall term. Professor Rogers.

Lw 29. Insurance.—Woodruff's Cases. *Three hours a week.* Spring term. Mr. Worster.

Lw 30. International Law.—Lectures. *One hour a week.* Fall term. Professor Rogers.

Lw 31. Maine Practice.—Lectures. *One hour a week.* Spring term. Mr. Martin.

Lw 32. Medico-Legal Relations.—Lectures. *About six hours.* Spring term. Mr. Southard.

Lw 33. Mining Law.—Lectures. *About four hours.* Winter term. Mr. Holman.

Lw 34. Municipal Corporations—Smith's Cases. *Three hours a week.* Winter term. Professor Walz.

Lw 35. Negotiable Paper.—Huffcut's Cases. *Two hours a week.* Winter term. Mr. Fletcher.

Lw 36. Negotiable Paper.—A continuation of course 35. *Two hours a week.* Spring term. Mr. Fletcher.

Lw 37. Partnership.—Ames's Cases. *Four hours a week.* Spring term. Professor Walz.

Lw 38. Private Corporations.—Smith's Cases. *Four hours a week.* Fall term. Professor Simpson.

Lw 39. Private Corporations.—A continuation of course 38. *Three hours a week.* Winter term. Professor Simpson.

Lw 40. Probate Law and Practice.—Lectures. *About ten hours.* Spring term. Mr. Justice Emery.

Lw 41. Real Property.—Tiedeman on Real Property. *Four hours a week.* Fall term. Professor Simpson.

Lw 42. Real Property.—A continuation of course 41. *Three hours a week.* Winter term. Professor Simpson.

Lw 43. REAL PROPERTY.—Finch's Cases on the Law of Property in Land. *Four hours a week.* Spring term. MR. ———

Lw 44. ROMAN LAW.—Lectures. *About ten hours.* Spring term. MR. JUSTICE EMERY.

Lw 45. SALES.—Burdick's Cases. *Two hours a week.* Fall term. MR. WORSTER.

Lw 46. SALES.—A continuation of course 45. *Two hours a week.* Winter term. MR. WORSTER.

Lw 47. SURETYSHIP.—Ames's Cases. *Two hours a week.* Fall term. MR. ———

Lw 47. SURETYSHIP.—A continuation of course 45. *Two hours a week.* Winter term. MR. ———

Lw 49. TORTS.—Ames and Smith's Cases. *Four hours a week.* Fall term. PROFESSOR WALZ.

Lw 50. TORTS.—A continuation of course 49. *Three hours a week.* Winter term. PROFESSOR WALZ.

Lw 51. TORTS.—A continuation of course 50. *Two hours a week.* Spring term. PROFESSOR WALZ.

Lw 52. WILLS.—Chaplin's Cases. *Three hours a week.* Spring term. MR. HOLMAN.

THE SUMMER SCHOOL

A session of the University, beginning about June 25 and running for five weeks, is held during the summer vacation. This school is designed to meet the needs of the following classes: first, teachers who may wish to employ their vacation in study; secondly, college students who desire either to work ahead in their course, or to make up work in which they are deficient; and thirdly, students who may lack certain credits for admission to college. Courses are offered in English, French, Latin, history, mathematics, physics, chemistry and botany. No examinations are required for admission. The fee for registration, which is the only charge, is ten dollars. Board and rooms may be obtained at an expense of about four dollars per week. Circulars describing the work more fully, or further information relating to the school, may be obtained by addressing Professor James S. Stevens.

COMMENCEMENT

The Commencement exercises of 1904 were as follows:—

Friday, June 3: Ivy Day Exercises.

Saturday, June 4: Junior Exhibition.

Sunday, June 5: Baccalaureate Address, by President George Emory Fellows.

Monday, June 6: College Convocation, including reports of departments and student enterprises, and the awarding of prizes; Class Day Exercises; Preside t's Reception.

Tuesday, June 7: Phi Kappa Phi Initiation and President's Address; Receptions by the Fraternities.

Wednesday, June 8: Commencement Exercises; Commencement Dinner; Meeting of the Alumni Association; Commencement Concert.

DEGREES CONFERRED

(The major subjects are stated in parenthesis.)

College of Agriculture

Roger Haskell, B. S. (Agriculture), Westbrook.

College of Liberal Arts

Florence Emily Buck, B. S. (History), Bucksport.
Edson Bayard Buker, B. S. (Biology), Brownville.
Carroll Sherman Chaplin, B. S. (Civics), Portland.
Edward Clinton Clifford, B. S. (Modern Languages), Woodfords.
Lennie Phœbe Copeland, B. S. (Mathematics), Bangor.
Roy Horton Flynt, B. S. (English), Augusta.
Clyde Irving Giles, B. S. (Civics), Skowhegan.
Benjamin True Larrabee, B. S. (Chemistry), Cumberland Mills.

Thomas Edward Leary, B. S. (Civics), Hampden.
Cecil Arthur Lord, B. A. (Modern Languages), Bar Harbor.
Edward Alton Parker, B. S. (Civics), Skowhegan.
Karl Byron Porter, B. S. (Biology), Oldtown.
Lottie Luella Small, B. A. (Modern Languages), Auburn.
Thomas Francis Taylor, B. A. (Latin), Bangor.
John Voden Tucker, B. S. (Civics), Rumford Falls.
Francis Howe Webster, B. S. (Biology), Orono.

College of Pharmacy

James Rich Talbot, B. S. (Pharmacy), East Machias.
Mary Ruggles Chandler, Ph. C., Columbia Falls.
Frank Albert Derby, Ph. C., Temple.
Charles John Huen, Ph. C., Sabattus.
John Raymond Kittredge, Ph. C., Rockland.
Walter Scott Sikes, Ph. C., Three Rivers, Mass.
DeForest Reed Taft, Ph. C., Winchester, N. H.

College of Technology

Roy Samuel Averill, B. S. (Civil Engineering), Milltown.
Hubert Merle Bassett, B. S. (Civil Engineering), Taunton, Mass.
Ralph Smith Bassett, B. S. (Civil Engineering), Oldtown.
Paul Leonard Bean, B. S. (Civil Engineering), Saco.
Ira Mellen Bearce, B. S. (Electrical Engineering), Hebron.
Edward Robie Berry, B. S. (Chemistry), Lynn, Mass.
Luther Cary Bradford, B. S. (Civil Engineering), Turner.
George Samuel Brann, B. S. (Civil Engineering), Dover.
Everett Mark Breed, B. S. (Electrical Engineering), Skowhegan.
Edwin Sherman Broadwell, B. S. (Chemistry), Cleveland, Ohio.
Horace Arthur Brown, B. S. (Civil Engineering), Bradley.
Albert Deering Case, B. S. (Civil Engineering), Lynn, Mass.
Clifford Gray Chase, B. S. (Electrical Engineering), Baring.
Elmer Bishop Crowley, B. S. (Civil Engineering), Indian River.
Arthur Edward Davenport, B. S. (Electrical Engineering), E. Brimfield, Mass.
Eugene Garfield Day, B. S. (Civil Engineering), Madison.
Philip Dorticos, B. S. (Chemistry), Woodfords.
Fred Victor Fifield, B. S. (Electrical Engineering), East Eddington.

