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1904

BEING THE

ANNUAL REPORTS

OF THE VARIOUS

DEPARTMENTS AND INSTITUTIONS

For the Year 1903.

VOLUME IV.

AUGUSTA
KENNEBEC JOURNAL PRINT
1904

ANNUAL REPORT

OF THE

UNIVERSITY OF MAINE

FOR THE YEAR 1903

PART I

REPORTS OF TRUSTEES, PRESIDENT, AND TREASURER

AUGUSTA
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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-fifth annual report, with the reports of the President and Treasurer.

In the comprehensive report of President Fellows will be found reference in detail to the different departments, and the various interests of the University.

In the early part of the year the term of office of Colonel Charles Plummer Allen of Presque Isle, as Trustee, expired, and the Honorable Charles L. Jones of Corinna was appointed as his successor.

Colonel Allen was graduated from the University in 1876, and he served as Trustee fourteen years. He was familiar with the affairs of the University for many years, and was deeply interested in everything pertaining to its progress and development, and earnestly endeavored at all times to promote its welfare.

The Honorable Charles L. Jones, his successor, was a friend of the University while a member of the seventy-first Legislature. He is a practical and experienced farmer, especially interested in the agricultural side of the University, and will doubtless make a valuable and efficient Trustee.

In June Professor Nathan C. Grover, who has been connected with the University as student and member of the Faculty for sixteen years, resigned his position as Professor of Civil Engineering to accept a more satisfactory position under the United States Government. Professor Grover is a man of high character and fine ability, and a superior teacher. His departure from the University was deeply regretted by students, faculty and trustees.

Mr. Harold S. Boardman, who was graduated from the University in 1895, took a post graduate course at the Massachusetts Institute of Technology, and later had practical experience as an engineer with the American Bridge Company, has been appointed to succeed Professor Grover.

During the year the Faculty has been increased by a number of exceptionally strong men. Among them are Professor J. B. Segall, Professor of Romance Languages; Professor Samuel N. Spring, Professor of Forestry; Professor William B. Hurd, Professor of Agriculture; Professor Ernest G. Lorenzen, Professor of Law; and Captain Charles J. Symmonds, Professor of Military Science and Tactics.

President Fellows in his report refers to the high qualifications of these gentlemen for the positions to which they have been chosen, and also refers to other changes in the faculty.

The University buildings are generally in good condition. Necessary repairs, alterations and improvements more or less extensive, have been made on most of the larger buildings, under the careful superintendence of Professor Howard S. Webb. A small wooden building for hospital purposes has been erected, and an extensive addition is being made to the Experiment Station building.

The new Engineering building, for which the last Legislature appropriated $35,000, now in process of construction under superintendence of Professor Perley Walker, Professor of Mechanical Engineering, will be ready for use early in 1904. It will be a fine building, and will afford splendid facilities to the departments of Electrical and Mechanical Engineering.

The dormitory accommodations are much too small to provide for the students who should live on the University campus. These accommodations have been increased but little during the past ten years, while the students within that time have increased in number fourfold.

The fraternity houses provide for about two hundred students. President Fellows, by persistent effort and good management, has been able to care for something more than one hundred students for whom no abiding place could be found on, or near to the campus. He has, with the consent of the Trustees, leased for a term of years two buildings, one in Orono village, formerly a hotel, and the other a large building north of the campus, and had them put in suitable condition for dormitory purposes. There should be erected as soon as possible on the University campus, a dormitory building large enough to properly accommodate from one hundred to one hundred and twenty-five students.

Of the new departments established during the year, it is believed that the department of Forestry and the secondary school of Agriculture will be especially attractive to Maine students. The great agricultural resources of our State, and her vast area of forest lands, certainly afford broad fields for the employment of young men who may receive the instruction given in these two departments.

The work of the Experiment Station is being more highly appreciated by the people of Maine, as the extent and value of that work becomes more generally known.

The attendance at the Law School is constantly increasing, and the fact that all of the graduates of 1903 who took the required bar examinations in Maine and Massachusetts, were admitted to the practice of law in those states, is a substantial proof of the thoroughness of the instruction given in this department of the University.

There are on the campus belonging to the University, more than a score of buildings, nearly all constructed of brick. These buildings could not at the present time be replaced for a quarter of a million dollars. The present system of heating these buildings is expensive and unsatisfactory. The Trustees look hopefully forward to the time when

a central heating plant can be established, from which all of the buildings on the campus can be heated at much less expense and more satisfactorily, than under the present system.

The University of Maine is apparently successful in every respect. Good work is being done in all of the departments. Its continuous prosperity and steady, healthful growth are extremely gratifying to all interested in its welfare.

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 of Maine has the honor to present his second annual report covering the years 1902-1903.

CHANGES IN THE BOARD OF TRUSTEES AND FACULTY

At the expiration of the term of office of Honorable Charles Plummer Allen the Governor and Council appointed to fill the vacancy, Honorable Charles Levi Jones of Corinna. Mr. Jones is a man of practical experience, and a successful farmer. The addition of Mr. Jones to the Board of Trustees will insure a strong interest in the development of the agricultural department of the University. He has already shown great interest in the practical management of the University and it is expected that he will render valuable service to the institution. The other members of the Board remain as heretofore.

During the spring term of 1903 Professor Nathan Clifford Grover presented his resignation as Professor of Civil Engineering. Professor Grover has been in the service of the department of Civil Engineering for two years as instructor, three years as assistant professor, and seven years as professor. Professor Grover had an offer of a position as Director of the Hydrographic Survey of New England, for the United States Government. Believing that he would enjoy the work and that it might lead to a larger field of usefulness he accepted it. It was with the keenest regret of the faculty and the student body that Professor Grover's resignation was accepted. He had been thoroughly efficient as a teacher, and especially valuable as a member of the working committees of the faculty. The institution, however, was extremely fortunate in having in the department, as instructor in Civil Engineering, Harold Sherman Boardman, whose thorough training, not only in this institution, but at the Massachusetts Institute of Technology, prepared him to assume the responsibilities of administering the department. With the title of associate professor he has been placed in charge of the work in Civil Engineering, and there seems every reason to believe that he will prove a worthy successor to Professor Grover. He has had practical experience in engineering work with the American Bridge Company for two years, and has had teaching experience for five years.