Harold Francis French, B. S. (Civil Engineering), Glenburn.
Harry Dennett Haley, B. S. (Civil Engineering), Gardiner.
Thomas Carroll Herbert, B. S. (Civil Engineering), Richmond.
Ernest Randall Holmes, B. S. (Mechanical Engineering), Eastport.
Ralph Thomas Hopkins, B. S. (Chemistry), Bangor.
Alfred Carroll Jordan, B. S. (Electrical Engineering), Casco.
Charles Benjamin Kimball, B. S. (Electrical Engineering), No. New Portland.
Ralph Waldo Emerson Kingsbury, B. S. (Electrical Engineering), So. Brewer.
Earle Brush Kingsland, B. S. (Civil Engineering), Vergennes, Vt.
Allen Mark Knowles, B. S. (Civil Engineering), Corinna.
Leonard Alexander Lawrence, B. S. (Civil Engineering), Eastport.
Clifford Henry Leighton, B. S. (Electrical Engineering), Addison.
Leslie Eugene Little, B. S. (Civil Engineering), Bucksport.
Frank McCullough, B. S. (Civil Engineering), Lynn, Mass.
Walter Draper McIntyre, B. S. (Mechanical Engineering), Orange, Mass.
Holman Waldron Monk, B. S. (Electrical Engineering), North Buckfield.
John Emmanuel Olivenbaum, B. S. (Mechanical Engineering), Jemtland.
Allen Thatcher Paine, B. S. (Civil Engineering), Brewster, Mass.
Ralph Howard Pearson, B. S. (Electrical Engineering), Guilford.
Connor Arthur Perkins, B. S. (Electrical Engineering), Bucksport.
Alverdo Linwood Phinney, B. S. (Electrical Engineering), South Portland.
John Herman Quimby, B. S. (Civil Engineering), Goodale's Corner.
Charles Henry Sampson, B. S. (Mechanical Engineering), Gorham.
James Herbert Sawyer, B. S. (Civil Engineering), Saco.
Walter Erwin Scott, B. S. (Civil Engineering), Dexter.

Karl Augustus Sinclair, B. S. (Civil Engineering), Malden, Mass.
Alvah Randall Small, B. S. (Civil Engineering), South Portland.
Leroy Clifton Smith, B. S. (Chemistry), East Exeter.
Godfrey Leonard Soderstrom, B. S. (Mechanical Engineering), Brooklyn, N. Y.
George Thomas Stewart, B. S. (Civil Engineering), Auburn.
Roy Elgin Strickland, B. S. (Electrical Engineering), South Paris.
Alec Gladstone Taylor, B. S. (Civil Engineering), North Sullivan.
Elliott Williams Taylor, B. S. (Mechanical Engineering), Wollaston, Mass.
Howard Smith Taylor, B. S. (Civil Engineering), Bangor.
Roland Lee Turner, B. S. Civil Engineering), West Boothbay Harbor.
Albert Lawrence Whipple, B. S. (Civil Engineering), Solon.

College of Law

Mark Jonathan Bartlett, LL. B., Montville.
Benjamin Willis Blanchard, LL. B., Bangor.
Glidden Bryant, LL. B., Newcastle.
Edward Everett Clarke, LL. B., New Bedford, Mass.
George Edwin Clough, LL. B., Monson, Mass.
John Howard Haley, LL. B., Cornville.
John Chellis Ham, LL. B., Belfast.
Clarence Bertram Hight, LL. B., Athens.
Alfred Alexander Lang, LL. B., Vicques, Porto Rico.
George Lougee, LL. B., Bangor.
John Bryant Merrill, LL. B., Bangor.
John Edward Nelson, LL. B., Waterville.
Edgar Burnham Putnam, LL. B., Danforth.
Judson Emery Sipprelle, LL. B., Bangor.

ADVANCED DEGREES

Master of Arts

Gertrude Lee Fraser, B. Ph. (1901), Nunda, N. Y.
Harry Oliver Hofstead, B. A., (Yale, 1903), New Haven, Conn.

Master of Science

Marshall Baxter Cummings, B. S., (University of Vermont, 1901), North Thetford, Vt.
Elmer Drew Merrill, B. S., (1898), Manila, Philippine Islands.

Civil Engineer

Philip Randolph Goodwin, B. C. E., (1900), St. Louis, Mo.

Mechanical Engineer

Harry Hewes Leathers, B. M. E., (1900), Boston, Mass.
Erastus Roland Simpson, B. M. E., (1896), Toronto, Ontario.

Master of Laws

John Daniel Mackay, LL. B., (1900), Quincy, Mass.
Ulysses Grant Mudgett, LL. B., (1903), Hampden.
Donald Francis Snow, LL. B., (1903), Bangor.

HONORARY DEGREES

Doctor of Laws

Erastus Eugene Holt, M. A., M. D., Portland.
Louis Carver Southard, M. S., Boston.

PRIZES AWARDED

The various prizes were awarded last year as follows:

The Kidder Scholarship, to Leroy Cleveland Nichols, Bangor

The Junior Exhibition Prize, to Florence Balentine, Orono.

The Sophomore Exhibition Prize, to Edward Arthur Stanford, Lovell Center.

The Walter Balentine Prize, to Milton Huston, West Falmouth.

The Franklin Danforth Prize, to Roger Haskell, Westbrook.
The Target Competition Prizes:
1st, to Elmer Bishop Crowley, Indian River.
2d, to Clement French Lemassena, Newark, N. J.
3d, to Horton Wilmot Keirstead, Oakland.
4th, to Robert Franklin Olds, Lewiston.

APPOINTMENTS

Speakers at Commencement, June, 1904

Ira Mellen Bearce, Hebron; Benjamin Willis Blanchard, Bangor; Everett Mark Breed, Skowhegan; Edward Everett Clarke, New Bedford, Mass.; Lennie Phoebe Copeland, Bangor; Elmer Bishop Crowley, Indian River; John Emmanuel Olivenbaum, Jemtland; Lottie Luella Small, Auburn.

Speakers at the Junior Exhibition, June, 1904

Florence Balentine, Orono; Henry Kingman Dow, Oldtown; George Kemp Huntington, Lynn, Mass.; Lester Hale Mitchell, West Newfield; Howard Arthur Stanley, Beverly, Mass.; Marion Barry Wentworth, Kennebunk Beach.

Speakers at the Sophomore Prize Declamation Contest, December, 1903

Frank Arthur Banks, Biddeford; Harry Alvah Emery, North Anson; George Parlin Goodwin, Skowhegan; Harvey Hamlin Hoxie, Waterville; Leroy Cleveland Nichols, Saco; Roy Hiram Porter, South Paris; Edward Arthur Stanford, Lovell Center; George Roger Tarbox, Calais.

Members of the Phi Kappa Phi

Ira Mellen Bearce, Hebron; Benjamin Willis Blanchard, Bangor; Everett Mark Breed, Skowhegan; Edwin Sherman Broadwell, Cleveland, Ohio; Carroll Sherman Chaplin, Portland; Edward Everett Clarke, New Bedford, Mass.; Lennie Phoebe Copeland, Bangor; Ralph Waldo Emerson Kingsbury, South Brewer; John Emmanuel Olivenbaum, Jemtland; Ralph Howard Pearson, Guilford; John Herman Quimby, Goodale's Corner; Leroy Clifton Smith, East Exeter.

Seniors Receiving General Honors

Everett Mark Breed, Skowhegan; Edwin Sherman Broadwell, Cleveland, Ohio; Carroll Sherman Chaplin, Portland; Lennie Phoebe Copeland, Bangor; Elmer Bishop Crowley, Indian River; Ralph Waldo Emerson Kingsbury, South Brewer; John Emmanuel Olivenbaum, Jemtland; Ralph Howard Pearson, Guilford; John Herman Quimby, Goodale's Corner; Leroy Clifton Smith, East Exeter.

Seniors Receiving Special Honors

Everett Mark Breed, Skowhegan, in Physics.
Lennie Phœbe Copeland, Bangor, in Mathematics.
Ralph Waldo Emerson Kingsbury, South Brewer, in Physics.

Juniors Receiving Special Honors

Gould Roydon Anthony, Scotland, Conn., in Philosophy.
Florence Balentine, Orono, in Latin.

Reported to the Adjutant General of the U. S. Army

Alvah Randall Small, South Portland.
Everett Mark Breed, Skowhegan.
Elmer Bishop Crowley, Indian River.

CATALOGUE OF STUDENTS

GRADUATE STUDENTS

Bowen, Everett Harlow, B. A., *Lowville, N. Y.,* 2 Bennoch St.
Colgate University, 1903.

Bussell, Edith Mae, Ph. B., *Oldtown,* Oldtown.
University of Maine, 1902.

Davis, Grant Train, B. A., *Clinton, Mich.,* 61 Main St.
University of Michigan, 1903.

Dinsmore, Sanford Crosby, B. S., *Dover,* Orono House.
University of Maine, 1903.

Hanson, Herman Herbert, B. S., *Orono,* 61 Main St.
Penn. State College, 1902.

Haskell, Horace Bray, Ph. B., *Orono,* Oak St.
Taylor University, 1900.

Hayden, Alton Amaziah, B. A., *Portland,* Forest St.
Bowdoin College, 1899.

Jenkins, Meritt, Ph. B.,
Tufts College, 1901.

Jewett, Arthur Crawford, B. S., *Orono,* North Main St.
Mass. Institute of Tech., 1901.

Mitchell, Fred Carlton, B. S., *Camden,*
University of Maine, 1900.

Perkins, DeForest Henry, Ph. B., *Skowhegan,*
University of Maine, 1900.

Smith, Nathan Rideout, B. A., *North Parsonsfield,*
Bates College, 1895.

Waldron, William Linscott, B. A., *Skowhegan,*
Colby College, 1899.

SENIORS

Abbott, Curtis Eames,	*Locke's Mills,*	Φ K Σ House.
Alden, Carl Howard,	*Gorham,*	201 Oak Hall.
Alton, Ralph Henry,	*Lynn, Mass.,*	2 Pine St.
Ames, Bertram Eugene,	*Lynn, Mass.,*	A T Ω House.

Anthony, Gould Roydon,	*Lincoln,*	Φ K Σ House.
Armstrong, George Otty,	*St. John, N. B.,*	27 Main St.
Bachelder, Herbert Walter,	*East Winthrop,*	Φ K Σ House.
Bailey, Charles Lester,	*Auburn,*	Σ A E House.
Balentine, Florence,	*Orono,*	Mt. Vernon House.
Beale, Harry Orlando,	*North Anson,*	202 Oak Hall.
Bearce, Edwin Freeman,	*Auburn,*	B Θ Π House.
Blaisdell, Harry George,	*Bangor,*	105 Oak Hall.
Bowles, Clayton Wass,	*Columbia Falls,*	6 Main St.
Breed, Archer Fuller,	*Lynn, Mass.,*	61 Mill St.
Brown, Archer Norwood,	*Stillwater,*	Stillwater.
Brown, Ernest Carroll,	*Gorham,*	Θ E House.
Carle, George Wilmot,	*Portland,*	107 Oak Hall.
Chatto, Byron Herbert,	*East Surry,*	37 North Main St.
Collins, Arthur Winfield,	*Caribou,*	Φ Γ Δ House.
Cotton, Ernest Linwood,	*Cumberl'd Mills,*	Mayo's Block.
Cowan, Benjamin Mosher,	*Biddeford,*	A T Ω House.
Cowles, Harry Davis,	*Athol, Mass.,*	J. P. Spearen.
Crowe, Francis Trenholm,	*St. Hyacinthe, Que.,*	Σ A E House.
Crowe, Joseph Wilkinson,	*St. Hyacinthe, Que.,*	Σ A E House.
Dinsmore, Ernest LeRoy,	*Whiting,*	Σ A E House.
Dow, Henry Kingman,	*Oldtown,*	Oldtown.
Drummond, Robert Rutherford,	*Bangor,*	K Σ House.
Flanders, Frank Leroy,	*Howard, R. I.,*	A T Ω House.
Foss, Howard Colburn,	*Boston, Mass.,*	A T Ω House.
Foubert, Charles Leon,	*Danbury, Conn.,*	205 Oak Hall.
Fowles, Raymond Arthur,	*Greenville,*	Greenville.
French, Prentiss Edwin,	*Turner,*	Σ A E House.
Gulliver, Edward Charles,	*Portland,*	105 Oak Hall.
Harlow, Clarence Burr,	*Brewer,*	107 Oak Hall.
Harvey, Bartle Trott,	*Orono,*	46 Main St.
Haskell, Ralph Webster,	*Westbrook,*	Φ Γ Δ House.
Hayes, Andrew Jenkins,	*Oxford,*	Φ K Σ House.
Higgins, Roy Edwin,	*Brewer,*	Φ Γ Δ House.
Hilliard, Edward Knight,	*Oldtown,*	Φ Γ Δ House.
Hilton, Horace Alden,	*Bangor,*	B Θ Π House.

Hopkins, Leonard Otis,	*South Framingham, Mass.,*	A T Ω House.
Huntington, George Kemp,	*Lynn, Mass.,*	Φ K Σ House.
Johnstone, Leslie Ingalls,	*Milford,*	Milford.
Kay, Frank Wilbur,	*Fiskdale, Mass.,*	104 Oak Hall.
Kenrick, William Winslow,	*Lynn, Mass.,*	Σ X House.
Lang, Charles Libby,	*Harrison,*	Φ K Σ House.
Learned, Frank Everett,	*Waterville,*	A T Ω House.
McClure, James Harvey,	*Bangor,*	B Θ Π House.
McDermott, John Augustine,	*Biddeford,*	A T Ω House.
Maddocks, William Samuel,	*Oldtown,*	Oldtown.
Martin, Lloyd Arthur,	*Oldtown,*	Oldtown.
May, John,	*Rockland,*	A T Ω House.
Mitchell, Lester Hale,	*West Newfield,*	Φ Γ Δ House.
Moody, Clare Joseph,	*Winterport,*	312 Oak Hall.
Moody, Percival Ray,	*Biddeford,*	A T Ω House.
Pennell, Charles Weston,	*Gray,*	Σ X House.
Powell, Mabel Frances,	*Orono,*	Forest St.
Ricker, William Jewett,	*Turner,*	Σ A E House.
Rogers, Elmer George,	*Bowdoinham,*	Θ E House.
Sampson, Freeman Marston,	*Gorham,*	204 Oak Hall.
Sands, Roy Granville,	*Foxcroft,*	47 Main St.
Seabury, Ralph Lowe,	*Yarmouth,*	Θ E House.
Shaw, Walter Jefferson,	*Orono,*	36 Mill St.
Smith, Carl David,	*Skowhegan,*	Φ Γ Δ House.
Smith, Dwight Freeman,	*Skowhegan,*	Φ Γ Δ House.
Snell, Roy Martin,	*Lagrange,*	Φ K Σ House.
Sprague, Adelbert Wells,	*Bangor,*	K Σ House.
Stanley, Howard Arthur,	*Beverly, Mass.,*	Φ Γ Δ House.
Sweet, Calvin Arthur,	*South Atkinson,*	302 Oak Hall.
Sweetser, Ernest Osgood,	*Cumberland Center,*	Σ X House.
Talbot, Fred William,	*Andover,*	Σ A E House
Taylor, Roy Edmund,	*Springvale,*	3 Peters St.
Thatcher, Henry David Thoreau,	*Dexter,*	Orono House.
Thomas, Burton Merrill,	*Portland,*	B Θ Π House.
Thomas, Herbert Arthur,	*Andover,*	Σ A E House.
Thomas, Lucian Alvah,	*Rockland,*	Σ X House.
Thomes, Edward Calder,	*Portland,*	B Θ Π House.
Trafton, Ernest Eugene,	*Auburn,*	Φ K Σ House.
Trask, Oland Wilbur,	*Woodfords,*	K Σ House

Weeks, Carl Wellington,	*Masardis,*	Φ K Σ House.
Wentworth, Marion Barry,	*Kennebunk Beach,*	Mt. Vernon [House.
White, Alphonso,	*North Sebago,*	Middle St.
White, Frank Osmond,	*Orono,*	Mill St.
Whittier, Arthur Craig,	*Farmington,*	Θ E House.
Wood, Alphonso,	*Belfast,*	B Θ Π House.