During the autumn of 1902 Captain Amos H. Martin of the 19th Infantry, was detailed for service as Commandant of Cadets at this in-

stitution, Captain Martin did not report for duty until December, and for the brief period preceding the arrival of Captain Martin, Captain Harry Smith of the National Guards of the State of Maine was employed to give military instruction. Captain Martin did not remain long with us. He was detailed to a position in the quartermasters' department in the Philippine Islands. The irregularity of the drill and the changes in the administration of the department so disarranged the military work that the freshman class was not as well prepared for military duty at the time of the resignation of Captain Martin as it should have been. In March, 1903, Captain Charles J. Symmonds, of the 12th Cavalry, was appointed to succeed Captain Martin. Captain Symmonds reported for duty on April 14, 1903, and immediately began a systematic arrangement of the military work. Captain Symmonds's personal qualities and experience in handling large bodies of men are such that we have every reason to believe that our military department will be maintained in a most efficient manner during his term of office.

Professor William E. Walz was placed in charge of the Law School as Acting Dean at the resignation of Professor Gardner at the end of the school year 1901-1902. The Law School prospered under his administration, largely increasing in numbers, and at the June meeting of the Board of Trustees, Professor Walz was made Dean of the Law School. There is every reason to believe that Professor Walz's efficient service will insure the continued prosperity of the Law School.

When Dean Gardner resigned there had been two men, including the Dean, who had given their whole time to instruction in the School. During the first year of the administration of Dean Walz the teaching was done by members of the Bar in Bangor, and elsewhere, who gave a portion of their time only to teaching. At the recommendation of Dean Walz the Board voted to employ another professor of Law who should take the place of Professor Walz promoted. Accordingly, Mr. Ernest G. Lorenzen, a member of the law firm of Goldsborough, Villard & Warner, New York City, was engaged. Mr. Lorenzen is a graduate of Cornell University and of the Cornell School of Law. He studied in Germany and took the degree of J. U. D. at Göttingen in 1901. Mr. Lorenzen's training and personality lead us to prophesy a successful career for him.

Mr. Alfred Y. Dubuque, instructor in the department of Modern Languages, resigned at the close of the year 1902-1903.

At the recommendation of the President the Trustees voted to divide the department of Modern Languages into the two departments of Germanic and Romance Languages, and authorized the appointment of a professor of Romance Languages. Accordingly, Professor J. B. Segall was engaged. Professor Segall has been for six years instructor in Romance Languages at Cornell University, and for two years instructor in the same subject at the College of the City of New York. His whole time since he was granted the degree of Doctor of Philosophy by Columbia University in 1893, has been devoted to teaching and study in

the line of his profession. His undoubted scholarship and experience encourage us to believe that the Romance languages will, in the future, receive more attention than they have in the past when only the divided attention of a professor whose chief interest was with the German could be given.

Professor George Depue Hadzsits, who was engaged to take the place of Professor Huddilston during his absence in Europe, completed his service with the return of Professor Huddilston in February, 1903.

Doctor Gilbert H. Boggs, who was for two years instructor in Chemistry, was offered a more lucrative and important position in the Georgia School of Technology, and resigned his position here to accept the offer. Mr. Grant Davis, a graduate of the University of Michigan in the class of 1903, was appointed to succeed Doctor Boggs.

Mr. Frank H. Mitchell, who had been tutor and instructor in Chemistry for three years, resigned to go into practical work. To succeed him, Mr. J. B. Reed, a graduate of the University of Michigan, has been appointed.

Mr. H. M. Soper, a graduate of the University of Maine in the class of 1903, has been appointed assistant in the department of Chemistry.

The department of History, which was separated from that of Civics at the beginning of the year 1903, prospered under the practical administration of Miss Colvin. By vote of the Trustees in June, 1903, Miss Colvin was advanced from the position of instructor to that of assistant professor for three years.

Mr. Walter M. Eby, instructor in Public Speaking, resigned to engage in the study of Law. Mr. N. W. Edson, a graduate of Harvard in the class of 1903, has been engaged to succeed Mr. Eby.

Mr. Walter Rautenstrauch, instructor in Mechanical Engineering, resigned to accept a similar position at Cornell University. Mr. A. C. Jewett, a graduate of the Massachusetts Institute of Technology, has been engaged as instructor to succeed Mr. Rautenstrauch.

The increase in the number of students and the amount of work in the Mechanical Engineering department demanded an additional man to give instruction in shop work. Mr. A. W. Cole, a graduate of the Worcester Polytechnic Institute, and an experienced mechanic, has been engaged for this work.

Mr. E. W. Davee has been engaged to give instruction in carpentry and blacksmithing.

Mr. Horace W. Britcher, assistant zoologist in the Experiment Station, who had been doing some important biological work under the auspices of the Experiment Station, found his health in such condition that he was compelled to resign and go to a more suitable climate. Mr. Britcher remained in Arizona for some time and returned to his parents' home in New York, where he died.

Mr. Britcher's attainments in his chosen field of work were such that had his life been prolonged he could not have failed to bring honor to himself and to the institution with which he was connected. The field of Biology has lost an able scholar, and the University of Maine a careful worker.

Mr. Horace P. Hamlin, assistant in drawing in the department of civil engineering, has been advanced to the position of instructor in that department.

Mr. C. C. Alexander, tutor in drawing, has resigned. Mr. Paul D. Simpson, a graduate of the University of Maine in the class of 1903, has been appointed to succeed him.

Mr. Ralph M. Connor, a graduate in the class of 1903, has been appointed tutor in mathematics.

Mr. H. E. Cole, tutor in Electrical Engineering, has resigned to go into practical work. Mr. V. M. Arana, a graduate of Notre Dame University, has been appointed instructor in Electrical Engineering.

Mr. W. A. Mitchell, tutor in physics, has resigned to accept a position at the Rhode Island Agricultural College.

Mr. E. H. Bowen, a graduate of Colgate University, has been appointed tutor in physics.

Mr. H. M. Shute, tutor in Modern Languages, has been appointed instructor in Modern Languages.

The number in the list of faculty is sixty-two. This, however, includes a number of instructors and lecturers in the School of Law who give but a small part of their time to teaching. The number of students in the departments of mathematics and the various languages, and engineering courses, is so great, however, that it is necessary to have very large classes. It would be unfair to have any greater number of students in these departments without an increase in the teaching force.

The scholarly attainments and breadth of training heretofore recognized as characteristic of the faculty of this institution are not only maintained, but have been increased by the cultured gentlemen who have been added to the faculty in the past year. The new members of the faculty who have been appointed hold degrees from Göttingen, Germany, Columbia University, Massachusetts Institute of Technology, Worcester Polytechnic Institute, University of Michigan, and other institutions of the highest grade. Our most valued reputation must come from the character of the instruction here given, and no pains will be spared to continue to offer the students who come here instruction by the best trained teachers which our means will permit us to engage.

DEGREES CONFERRED

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

SHORT COURSE IN PHARMACY

Ernest Lester Cowan, Ph. C., West Hampden.
Harry D. Cowles, Ph. C., Athol, Mass.
Andy Laurin Hoyt, Ph. C., Dover.
James Leroy Race, Ph. C., Boothbay.

FOUR YEARS COURSES

Ernest Linwood Baker, B. S., in Chemistry, Portland.
Archie Ray Benner, B. S., in Electrical Engineering, Waldoboro.
Cleora May Carr, Ph. B., Oldtown.

Robert Flint Chandler, B. S., in Civil Engineering, New Gloucester.
Nathan Ajalon Chase, B. S., in Chemistry, South Paris.
Leroy Milton Coffin, B. S., Freeport.
Fred Collins, B. S., in Civil Engineering, Bar Harbor.
Ralph Melvin Connor, B. S., in Civil Engineering, East Wilton.
Leroy Brown Crabtree, B. S., Hancock.
Henry Kennedy Crocker, B. S., in Chemistry, Rockland.
Rodney Clinton Davis, B. S., in Civil Engineering, Lewiston.
Sanford Crosby Dinsmore, B. S., in Chemistry, Dover.
Carlos Dorticos, B. S., Woodfords.
Frank Libby Douglass, B. S., in Civil Engineering, West Gorham.
William Norman Dyer, B. S., in Civil Engineering, Harrington.
Victor E. Ellstrom, B. S., in Civil Engineering, Fitchburg, Mass.
Samuel Joshua Foster, B. S., in Pharmacy, Bingham.
George Leonard Freeman, B. S, in Civil Engineering, West Gray.
Arthur Willard Gage, B. S., in Civil Engineering, Dennisport, Mass.
Oren Leslie Goodridge, B. S., in Civil Engineering, Orono.
Burton Woodbury Goodwin, B. S., in Civil Engineering, Berry Mills.
Shirley Preston Graves, B. S., Northeast Harbor.
Philip Howard Harris, B. S., in Electrical Engineering, Portland.
Edward Goodnow Hartford, B. S., in Civil Engineering, Calais.
John Heddle Hilliard, B. A., Oldtown.
Henry John Hinchcliffe, B. S., Worcester, Mass.
Frances Augusta Hinckley, Ph. B., Oldtown.
Claude Abbott Kittredge, B. S., in Electrical Engineering, Farmington.
Arthur Stephen Libby, B. A., Dexter.
Warren Cornelius Loud, B. S., in Civil Engineering, Caribou.
John Hollis McCready, B. S., in Electrical Engineering, Houlton.
Amy Inez Maxfield, B. S., Sandy Point.
Roderick Edward Mullaney, B. S., in Electrical Engineering, Bangor.
Stephen Edward Patrick, B. S., in Mechanical Engineering, Gorham.
Ernest Albee Porter, B. S., in Civil Engineering, Eustis.
Harold Vose Sheahan, B. S., in Civil Engineering, Dennysville.
Paul Dyer Simpson, B. S., in Civil Engineering, Sullivan.
Silas Gilman Small, B. S., in Pharmacy, Lubec.
Howard Ausburn Smith, B. S., in Civil Engineering, North Truro, Mass.
Henry Melville Soper, B. S., in Chemistry, Old Town.
Charles Wesley Stone, Jr., B. S., in Chemistry, Old Town.
Arthur Ray Towse, B. S., in Civil Engineering, North Lubec.
Isaac Emery Treworgy, B. S., Surry.
Ralph Henry White, B. S., in Mechanical Engineering, East Machais.
Harvey David Whitney, B. S., in Chemistry, Auburn.
Mellin Cleaveland Wiley, B. S., in Civil Engineering, Bethel.

SCHOOL OF LAW

Waldo Horace Bennett, LL. B., Newport.
William Wallace Buckley, LL. B., Winchendon, Mass.
Thomas Reardon Geary, LL. B., Whitneyville.

James Herbert Morson, LL. B., Marshfield, P. E. I.
Ulysses Grant Mudgett, LL. B., Hampden.
Edward Patrick Murray, LL. B., Bangor.
Ernest Eugene Noble, LL. B., Blaine.
Paul Potter, LL. B., Worcester, Mass.
Charles Hickson Reid, LL. B., Bangor.
Donald Francis Snow, LL. B., Bangor.
Nil Louis Violette, LL. B., Van Buren.
George Hayes Winn, LL. B., Lewiston.