JUNIORS

Abbott, Herbert Lester,	*Bucksport,*	312 Oak Hall
Austin, Alton Arthur,	*Ridlonville,*	K Σ House.
Bacon, Roy Sawtelle,	*Sidney,*	301 Oak Hall.
Banks, Frank Arthur,	*Biddeford,*	A T Ω House.
Bearce, Henry Walter,	*Hebron,*	Σ A E House.
Bearce, Winfield Dexter,	*Auburn,*	B Θ Π House.
Bennett, Arthur Guy,	*Paris,*	Φ K Σ House.
Bolt, Richard Arthur,	*St. John, N. B.,*	Bangor.
Brockie, John Meikle,	*Oldtown,*	Oldtown.
Brown, Everett Dana,	*South Paris,*	309 Oak Hall.
Burke, Walter Horace,	*West Kennebunk,*	Σ A E House.
Butterworth, Albert Jared,	*Southbridge, Mass.,*	Σ X House.
Campbell, Charles William,	*Ellsworth,*	K Σ House.
Carlson, Gotthard Wilhelm,	*Bethel,*	Φ K Σ House.
Cassey, Sidney,	*Lynn, Mass.,*	306 Oak Hall.
Churchill, Howard Lincoln,	*North Buckfield,*	207 Oak Hall.
Colby, Edward Kelley,	*Lynn, Mass.,*	109 Oak Hall.
Colcord, Lincoln Ross,	*Searsport,*	K Σ House.
Coligny, Guerric Gaspard,	*Springfield, Mass.,*	A T Ω House.
Crowell, Lincoln,	*Dorchester, Mass.,*	101 Oak Hall.
Currier, Charles Ellsworth,	*Brewer,*	Φ K Σ House.
Danforth, Franklin Wendell,	*Skowhegan,*	108 Oak Hall.
Dickinson, Raymond Nettleton,	*Hartford, Conn.,*	J. P. Spearen.
Dolbier, William Ray,	*Salem,*	Middle St.
Edwards, Dayton James,	*Oaks,*	Φ K Σ House.
Elliot, Samuel Gault,	*Rumford Point,*	303 Oak Hall.
Elliott, Hallet Carroll,	*Patten,*	16 Main St.
Elms, James William,	*Foxcroft,*	A T Ω House.
Emery, Harry Alvah,	*North Anson,*	B Θ Π House.
Floyd, Charles Wallace,	*Wytopitlock,*	Oldtown.

Forbes, Clinton Fairfield,	*Buckfield,*	Σ X House.
Frost, Walter Oscar,	*Rockland,*	Φ Γ Δ House.
Glover, Philip Holden,	*Harrington,*	Β Θ Π House.
Goodwin, George Parlin,	*Skowhegan,*	Φ Γ Δ House.
Gray, Claude Albert,	*Bridgton,*	211 Oak Hall.
Hamlin, Roy Gilbert,	*Gorham, N. H.,*	Φ Κ Σ House.
Harding, Brydone Ellsworth,	*Danforth,*	302 Oak Hall.
Harlow, Frederic Hall,	*Gorham,*	Φ Κ Σ House.
Hews, Wellington Prescott,	*Ashland,*	Α Τ Ω House.
Hill, George Herbert,	*Saco,*	Σ Α Ε House.
Hodgdon, Carolyn Adelle,	*Hampden Corner,*	Mt. Vernon. [House.
Howard, Lester Boyton,	*Dover,*	Θ Ε House.
Hoxie, Harold Shepherd,	*Fairfield Center.*	Θ Ε House.
Hoxie, Harvey Hamlin,	*Waterville,*	307 Oak Hall.
Johnson, Caleb Hartwell,	*Nahant, Mass.,*	102 Oak Hall.
Jones, Gertrude May,	*Corinna,*	Mt. Vernon House.
Karl, Harold Louis,	*Rockland,*	Σ X House.
Kittredge, Raymond Brown,	*Beverly, Mass.,*	Σ Α Ε House.
Lord, Ralph Edwin,	*Bangor,*	Β Θ Π House.
Lovett, Merton Rooks,	*Beverly, Mass.,*	Σ Α Ε House.
McDermott, William Laurence,	*Biddeford,*	Α Τ Ω House.
Morse, Harrison R.	*Merrimac, Mass.,*	Pine St.
Newman, Max Gibson,	*Fryeburg,*	Κ Σ House.
Nichols, Leroy Cleveland,	*Saco,*	Σ Α Ε House.
Olds, Robert Franklin,	*Lewiston,*	301 Oak Hall.
Owen, George Stuart,	*Portland,*	Φ Γ Δ House.
Paige, James Lonsdale,	*Southbridge, Mass.,*	Σ X House.
Perry, Estelle,	*Penobscot,*	Mt. Vernon House.
Porter, Roy Hiram,	*South Paris,*	Σ Α Ε House.
Prince, Charles Edward,	*Kittery,*	307 Oak Hall.
Reed, Frank Radford, Jr.,	*Rumford Falls,*	Σ Α Ε House.
Reynolds, Thomas Harold,	*Eastport,*	Φ Γ Δ House.
Richards, Earle Revere,	*New Gloucester,*	Φ Κ Σ House.
Richardson, Alton Willard,	*Bethel,*	Main St.
Rogers, Daniel Nathan,	*Patten,*	Κ Σ House.
Ross, Harold Dockum,	*Skowhegan,*	Prof. Walker.
Sawyer, Edgar John,	*Milbridge,*	Κ Σ House.
Sherman, Raphael Simmons,	*Camden,*	Σ X House.
Simmons, John Percy,	*Belfast,*	2 Pine St.

Smith, Ralph Seldon,	*Orono,*	44 Main St.
Southard, Frederick Dean,	*Dorchester, Mass.,*	Φ Γ Δ House.
Sparrow, Arthur Leonard,	*South Orleans, Mass.,*	Prof. [Walker.
Stanford, Edward Arthur,	*Lovell,*	Σ A E House.
Stevens, Fred Oramel,	*Nashua, N. H.,*	Φ K Σ House.
Stewart, Frank Carroll,	*Farmington,*	Θ E House.
Tarbox, George Roger,	*Calais,*	Σ A E House.
Wallace, James Gordon,	*Portland,*	B Θ Π House.
Weick, Frank Bridge,	*Springfield,*	Θ E House.
Weymouth, Arthur Pettengill,	*Dexter,*	Φ Γ Δ House.
Whitmore, Albert Ames,	*Fryeburg,*	311 Oak Hall.
Worcester, Herbert Wheeler,	*Portland,*	109 Oak Hall.