The second degree was conferred upon the following persons, who had complied with the statutes in regard to the requirements for advanced degrees:

MASTERS' DEGREE

Charles Vey Holman (LL. B. in 1902), LL. M.
Walter Rautenstrauch (B. S. University of Missouri 1902), M. S.
Marie Cecilia Rice (B. S. 1902), M. S.

CIVIL ENGINEER

Frank Lathrop Batchelder, B. C. E. (1899).

ELECTRICAL ENGINEER

Alfred Howard Buck, B. M. E. (1895).
Harold Hayward Clark, B. M. E. (1899).

MECHANICAL ENGINEER (honorary)

Clarence Everett Watts, of the class of 1898.

STUDENTS

The number of students for the year ending June, 1902, was 411. For the year beginning July 1, 1902, and ending July 1, 1903, the number was 483. The present year will number 525. The number of new students admitted at the beginning of this academic year is 180 at Orono, and 29 at Bangor.

Of these 140 enter the freshman class in four year courses; 7 enter the short course in Pharmacy; 29 enter the School of Law. The others have been admitted to advanced standing or as special students in the various departments. The new department of Forestry has 17 students registered as taking work. The Secondary School of Agriculture opened on October 13, with 5 students. The number of inquiries concerning this course warrant us in believing that a greater demand will be felt for the work of this course than for the advanced college agricultural work. As soon as the public becomes acquainted with the opportunities offered for the practical work in agriculture we believe this course will attract numbers of students who would never fully prepare themselves for work of a college grade.

Every county in the State is represented in the student body. Every county in the State is represented in the Freshman class. The largest number of students from any one county is from Penobscot county. The largest number of students from any one town is from Bangor. The number of women students is 18.

Of the new students the State of Maine furnishes 138; Massachusetts 23; Vermont 1; Connecticut 2; Rhode Island 1; New Hampshire 5; New York 1; Maryland 1; Utah 1. The average age of the freshman class is eighteen years, one month, five days. The age of the oldest student in the freshman class is twenty-seven years, four months; of the youngest, fifteen years, eleven months.

A large proportion of the students have been admitted heretofore by certificate from certain schools approved by a committee of the faculty. During the past year, by vote of the faculty, this institution has joined the New England College Entrance Certificate Board. All of the leading colleges in New England which admit at all by certificate have joined this Board; the purpose being to have a common list of approved schools. The standard demanded of the fitting schools and high schools, in order that they may be placed upon the list of schools approved by the Board, is somewhat higher than that previously required by the individual colleges entering into the agreement. It is possible that this fact may somewhat reduce the number of new students in this institution, as well as in others, next year. If it should so operate, it will, however, warrant a high grade of scholarship in those who are admitted. It will be the continued policy of the administration of the University to knit together the interests of all of the public schools and those of the University, and we should regret exceedingly anything which would tend to hinder this accomplishment. It is believed, however. that any diminution of the number of students, which may arise from the adoption of the new method of admission, will be but temporary, and that the main result will be the elevation of the grade of work in the preparatory schools. This, then, will be a benefit to the whole system.

COURSES OF STUDY

The modifications in the requirements for graduation, which were adopted last year, have proven meritorious. The greater opportunity for electives has led most of the students to seek a broader training and has increased the number of students in those departments which tend more to breadth of general knowledge.

The courses in Agriculture have been greatly modified in the direction of offering more practical work from the beginning of the courses.

The new course in Forestry, which was made possible by the appropriation of $2,500 a year by the seventy-first legislature, has opened under the most auspicious circumstances. The course has been laid out on the same plan as the other courses, continuous work for one hour a day being offered for three full years in the subject of Forestry. The remainder of the student's time is devoted to technical, agricultural, and literary studies selected from other departments.

SCHOOL OF LAW

The percentage of increase in the number of students is greater in the Law School than in the other departments of the University for the past two years. The total number of students in attendance in the year 1901-1902, at the Law School, was 47; in the year 1902-1903 the number was 66. The number in attendance to November, 1903, is 71. The number of persons on the faculty of the School of Law, including the president and librarian, is 15. There is an increased attendance of graduates from other institutions, especially from the other Maine colleges. This is a hopeful sign that the Law School will be able to elevate the character of its work and to offer for examination well trained men.

EQUIPMENT

The equipment in most of the departments has been somewhat increased during the past year. For details of instruments and other apparatus see reports from the various departments appended to this report.

BUILDINGS

In the president's last annual report, under the head of Needs of the University, a statement was made that some provision should be made for a new shop and mechanical laboratory. This need was presented in due form to the Legislature, which appropriated $35,000 for the purpose of constructing and equipping a building for "such machine, wood, and iron working shops and laboratories as may be required for the use of the departments of Mechanical and Electrical Engineering." The Trustees met on April 14, 1903, and from various designs submitted, accepted the plans of Thomas & Crowell, Architects, of Bangor. By vote of the Trustees the contract for constructing the foundation to the building was awarded to M. C. Foster, Waterville. The foundation was completed in June, 1903, and the contract for the superstructure was let to L. E. Bradstreet, of Hallowell. At the present writing, about the middle of November, the brick laying is completed on the portion of the building devoted to the shops, and nearly completed on the portion of the building intended for the laboratories. The material is all on the grounds, and there is every evidence that the whole structure will be finished and ready for occupancy early in the year 1904.

The cost of the building will be so near to the total appropriation that not so large an amount as was hoped can be devoted to the equipment. Yet, owing to the number of students at present in the institution and likely to attend in the immediate future, it would have been very unwise to have made a smaller building. As it is, when these shops and laboratories are completed they should be sufficient for the departments of Mechanical and Electrical Engineering until the total number of students in the institution shall exceed one thousand.

By vote of the Trustees the new building has been named Lord Hall, in honor of Honorable Henry Lord, for twelve years member of the Board of Trustees, and for eleven years president of the same.

The Phi Kappa Sigma Fraternity has secured funds and erected a chapter house on the west side of the road, just south of the Phi Gamma Delta Chapter House. This is a large, commodious house, of good design, capable of furnishing homes for about thirty students.