SOPHOMORES

Aiken, Edith Nora,	*Brewer,*	Mt. Vernon House.
Alexander, William Wesley Banister,	*Everett, Mass.,*	[310 Oak Hall.
Allen, Frank Samuel,	*Brewster, Mass.,*	103 Oak Hall.
Alton, Francis Osgood,	*West Lynn, Mass.,*	2 Pine St.
Ames, John Atwood,	*Lewiston,*	209 Oak Hall.
Balentine, Marion,	*Orono,*	Mt. Vernon House.
Barrows, Arad Thompson,	*Burleigh,*	16 Main St.
Barrows, Lucius Dwelley,	*Foxcroft,*	Σ A E House.
Bates, John Thaxter,	*Calais,*	37 North Main St.
Bean, Chester Howe,	*Bethel,*	209 Oak Hall.
Bean, Ernest Daniel,	*Haverhill, Mass.,*	Pine St.
Bean, Perry Ashley,	*Albany,*	206 Oak Hall.
Bird, Sidney Morse 2d,	*Rockland,*	B Θ Π House.
Black, Walter Wright,	*Beverly, Mass.,*	Σ A E House.
Brooks, Joseph Henry,	*Milltown,*	Σ A E House.
Brown, Amon Benjamin,	*Lincolnville,*	Φ Γ Δ House.
Bucknam, Ralph Emerson,	*Eastport,*	212 Oak Hall.
Burleigh, John Holmes,	*South Berwick,*	A T Ω House.
Burns, Caleb Edgar Slocomb,	*Fort Fairfield,*	Φ Γ Δ House.
Cayting, Arno Burr,	*Brewer,*	111 Oak Hall.
Claflin, Francis Marsh Albee,	*Upton, Mass.,*	Mill St.
Clayton, Robert Edmund,	*Bangor,*	K Σ House.
Coffin, Roy Selwin,	*Bangor,*	Bangor.

Colcord, Joanna Carver,	*Searsport,*	Mt. Vernon House.
Connell, Bennett Robert,	*Houlton,*	Σ X House.
Cony, Daniel William,	*Augusta,*	Β Θ Π House.
Cummings, Elmer,	*Paris,*	308 Oak Hall.
Davidson, Edward Burleigh,	*York Village,*	Α Τ Ω House.
Davis, Charles Eugene,	*Bridgton,*	Θ Ε House.
Druery, Edward James,	*Augusta,*	Myrtle St.
Emmons, John Walton,	*Biddeford,*	Α Τ Ω House.
Erskine, Fred Stoddard Neville,	*East Boston, Mass.,*	Θ Ε House.
Eveleth, Harry Pope,	*Greenville Junction,*	Κ Σ House.
Fagan, James Patrick Vincent,	*Oldtown,*	Oldtown.
Fogg, Charles Matthew,	*Cornish,*	37 North Main St.
Foster, Roberto Mower,	*Lisbon,*	Φ Κ Σ House.
French, Cecil Sumner,	*Kingfield,*	Myrtle St.
Galland, Joseph,	*Biddeford,*	Α Τ Ω House.
Gellerson, Rex C.,	*Fort Fairfield,*	Θ Ε House.
Goodrich, Joe Kinsman,	*Skowhegan,*	Κ Σ House.
Harlow, Edward Thomas,	*South Brewer,*	112 Oak Hall.
Harvell, John Perham,	*Red Beach,*	206 Oak Hall.
Hatch, Roy Otis,	*West Groton, Mass.,*	[J. P. Spearen.
Hayter, George Henry,	*Clinton, Mass.,*	102 Oak Hall.
Hayward, Guy Edwin,	*Winthrop,*	Φ Γ Δ House.
Hilliard, Stanley Tyng,	*Oldtown,*	Φ Γ Δ House.
Hodgkins, Lincoln Hall,	*Bunker Hill,*	Middle St.
Holbrook, Franklin Pratt,	*Brooks,*	101 Oak Hall.
Hooper, Elmer Guy,	*West Lynn, Mass.,*	Geo. L. [Spaulding.
Hosmer, Fred Pote,	*Rockland,*	Α Τ Ω House.
Hussey, Erwin Howard,	*Guilford,*	208 Oak Hall.
Hutchins, Wilbury Owen,	*Orland,*	39 North Main St.
Illingworth, Miles William,	*Worcester, Mass.,*	Φ Γ Δ House.
Iversen, Arthur,	*Portage Lake,*	Σ X House.
Jordan, Victor Burns,	*Hartland,*	J. P. Spearen.
Judkins, Ernest Laroy,	*Skowhegan,*	Main St.
Keirstead, Horton Wilmot,	*Oakland,*	Σ X House.
Keene, Leroy David,	*Norway,*	Φ Κ Σ House.
Knowlton, Herbert Austin,	*Pembroke,*	6 Main St.
Lambe, Emerson Peavy,	*Calais,*	206 Oak Hall.
Lambe, Reginald Robert,	*Calais,*	Σ Α Ε House.

Lekberg, Carl Henry,	*Worcester, Mass.,*	Σ X House.
Lisherness, Ernest,	*N. New Portland,*	Φ Γ Δ House.
Lord, Arthur Russell,	*Ipswich, Mass.,*	112 Oak Hall.
Lunt, Harvey Melville,	*Lewiston,*	K Σ House.
McKenzie, Herman Ellis,	*West Jonesport,*	205 Oak Hall.
Macomber, Carlton Hambly,	*Portsmouth, R. I.,*	308 Oak Hall.
Maddocks, Frank Everett,	*Bluehill,*	208 Oak Hall.
Malloy, Thomas Angelo,	*Lewiston,*	10 Pine St.
Mansfield, Mildred Charlotte,	*Orono,*	16 Bennoch St.
Martin, Charles Henry,	*Fort Fairfield,*	Φ Γ Δ House.
Matheas, Fred Walter,	*Bangor,*	103 Oak Hall.
Matthieu, Joseph Clarence,	*Farmington,*	203 Oak Hall.
Merrill, Joseph Farrington,	*Auburn,*	Prof. Drew.
Morrison, James Joseph,	*Pembroke,*	Mill St.
Nickles, Herbert Lewis,	*Cherryfield,*	Mill St.
Orne, Sidney Baxter,	*Boothbay Harbor,*	Orono House.
Packard, Harry Ellsworth,	*Winthrop,*	Σ A E House.
Pennell, Alcot Johnson,	*Melrose Highlands, Mass.,*	J. M. Craig.
Perry, Donald Cushman,	*Island Falls,*	Mill St.
Perry, Theodore Bigelow,	*Island Falls,*	Mill St.
Philbrook, Earle Walter,	*Milan, N. H.,*	B Θ Π House.
Philbrook, Howard Grenville,	*Shelburne, N. H.,*	B Θ Π House.
Pierce, Stephen Franklin,	*Cooper's Mills,*	Θ E House.
Purington, Heber Penn,	*Jay,*	21 Middle St.
Quint, Raymond Alton,	*North Berwick,*	B Θ Π House.
Read, Carroll Arthur,	*Stillwater,*	Stillwater.
Reed, Lowell Jacob,	*Berlin, N. H.,*	Φ K Σ House.
Ridge, Reginald,	*Portland,*	K Σ House.
Roberts, Guy Henry Blaine,	*Alfred,*	Σ X House.
Robinson, Reginald Elton,	*Oxford,*	111 Oak Hall.
Rockwood, Noel Mumford,	*Calais,*	54 North Main St.
Rollins, Deane Whittier,	*Farmington,*	Φ Γ Δ House.
Rounds, Albert Prentiss,	*Bridgton,*	211 Oak Hall.
Russell, William Henry,	*East Boston, Mass.,*	104 Oak Hall.
St. Onge, Walter James,	*Dover,*	212 Oak Hall.
Sampson, Arthur Haskell,	*Gorham,*	204 Oak Hall.
Scammon, William Francis,	*Berlin Mills, N. H.,*	39 North Main St.