The building leased, and known as University Hall, during the year 1902-1903, has been leased for a term of three years. Additional furniture has been purchased and certain repairs made to the building so that it now accommodates about sixty, while the dining-room has been enlarged so that from eighty to ninety persons are boarded.

It became evident as the time approached for the fall term to open that there would not be sufficient room for students in all of our dormitories and chapter houses. Consequently the large residence a few rods north of the campus was leased and put in condition to serve as a dormitory. This building has been leased for one year with the privilege of the extension of the lease to three years.

Owing to the prevalence of smallpox in the vicinity of Bangor, Orono, and Oldtown, it was ordered by a committee of the Trustees that a small building for a hospital should be constructed upon the grounds of the University. Accordingly, there has been erected, hastily but substantially, a building 15 by 38 feet, with a kitchen attached. There are two rooms on the lower floor, an entry and two closets, and one room on the second floor. Fortunately no case of smallpox has yet appeared among the students, but the building stands ready to accommodate any of the students who may be afflicted with any contagious disease. I think it advisable to have the building in perfect readiness for occupancy at any moment. Although in form and size the building is not such as should be erected if our funds were ample, yet it has long been desirable that some place should be provided where any student having a contagious disease might be isolated.

A new poultry house has been added to the equipment of the Experiment Station. This will enable the Station to carry on more successfully experiments in egg production which have given this Station an enviable reputation for the past three or four years.

NEEDS OF THE UNIVERSITY

It is always a matter of doubt whether it is wise to state fully the needs of the institution, or whether it is better to state only those necessities which are so pressing that the need will appear obvious to the casual reader.

Among the necessities of the immediate future should be mentioned that of provision for the housing of the students and faculty. It needs no argument to prove that if we have students and faculty they must have some place to live. There seems a possibility of provision for the faculty by means which it is impossible to expect will suffice for the students. Money invested in houses which will rent to members of the faculty will bring a proper interest. Hence it is merely a business proposition which may be broached to individuals or corporations which have money. But the housing of the students is a matter which must be at-

tended to by the University itself. Up to a certain limit all students who could not live in college dormitories or chapter houses could find accommodations in the village, but that limit has been reached. If we were located nearer to Bangor, so that students in large numbers could find accommodations in the city, no dormitory would be necessary. But located as we are, in the country, we shall be obliged to limit the numbers of students very soon unless provision can be made for them. At present I feel that the next Legislature should be asked to appropriate funds for the erection of a dormitory which will care for at least one hundred students.

Among the needs of the University for other buildings, although it may seem at present impracticable to ask the Legislature to appropriate funds, are a library building, a building for the department of physics, and either a new laboratory for chemistry or an addition of considerable size to the present laboratory. The unusual increase of the number of students creates this demand. All of the engineering students must take physics, and a number of students in all courses take chemistry. Hence, these departments are very crowded, and classes in these subjects cannot be held in rooms or buildings which are not especially adapted to them. A class in mathematics, or logic, or history, can meet in any room, or move about from room to room, but laboratory work must be done in the same place day after day, and the laboratory can accommodate no more than a fixed number.

The department of Horticulture needs larger and better quarters.

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 students 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.

GEORGE 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, 1903.

RECEIPTS OF THE UNIVERSITY OF MAINE FROM JULY 1, 1902, TO JULY 1, 1903.

Cash balance July 1, 1902		$965 16
Bills payable	$10,000 00	
Bills receivable	763 18	
Chemistry maintenance	71 33	
Commons	48 95	
Diplomas	91 63	
Alumni hall subscription	270 00	
Land grant fund	5,915 00	
Coburn fund	4,000 00	
Interest and discount	153 36	
Light station	918 36	
Library fines	22 58	
Morrill fund	25,000 00	
Phi Gamma Delta Construction Account	60 00	
Kappa Sigma Construction Account	40 00	
Rents	1,013 00	
State	25,000 00	
Student receipts	23,861 70	
Sundry receipts	336 34	97,565 43
		$98,530 59

NET EXPENSES OF THE UNIVERSITY OF MAINE FROM JULY 1, 1902, TO JULY 1, 1903.

Current expenses:		
Salaries		$48,184 98
Departments:		
Agriculture	$1,495 45	
Bacteriology and Veterinary Science	61 47	
Biology, equipment and maintenance	182 25	
Chemistry, equipment	28 08	
Civil Engineering	994 76	
Electrical Engineering	51 65	
Greek and Art	151 70	
History	14 00	
Latin	7 25	
Law School	1,150 34	
Mathematics and Astronomy	80 61	
Mechanical Engineering	1,016 07	
Military Science	224 08	
Modern Languages	10 25	
Pharmacy maintenance	49 53	
Physics, equipment and maintenance	192 43	
Shop	52 53	5,762 45
		$53,947 43

NET EXPENSES—*Concluded.*

General expenses:		
Advertising	$1,130 52	
Bills payable	5,000 00	
Care of Buildings	1,091 48	
Commencement	716 26	
Freight and express	312 93	
Furniture and fixtures	472 44	
Grounds, equipment and maintenance	954 12	
Heating buildings	3,088 77	
Heating plant	12 22	
Insurance	228 10	
Incidentals	121 06	
Kidder scholarship	30 00	
Library	2,581 61	
Lighting buildings and grounds	685 60	
Miscellaneous	2,210 57	
Mt. Vernon House and incidentals	342 56	
Office	162 14	
Oak Hall maintenance	168 33	
Postage and stationery	465 82	
Reading room	77 65	
General repairs	5,336 91	
School inspection	158 73	
Text books	479 54	
Track	45 65	
Treasury	159 13	
Trustees' expenses	33 34	
University Hall	3,556 61	
Water supply	622 04	
Sundry expenses	4 95	$30,259 08
Cost of maintaining the University for year		$84,206 51
Ice house		329 16
Lord Hall construction account		2,235 33
Cash balance		11,759 59
		$98,530 59

This apparent cash balance is accounted for by the treasury having received from the State $5,000 due from the previous year, and by $10,000, (see item Bills Payable) drawn the latter part of June in anticipation of the receipt of the Morrill Fund payment on July 20. There is thus a deficit, on June 30, 1903, of $3,240.41.

ACCOUNT WITH THE UNITED STATES GOVERNMENT APPROPRIATION UNDER THE MORRILL ACT FOR THE YEAR ENDING JUNE 30, 1903.

Receipts:		
Received from the United States July 18, 1902		$25,000 00
Expenditures:		
Agriculture	$5,925 00	
Mechanic Arts	8,700 00	
English Language	2,400 00	
Mathematical Science	2,800 00	
Natural or Physical Science	3,700 00	
Economics	1,475 00	$25,000 00

Respectfully submitted,

ISAIAH K. STETSON, *Treasurer.*

I hereby certify that I have examined the accounts of the Treasurer and find them correctly kept and properly vouched.

ELLIOTT WOOD, *Auditor.*

REPORT OF THE SCHOOL OF LAW

President G. E. Fellows:

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

The total registration of the Law School for 1903-1904 up to date, November 9th, is 71 as against 61 up to the same date a year ago. As usual, a few additional men will undoubtedly register during the course of the year, but unless they are exceptionally able or have already studied law, to some extent at least, their joining the school at a later date is not encouraged. The length of the course of the Law School, three years, still deters some very good men from registering as regular students as they believe that they cannot afford the expense. We have thus among our special students some remarkably bright young men. One-third of them are college graduates.

The students for the present year are classified as follows:—Graduates 18, Seniors 12, Juniors 16, First Year men 19, and Special Students 6. Of the colleges of Maine, Bates is represented by two men, Bowdoin by four (an increase of three as against last year), Colby four (a like increase of three), and the University of Maine by one; while, of the colleges outside of the State, Dartmouth has two representatives, Harvard one, New York University one, and St. Mary's college one. One Brown, and one Maine University graduate are temporarily out of the school earning money to continue their studies. All these men are holders of degrees in letters or science from their respective colleges.

The number of college graduates in the Law School shows a steady increase. Two years ago the proportion of college graduates to other students was nine per cent., last year it was fifteen, and this year it is twenty-four per cent. Starting on the basis of the figures published this year by the Committee on Legal Education and Admission to the Bar, appointed by the American Bar Association, and taking the 104 law schools of the entire country, the percentage of college graduates is twenty; that of the 37 law schools belonging to the Association of American Law Schools twenty-two; that of the 67 law schools outside of that Association sixteen; and, omitting from their number one school that has the same standard of admission as the Association of American Law Schools but has not joined it, fourteen. In this respect the Law School of the University of Maine is thus above the average of the law schools in the country as well as of those belonging to the Association of American Law Schools. In this connection I wish to state that I at-

tended, on behalf of the Law School, the session of the American Bar Association and of the Association of American Law Schools, held at Hot Springs, Virginia, this summer. The meetings have been interesting and the discussions fruitful.

Judging from the representation of the different counties, the Law School seems to be gaining a wider and stronger foothold in the State. This representation is as follows:—Androscoggin one, Aroostook two, Franklin one, Hancock three, Kennebec five, Knox one, Lincoln one, Oxford three, Penobscot twenty-seven, Piscataquis three, Somerset three, Waldo four, Washington four, York three. About two years ago seven, and last year four, counties were not represented; but this year there are only two counties that have no representatives in the Law School. From outside the State there are eight students from Massachusetts, one from New Hampshire, and one from Porto Rico.

At the commencement last June the degree of Bachelor of Laws was conferred upon thirteen graduates of the Law School, and that of Master of Laws upon one that had taken graduate work. While a law school cannot, of course, guarantee the success of its graduates either at the bar examination or in life generally, it will be gratifying to the friends of the Law School to learn that of those graduates that took the succeeding examinations in July for admission to the bar in Maine and Massachusetts, all passed without a single exception, and not a few with distinguished excellence, a result especially satisfactory in Massachusetts, where nearly forty per cent. of the total number of applicants for admission to the bar failed to pass the examination.

Work in the different divisions of the Practice Court of the School is obligatory upon Seniors and Juniors. With the approval of the faculty, however, First Year men and special students are allowed to volunteer for such work.

Mr. Ernest Gustavus Lorenzen, Ph. B., LL. B., J. U. D., of Cornell (1898 and 1899) and of Göttingen, Germany (1901), has been appointed Professor of Law during the summer. This addition to the teaching force of the School has made it possible to change Equity and Evidence, important branches of the law, from alternating subjects to studies that will be given every year.

The chief needs of the School are (1) More suitable quarters for the next year. This is a paramount need. Present accommodations are wholly inadequate and admitted to be so. (2) A more rapid rate of increase in books for the library. (3) Strong efforts on the part of the University to make the existence of the Law School and the advantages it offers more widely known so as to meet the steadily increasing competition and rivalry of other law schools in New England outside of Maine. Complimentary as is this attention paid to the Law School by its rivals, we are compelled to meet this competition with all the legitimate means in our power.

Respectfully submitted,

W. E. WALZ,

Dean of the Law School.

REPORT OF THE DEPARTMENT OF AGRICULTURE

President G. E. Fellows:

SIR:—Previous to September 1st, 1903, the agricultural department of the University has been under the direction of the Experiment Station. Since September 1st the Station has been relieved of these duties and the agricultural plant now consists of the farm, Animal Industry and Horticultural departments, with a professor in charge of each.

Under this new arrangement some changes have been made in the courses of study. We have prepared a schedule to be followed by those who take the four years course in Agriculture which includes, besides those subjects required to be taken by all students enrolled at the University, work in the several departments on which the science of Agriculture depends, and one full year each of Crop and Crop Production, Animal Industry, and Horticulture. During the fourth year of this course an opportunity will be given such students as so desire to take advanced work in either one or all of these three departments, thus making, we believe, a course equal to any given by the agricultural colleges.