Schoppe, William Freeman,	*West Auburn,*	Σ A E House
Seamon, Percy Ralph,	*Roxbury, Mass.,*	104 Oak Hall.
Simmons, Frederick Johnson,	*Morrill,*	Main St.
Smith, Herbert Henry,	*East Corinth,*	27 Main St.
Stetson, Everett Halliday,	*Auburn,*	K Σ House.
Stetson, Howard Carlton,	*Auburn,*	Φ K Σ House.
Stevens, Albert William,	*Belfast,*	B Θ Π House.
Stone, William Elmer,	*South Brewer,*	Φ K Σ House.
Sturtevant, Walter Linwood,	*Bangor,*	Bangor.
Swift, Porter La Forrest,	*Norway,*	Φ K Σ House.
Talbot, Richard Foster,	*Andover,*	Σ A E House.
Tate, Edith Mabel,	*East Corinth,*	Mt. Vernon [House.
Tebbets, Charles Bucknam,	*Auburn,*	4 Forest St.
Toner, Ernest Leroy,	*Auburn,*	Σ X House.
Totman, Arnold Washington,	*Fairfield,*	K Σ House.
Twombly, Frank Wesley,	*Belfast,*	Φ K Σ House.
Washburn, Willis Flye,	*China,*	A T Ω House.
Wildes, Gordon Lunt,	*Skowhegan,*	K Σ House.
Williams, Benjamin Franklin,	*North Islesboro,*	A T Ω House.
Wilson, Elmer Josiah,	*Lynn, Mass.,*	Σ X House.
Witham, Lester Clyde,	*North Anson,*	202 Oak Hall.
Wyman, Abel Percival,	*Skowhegan,*	Σ A E House.
York, Verne Jerome,	*Bangor,*	Bangor.

FRESHMEN

Bennett, DaCosta FitzMaurice,	*Lubec,*	Θ E House.
Black, Walter Lauriston,	*Sandypoint,*	14 Myrtle St.
Boyle, Claude,	*Dover,*	A T Ω House.
Brown, Sarah Ellen,	*Oldtown,*	Mt. Vernon House.
Brownell, Chester Arthur,	*Newport, R. I.,*	Θ E House.
Capen, Howard Benjamin,	*Eastport,*	B Θ Π House.
Chase, Daniel,	*Baring,*	Σ A E House.
Chase, Mildred,	*Bluehill,*	Mt. Vernon House.
Chase, Minnie Ella,	*Bluehill,*	Mt. Vernon House.
Cobb, William Alfred,	*Auburn,*	Φ K Σ House.
Collins, Bernard Ira,	*Haverhill, Mass.,*	2 Pine St.
Cram, Edward Winslow,	*Portland,*	K Σ House.
Cummings, Robert Lincoln,	*Gorham,*	201 Oak Hall.

Davis, Raymond Earl,	*Rumford Falls,*	Θ E House.
Dixon, Leon Snell,	*Orono,*	College St.
Doherty, David Frederick,	*Houlton,*	Orono House.
Dow, Owen Oscar,	*Hiram,*	Φ Γ Δ House.
Draper, Clifford Lester,	*Stoneham, Mass.,*	Θ E House.
Dunn, Emory Norwood,	*Wytopitlock,*	Θ E House.
Durgin, Albert Guy,	*Orono,*	Middle St.
Ellis, Harold Milton,	*Hingham, Mass.,*	North Main [St.
Emery, Francis Philip,	*Eastport,*	Σ A E House.
Estabrooke, Elizabeth Read,	*Orono,*	Main St.
Farnsworth, Alice Belle,	*West Sullivan,*	Mt. Vernon [House.
Fellows, Raymond,	*Bucksport,*	Φ Γ Δ House.
Fenn, Charles Henry,	*Portland,*	Σ X House.
Files, Frederick Whitney,	*Portland,*	Θ E House.
Fish, Frank Willard,	*Fall River, Mass.,*	Myrtle St.
Flanders, Burton Edward,	*Waldoboro,*	61 Mill St.
French, Frank Danforth,	*Jonesport,*	K Σ House.
Gannett, James Adrian,	*Yarmouthville,*	Φ K Σ House.
Hanscom, Arthur Snow,	*Leeds Junction,*	J. M. Craig.
Hardison, Grover Merrill,	*Caribou,*	Alec Latno.
Harmon, Ralph Chase,	*Woodfords,*	Σ X House.
Harris, Bell Curry,	*Sherman Mills,*	Oldtown.
Heath, Ralph Curtis,	*Revere, Mass.,*	J. P. Spearen.
Hill, William Andrew,	*Winterport,*	Φ Γ Δ House.
Holmes, James Albert,	*Silver Lake, Mass.,*	North [Main St.
Hopkins, George Jesse,	*Bath,*	Main St.
Howard, Elwood Lee,	*Sangerville,*	305 Oak Hall.
Hussey, Harold Orrett,	*Vassalboro,*	B Θ Π House.
Irish, Joshua Swett,	*Gorham,*	110 Oak Hall.
Johnson, Charles Arthur,	*Berlin Mills, N. H.,*	Orono [House.
Jordan, Ralph Dexter,	*Lewiston,*	Pine St.
Keating, Joseph Sylvester,	*Red Beach,*	Main St.
Kendregan, John Thompson,	*Rockland, Mass.,*	K Σ House.
Knight, George Raymond,	*North Waterford,*	206 Oak Hall.
Lancaster, Howard Augustus,	*Oldtown,*	Oldtown.
Lanpher, Stacy Clifford,	*Sebec,*	305 Oak Hall.

Libby, Paul,	*Somersworth, N. H.,*	304 Oak [Hall.
Locke, Samuel Barry,	*West Paris,*	Σ X House.
Loft, John Edgar,	*Springfield,*	North Main St.
Lord, Leslie Roland,	*Poquonock, Conn.,*	Σ X House.
McArthur, Chase,	*Milltown,*	54 North Main St.
McNamara, William Stephen,	*Millville, Mass.,*	J. P. Spearen.
Meserve, Claude Pitman,	*North Bridgton,*	Σ A E House.
Miner, Henry LeRoy,	*Haverhill, Mass.,*	A T Ω House.
Mitchell, Robie Lawton,	*West Newfield,*	Φ Γ Δ House.
Morton, Fred Constine,	*South Windham,*	110 Oak Hall.
Neal, Arthur Francisco,	*North Berwick,*	B Θ Π House.
Penny, Paul Stinchfield,	*Augusta,*	210 Oak Hall.
Perkins, Howard Lewis,	*Augusta,*	210 Oak Hall.
Prescott, Glenn Carleton,	*Bradford, Mass.,*	2 Pine St.
Reynolds, Carl Wilson,	*Bar Harbor,*	Θ E House.
Rich, Harry Herbert,	*Bangor,*	K Σ House.
Robinson, Philip Increase,	*Waterville,*	Φ K Σ House.
Sargent, Leslie Wheeler,	*South Brewer,*	B Θ Π House.
Savage, Edland Donald,	*Ellsworth,*	Φ K Σ House.
Sawyer, William Robert,	*Milbridge,*	K Σ House.
Seavey, Lewis Harold,	*Thomaston,*	61 Mill St.
Skofield, Perley Fiske,	*Houlton,*	Park St.
Smith, Frank Folsom,	*Rumford Falls,*	Σ A E House.
Smith, Herman Brackett,	*Saco,*	Φ K Σ House
Smith, Oscar Franklin,	*Calais,*	37 North Main St.
Smith, Raymond Judson,	*Skowhegan,*	Φ Γ Δ House.
Steward, Robert Kent,	*Skowhegan,*	Φ Γ Δ House.
Stuart, George Albert,	*Calais,*	37 North Main St.
Sturtevant, Merle Alton,	*Hebron,*	207 Oak Hall.
Tabor, Ralph Sanborn,	*Haverhill, Mass.,*	A T Ω House.
Talbot, Robert Elwin,	*Andover,*	Σ A E House.
Thomas, Levi Barrett,	*Skowhegan,*	Main St.
Todd, Arthur Lee,	*Georgetown,*	Main St.
Trask, Warren Dudley,	*Augusta,*	K Σ House.
Vickery, Earle Nelson,	*Pittsfield,*	Main St.
Weston, Clarence McLellan,	*Madison,*	Mrs. Graves.
Wilbur, Walter Edmund,	*Pembroke,*	Main St.
Yates, Howard Douglass,	*Atlanta, Ga.,*	K Σ House.
Young, Bert Harvey,	*Bar Harbor,*	Φ Γ Δ House.