The work in Crops and Crop Production will consist of lectures, in which are considered the soil, factors determining fertility, and modern practices of handling farms with methods particularly applicable to New England. Each of the several farm crops and the best methods of producing and caring for them will be studied in detail. Supplementing this lecture work, a general course of laboratory practice in farm engineering will be given. This will comprise farm surveying and drainage, a study of farm implements, keeping of farm accounts, the management of business, construction of farm buildings, and the performance by the student of labor connected with the raising of the farm crops.

Besides the four years college course, a new two years school course has been opened with five earnest young men as the entering class. These students have all had practical experience in farming. The short winter courses will continue as in past years, with an increased amount of instruction. The farm and other equipment of the University is used to demonstrate the work of all courses.

In the management of the farm it is the intention to increase the number of crops grown and make it, so far as possible, a model Maine farm. A careful system of keeping the time of men and teams has been instituted. The farm will be plotted, and records of rotations and cost of each crop will be kept on file.

The farm is fairly well equipped with implements, but needs several of the more modern and improved tools of each class. An appeal will be

made to the leading manufacturers and an effort put forth to receive samples of modern machinery, both for the purposes of use on the farm and instruction in the class room. At the present time there is no ample storage room for farm implements.

The department is in much need of a room fitted out with some equipment where the mechanical analysis of soils and studies of similar nature could be carried on. Botany plays such an important part in all agricultural teaching that we greatly feel the necessity of a department of that science in the University, so that a more complete course can be given than is now possible.

Besides this work of instruction I am frequently called upon to give addresses to Farmers' Institutes, grange meetings, other agricultural gatherings, and teachers' conventions. Whenever possible such meetings are attended. It is the wish and desire of this department to cooperate with the Maine State Board of Agriculture, and the agricultural press, in work toward upbuilding and maintaining a high agricultural standard in this State. The department will especially invite letters of inquiry from the farmers throughout the State, and by such correspondence do all it can to help the farmer as well as teach the student in college.

The question of making agricultural instruction a part of the public school education is fast coming to the front and we believe in the University identifying itself with this movement, and aiding in its promotion.

There has been a great revival of interest in agriculture especially in the East. Its effect is already noticeable at the University, there being seventeen students taking work in Agriculture.

There is an increasing demand for trained agriculturists in work connected with the United States Department of Agriculture, the several colleges and experiment stations, and as managers of farms and private estates. The future prospects of young men trained to fill such positions are exceedingly bright.

Respectfully submitted,

WILLIAM D. HURD,
Professor of Agriculture.

REPORT OF THE DEPARTMENT OF HORTICULTURE

President G. E. Fellows:

Sir:—The work of the Horticultural Department during the past year is not essentially different from that outlined in my last report. The instruction in forestry has, however, been turned over to the newly established Department of Forestry. The number of students in the classes in horticulture and landscape gardening has been larger than in previous years, and very satisfactory work has been accomplished.

It has become necessary to replace the old "Foster" hot water heater in the greenhouse, and a new "Walker" heater is now being installed. The automatic ventilator in one of the houses has also been replaced by one of more modern construction.

The most important change upon the campus during the year is the building of a much needed concrete walk from the front of Coburn Hall to Alumni Hall. It is earnestly recommended that the present board walks on the campus, which will necessarily be renewed in a very short time, be replaced by concrete. The usual planting of trees and shrubs has been continued and the nurseries have been considerably extended, so that in next year's planting more immediate effects may be obtained.

In accordance with the action of the trustees, that portion of the campus lying south of the "farm road," has been plotted for house lots, and some very choice locations are thus provided.

While it has not been, and is not now, desired to maintain a commercial establishment, except for purpose of instruction and illustration, the students as they leave the institution should have some definite idea of the requirements of a commercial garden. This idea cannot well be conveyed under existing conditions. I have previously recommended the erection of a building for the use of the department, and I still believe that such a building would increase the efficiency of the work. Room is needed for the storage of fruits and vegetables, for the wintering of nursery stock, for the housing of tools and for general storage purposes. At present it is necessary to carry fruit to a private cellar one-half mile distant if it is to be kept for any length of time. A building which would answer the purpose very well can be erected for about $1,500.

In view of the importance of suitable implements in a well appointed orchard or market garden, and the necessity on the part of the students of actually seeing and using implements, I would earnestly recommend

that the equipment of the department in this direction be materially increased.

The Department now has a well arranged garden herbarium of some 1,650 specimens representing 650 distinct species of cultivated plants or noxious weeds. While this is primarily for the use of the Experiment Station, it is available for the botany students and garden botany will form an important feature of advanced studies in horticulture. It is now desirable that a collection of insecticides, spraying apparatus, seeds, and other objects for illustrative purposes be so arranged as to be available for the uses of instruction. Many of these things have been contributed, but there is no suitable place for storing or exhibiting them. The necessary cases and museum jars may be secured for a cost of not more than $100.

The use of lantern slides has come to be a necessity in every well regulated class-room in which natural science is taught. I would ask for $100 to expend in equipment of this sort.

The room in the horticultural building which is used for practical demonstrations has never been completed. It should be ceiled and painted. This will cost about $50.

The following summary will indicate concisely some of the more immediate needs of the Department in addition to the usual current expenses:

Storage house, barn, and sheds	$1,500
Concrete walks	500
Tools and apparatus	300
Lantern slides	100
Cases and museum jars	100
Nursery stock	150
Ceiling room in Horticultural Building	50
	$2,700

Respectfully submitted,

WELTON M. MUNSON,

Professor of Horticulture.

REPORT OF THE DEPARTMENT OF ANIMAL INDUSTRY

President G. E. Fellows:

SIR:—My duties consist of giving instruction in Stock Breeding, Stock Feeding, Poultry Industry and Dairying, and in making investigations in "Stock and Poultry Breeding" for the Experiment Station.