SHORT PHARMACY COURSE

SOPHOMORES

Bailey, Frank Linwood,	*South Harpswell,*	Α Τ Ω House.
Chaney, Irvin Wayne,	*Brunswick,*	108 Oak Hall.
Hurd, William Bromley,	*North Berwick,*	303 Oak Hall.
Knight, Mary Louise,	*North Bridgton,*	Mt. Vernon [House.
Maxwell, John Willard,	*Winthrop,*	Θ Ε House.
Reemie, Edgar Warren,	*East Machias,*	Pine St.

FRESHMEN

Gordon, Harry Leon,	*Haverhill, Mass.,*	Β Θ Π House.
Marr, Leon Herbert,	*Farmington,*	203 Oak Hall.
Preble, Ralph Huston,	*Machias,*	Θ Ε House.
Riley, Philip Henry,	*Bangor,*	Bangor.
Williams, Roger Oland,	*Hartland,*	J. P. Spearen.

SPECIAL STUDENTS

Bird, Ralph Butler,	*Rockland,*	Β Θ Π House.
Blaisdell, Ernest Dennison,	*Oakland,*	Θ Ε House.
Brown, Elon Leroy,	*Norway,*	G. L. Spaulding.
Bye, Terschek Franzoir,	*Kennebunk,*	Φ Γ Δ House.
Colcord, Maude Brown,	*Searsport,*	Mt. Vernon House.
Coleman, Everett Clinton,	*Roxbury, Mass.,*	Alec Latno.
Crowell, Philip Holmes,	*Orono,*	College St.
Downing, Herbert Plummer,	*Ripley,*	Peter St.
Drew, Pierce Allen,	*Orono,*	Mill St.
Farnham, Walter Elwood,	*Canaan,*	Κ Σ House.
Fifield, Ralph Herbert,	*Dexter,*	Φ Γ Δ House.
Godfrey, Harold Ernest,	*Litchfield Corner,*	36 Main St.
Hall, William Dickson,	*Rockland,*	Φ Γ Δ House.
Hammond, Roydon Lindsay,	*Orono,*	Main St.
Hodgkins, Alden E.,	*Damariscotta Mills,*	3 Forest St.
Hoyt, Ernest Clair,	*Fort Fairfield,*	Α Τ Ω House.
Hunting, Joseph V.,	*Plymouth, Mass.,*	
Jacobs, Joseph,	*West Boylston, Mass.,*	[3 Middle St.
Libby, Eva Catherine,	*Hartland,*	Mt. Vernon House.

Lincoln, Samuel Bicknell,		J. P. Spearen.
Little, Herbert Oakes,	*Augusta,*	Pine St.
McIntire, John Bird,	*Belfast,*	Σ A E House.
McKenney, Blake,	*Bangor,*	Bangor.
May, Seth,	*Auburn,*	57 Mill St.
Means, Otis Witham,	*Machias,*	Φ Γ Δ House.
Mitchell, Sanford Stevens,	*Cherryfield,*	J. P. Spearen.
Moody, Ralph Henry,	*Turner,*	K Σ House.
Moore, Shirley Maynne,	*Bangor,*	103 Oak Hall.
Morton, John Langford,	*Plymouth, Mass.,*	
Osgood, William Thompson,	*Garland,*	Main St.
Pease, Fred Forrest,	*Livermore Falls,*	Alec Latno.
Pilsbury, Marguerite Dorothy,	*Belfast,*	Mt. Vernon House.
Potter, Robert Eaton,	*Bath,*	Σ X House.
Richardson, Fred Joel,	*Oldtown,*	Oldtown.
Smith, George Lewis,	*Longcove,*	Σ X House.
Spofford, Judson Gould,	*South Paris,*	3 Forest St.
Thomas, Searle Fowler,	*Lincoln,*	Φ K Σ House.
Varney, Perley Wood,	*Windham Center,*	Alec Latno.
Wilson, Edgar Kennard,	*Portland,*	Σ X House.
Witherell, Louis Von,	*Oakland,*	B Θ Π House.

SCHOOL OF AGRICULTURE

SECOND YEAR

Bailey, Herbert Barton,	*Biddeford,*	Campus.
Black, Hedley Chapman,	*Winthrop,*	55 Main St.
Wakefield, Mark Harlan,	*Biddeford,*	Campus.

FIRST YEAR

Abbott, Stephen Edward,	*Bethel,*	G. L. Spaulding.
Bickford, Harold Frank,	*North Dixmont,*	[G. L. Spaulding.
Carver, J. H.,	*Vinal Haven.*	
Hall, Elmer Joseph,	*Fort Fairfield,*	Θ E House.
Houghton, Ervin Albert,	*Fort Fairfield,*	14 Myrtle St.
Packard, Ransom,	*Brockton, Mass.,*	J. P. Spearen.

SUMMER SCHOOL

Allen, Caroline F., *Bangor,*
Balentine, Marion, *Orono,* Mathematics.
Burnham, Agnes Rowena, Ph. B., *Orange, Mass.,* English, [History, Botany.
Univ. of Me., 1900, Teacher in Orange, Mass., High School.
Curtis, J. Dwight, *Brunswick,* French, [Mathematics.
Dixon, Leon Snell, *Orono,* Physics, French.
Fagan, James Patrick Vincent, *Oldtown,* English, Mathematics.
Felch, Llewellyn Moses, *Houlton,* Physics, Chemistry.
Instructor in Science, Ricker Classical Institute.
Fogler, Ben Baker, *Skowhegan,* Physics, Chemistry.
Fuller, Laura Belle, *Bowery Beach,* History, French, [English.
Gardner, George Redman, B.A., *Bridgton,* Physics.
Bowdoin, 1901. Principal High School.
Griffin, Howard Cousens, B. A., *Bangor,* Chemistry.
Bowdoin, 1904.
Hamilton, Willard Packard, B. A., *Caribou,* Physics, Chemistry.
Bates, 1900. Principal High School.
Jones, Gertrude May, *Corinna,* English, Physics.
Larlie, Pearl, *Perth, N. B.,* English, French.
McDougall, John Henry, *Quincy, Mass.,* Mathematics.
Merriman, San Lorenzo, B. A., *Presque Isle,* Chemistry. [Physics, Latin.
Bowdoin. Principal High School.
Merrill, Maurice Palmer, *Skowhegan,* Chemistry, Physics.
Mitchell, Fred Carlton, B. S., *Camden,* Physics, Chemistry.
University of Maine, 1900. Principal High School.
Moody, Frank Wilson, *Hallowell,* French, Physics.
Nichols, Clara Isabelle, *Saco,* French, Chemistry.
Paul, Josephine Frances, *Camden,* French, German, [History.
Perkins, DeForest Henry, Ph. B., *Skowhegan,* History, French, [English.
University of Maine, 1900. Principal High School.
Preble, Joy Marian, *Bangor,* Chemistry, Physics.
Reed, Geneva Alice, *Orono,* German, Chemistry.
Savage, Edland Donald, *Ellsworth,* Latin, Algebra.

Smith, G. Lewis,	*Longcove,*	English, [Mathematics.
Steward, Robert Kent,	*Skowhegan,*	Physics, [Mathematics.
Trecartin, Etta Bradford,	*Lubec,*	History, English.
Twombly, Guy Mark,	*Monroe,*	Botany, English, [History.
Tooker, Christine Fay,	*Caribou,*	History.
Wass, Clifton Ennis, Principal High School.	*Sangerville,*	French, Latin.

THE COLLEGE OF LAW

GRADUATE STUDENTS

Blanchard, Benjamin Willis, LL. B., *Bangor,* 118 Congress St.
University of Maine, 1904.

Clough, George Edwin, LL. B., *Monson, Mass.,*
University of Maine, 1904.

Cook, Harold Elijah, LL. B., *Waterville.*
University of Maine, 1900.

Dunn, Patrick Henry, LL. B., *Bangor,* Bass Building.
University of Maine, 1902.

Folsom, LeRoy Rowell, B. S., *So. Norridgewock.*
University of Maine, 1895.

Geary, Thomas Reardon, LL. B., *Bangor,* 20 State St.
University of Maine, 1903.

Greeley, Harold Dudley, LL. B., *Cambridge, Mass.*
New York University, 1903.

Hight, Clarence Bertram, LL. B., *Dexter,*
University of Maine, 1904.

Lord, Harry, LL. B., *Bangor,* 82 Cumberland St.
University of Maine, 1902.

Merrill, John Bryant, *Bangor,* 26 Jefferson St.

Noble, Ernest Eugene, B. A., *Blaine.*
Colby College, 1897. LL. B., University of Maine, 1903.

Putnam, Varney Arthur, B. A., *Danforth.*
Colby College, 1899. LL. B., University of Maine, 1902.

Plumstead, Frank, B. A., *Bangor,* Morse-Oliver Building.
Bates College, 1896. LL. B., University of Maine, 1901.

Reid, Charles Hickson, LL. B., *Bangor,* 60 Lincoln St.
University of Maine, 1903.

Robinson, William Henry, LL. B., *Bangor,* 42 Hammond St.
University of Maine, 1902.
Selkirk, Robert William, LL. B., *Bangor,* 16 Broad St.
University of Maine, 1902.
Violette, Nil Louis, B. A., *Van Buren.*
St. Mary's College. LL. B., University of Maine, 1903.
Waterhouse, William Henry, LL. B., *Oldtown.*
University of Maine, 1900.
Wood, Clarence Ashton, LL. B., *Syracuse, N. Y.*
American University, 1903.

SENIORS

Andrews, Percy Melville, B. A., *Portland,* 25 State St.
Colby College, 1901.
Bridges, Ansel Harrison, *Easton,* Oldtown.
Brown, Leon Gilman Carleton, *Milo,* 151 Ohio St.
Brown, Royal Weaver, *Boyd Lake,* 151 Ohio St.
Crawford, Adolphus Stanley, *Oldtown,* Oldtown.
Davis, Waldo Trevor, B. A., *Clinton, Mass.,* 50 Charles St.
Dartmouth College, 1901.
Doyle, Joseph Henry, *Franklin,* 179 Union St.
Foster, Walter Herbert, *Dorchester, Mass.,* 228 State St.
Johnson, William Ashbury, *Milo,* 46 Jefferson St.
Keyes, Orman Leroy, *Stetson,* 151 Ohio St.
Lancaster, Arthur Blaine, *Gardiner,* 239 Union St.
Linehan, Daniel Joseph, *Bradford, Mass.,* 100 Ohio St.
MacLean, Neil Vincent, *Bangor,* 145 Garland St.
Record, Lewis Stillman, Ph. B., *Worcester, Mass.,* 365 Union St.
Brown University, 1902.
Robinson, Curville Charles, *East Machias,* 123 Essex St.
Ross, Harry Francis, B. A., *Bangor,* 88 Broadway.
Harvard University, 1897.
Smalley, Charles Tobias, *Rockland,* 316 Hammond St.
Wall, Erastus Lewis, B. A., *Bangor,* 25 State St.
Bates College, 1902.
Winslow, Joseph Towne, *New Bedford, Mass.,*
250 Hammond St.
Wormwood, Thurston Pike, *Bangor,* 380 Union St.
Worster, George Henry, *Bangor,* 234 Center St.

JUNIORS

Brooks, Gerry Lynn,	*Upton,*	185 Pine St.
Burgess, J. Fred,	*Bangor,*	77 James St.
Burnham, Elmer John,	*Kittery,*	350 Hammond St.
Colby, James Adams,	*Lynn, Mass.,*	260 Hammond St.
Conners, Charles Patrick, B. A., Bowdoin College, 1903.	*Bangor,*	354 State St.
Cowan, George Albert,	*Hampden,*	Hampden.
Dunbar, Oscar Hall,	*Jonesport,*	25 State St.
Fox, Lewis Edwin,	*Lovell,*	40 Everett St.
Gardner, Herbert Nelson, B. A., Bowdoin College, 1898.	*Patten,*	11 Cedar St.
Harris, Moses Harry,	*Auburn,*	228 State St.
Hasty, Percy Albert,	*Brooks,*	202 Union St.
Lalibertè, Joseph Alphonse,	*Fort Kent,*	250 Hammond St.
Pike, George William,	*Lisbon, N. H.,*	91 Fifth St.
Roix, William Richard,	*Bangor,*	25 State St.
Swett, Lucius Black,	*West Hollis,*	74 Third St.
Warren, William Moncena, B. A., Bowdoin College, 1901.	*Bangor,*	285 Center St.

FIRST YEAR STUDENTS

Bangs, Harry Edgar,	*Freedom,*	151 Ohio St.
Brenner, George Henry,	*West Townsend, Mass.,*	74 Third St.
Brown, Winfield Scott, B. A., Bates College, 1895.	*Dexter,*	3 Granite Block.
Buckley, John,	*Union, Conn.,*	50 Charles St.
Clark, Jerome Borden,	*West Gouldsboro,*	[250 Hammond St.
Cotton, Carl, B. A., Colby College, 1900.	*Fairfield,*	11 Holland St.
DeWolfe, Robert William,	*Portland,*	74 Third St.
Dudley, John Perley, Colby College.	*Mapleton,*	25 State St.
Finnigan, James Patrick,	*Bangor,*	54 Summer St.
Hamlin, Joseph Wilbur,	*Bethel,*	25 State St.
Holman, Wilmer Harrison,	*Dixfield,*	316 Hammond St.
Keegan, John Joseph,	*Lubec,*	28 Second St.

Lilley, George Edgar,	*New Bedford, Mass.,*	[50 Charles St.
Monroe, Edward Roy,	*Portland,*	187 Essex St.
Moody, John Franklin, Jr., B. A., Colby College, 1900.	*Auburn,*	242 State St.
Moore, Charles Dana Clift,	*Lynn, Mass.,*	Orono (Kappa [Sigma House.)
O'Halloran, Thomas Henry, University of Vermont.	*Marlboro, Mass.,*	242 State St.
Perry, Lawrence Swift,	*New Bedford, Mass.,*	50 Charles [St.
Phinney, Willard Herbert,	*Edmunds,*	28 Second St.

SPECIAL STUDENTS

Chandler, Carroll Delwin,	*Bangor,*	22 Short St.
Clark, Dana Leander,	*Belgrade Lakes.,*	75 Fourth St.
Comerford, Michael Joseph,	*Worcester, Mass.,*	141 Ohio St.
Doyle, Fred Eugene, B. A., Holy Cross College, 1901.		105 Third St.
Head, Frank Samuel,	*Bar Harbor,*	17 James St.
Lewis, Charles Goodell,	*New Bedford, Mass.,*	50 Charles St.

SUMMARY

Graduate Students		12
Seniors		87
Juniors		81
Sophomores		121
Freshmen		88
Short Pharmacy, Sophomores	6	
Freshmen	5	11
Special Students		40
School of Agriculture, Second Year	3	
First Year	6	9
Summer School		31
College of Law, Graduate Students	19	
Seniors	21	
Juniors	16	
First Year	19	
Special Students	6	81
Total		561
Names counted twice		7
		554

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