The barns and sheepfold as now arranged furnish excellent quarters for all animals and make them easily accessible for handling and instruction purposes.

The cattle herd consists of thirty-five animals, of which number 14 are registered Jerseys, 1 Ayrshire, 1 Shorthorn, 1 Red Poll, 1 Hereford, and 17 grade cows.

The swine herd contains 21 Berkshires and 5 Chester Shoates.

There are 60 sheep, all pure blooded Shropshires, Oxfords, Hampshires, Cheviots and Horned Dorsets.

Early in the year a room was provided in one of the barns into which animals could be taken before the classes, for study and judging. It is of sufficient size, well lighted and heated, and is a very valuable accession to the teaching facilities.

The Dairy Building has been very much improved throughout, and the work and recitation rooms are adequate and in excellent condition.

Most of the instruction in Poultry Industry is practical, and much of it is given in the breeding and stock houses of the Experiment Station poultry plant, which consists of two houses occupied by 800 breeding and laying birds; and fifteen portable brooder houses provided with lamp brooders.

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 hot water would make the whole plant quite complete, and extensive enough for instruction purposes. Such a house could be constructed and completely equipped for five hundred dollars.

Respectfully submitted,

G. M. GOWELL,

Professor of Animal Industry.

REPORT OF THE DEPARTMENT OF MECHANICAL ENGINEERING

President G. E. Fellows:

SIR:—During the past year the work of instruction in the department of mechanical engineering has been carried on according to the outline embodied in my last report, with the addition of three new courses. These are, Materials of Engineering, Fuels of Steam Boiler Economy, and Hydraulic Machinery. The first two are required of students whose major is taken in mechanical engineering, and all are open to all engineering students. The mechanical laboratory course has been systematized and extended, so that it now constitutes an important part of the course of study. It is my purpose to extend it still farther by beginning the work with the junior class in the spring term.

The courses offered in marine engineering seem to be meeting a real demand. Four members of the senior class are taking the work, which has, thus far, included the laying off of the lines of a steamship, and the preliminary design of Scotch boilers. Designs of triple expansion marine engines will follow in the spring term.

In the machine shop it was decided last year to return to the exercise system of instruction. A graded set of exercises, a definite number of which is to be completed by each student, has accordingly been prepared, in such form as to give great variety to the work and including the fitting and assembling of machine parts. Careful instruction is given in the construction and uses of each machine, and in the properties of the materials handled, from which each student is required to write up a complete set of notes. I wish to emphasize the importance of this work when it is done with the care that should characterize all university work.

In the work of instruction I have been assisted by Mr. S. J. Steward, a graduate of the University of Maine, instructor in Machine Work, during the year of 1902-1903, now instructor in the designing of steam and hydraulic machinery; Mr. Walter Rautenstrauch, a graduate of the University of Missouri, instructor in Mechanics and Machine Design during the year 1902-1903, succeeded at the opening of the present year by Mr. A. C. Jewett, a graduate of the Massachusetts Institute of Technology; Mr. A. W. Cole, a graduate of the Worcester Polytechnic Institute, instructor in Machine Work and Descriptive Geometry during the present year; and Mr. E. W. Davee, instructor in Wood and Forge Work. A part of the time of Mr. Steward and Mr. Davee is devoted

to duties other than teaching. The total number of teaching hours in the department amounts to about ninety per week. This includes nine hours of class room work and twenty-seven of shop and drawing room work with students from the departments of electrical and civil engineering and agriculture.

During the present year thirty-three students, exclusive of freshmen, have registered in the department, divided among the classes as follows: seniors, six; juniors, nine; sophomores, twelve; special, six. Two men were graduated in 1903, both of whom have secured good positions. There have been many calls for men to fill positions for which no candidates were available.

The following is a list of new apparatus purchased for the mechanical engineering department during the year of 1902-1903.

1 Oil testing machine for friction test	$540 00
Apparatus for flash test, chill test, and viscosity test of lubricating oils	60 50
Laying off gauge for materials testing	3 50
1 Amsler's Polar Planimeter	24 00
1 Fuller's Slide Rule	24 00
1 Throttling Steam Calorimeter	18 00
1 Draft Gauge	12 00
1 Breslau Water Meter	30 00
3 Pressure Gauges	17 75
3 Thermometers	10 80
1 6 ft. Straight Edge for drafting room	10 00
1 Inside caliper gauge	4 50
Card index outfit, about	30 00
Total of permanent equipment	$785 55

The new equipment added during this year consists of four wood turning lathes, costing about $200; hand tools for same, costing about $30. There has been constructed, from our own design and by one of our students, a working model of the steam engine valve gear for use in designing. We have also received, free of charge, from the Nathan Manufacturing Company of New York, a lifting "Monitor" injector for use in laboratory testing. Acknowledgment is here made of the generosity of this firm.

Upon the completion of Lord Hall, the construction of which is now well under way, the department will be well provided with working laboratory room, probably for many years to come. Very little equipment is now on hand for the building, however, and for this there is pressing need of additional funds. Below is a list representing the most urgent requirements for carrying on the work essential to a well organized course of study in mechanical engineering. The list could be extended indefinitely, but only absolute necessities are included. The items for the work shops are made necessary by the great increase of students in mechanical and electrical engineering, or by the need of replacing wornout articles. The laboratory equipment is to provide proper

means, heretofore lacking to a great extent, for developing methods of work in the real science of mechanical engineering. Funds for purchasing the following machines or implements are earnestly desired.

Shop Equipment:

Three engine lathes, small size, costing about.....	$700 00
Two speed lathes for metal work	100 00
Nineteen down draft forges and anvils	575 00

Laboratory Equipment:

One torsion testing machine, costing about.....	$380 00
One Orsat's gas testing apparatus.....	25 00
One steam pump	65 00
One Rider-Ericsson hot-air engine	100 00
Equipment for belt testing	200 00
Equipment for hydraulic laboratory.....	400 00
Calorimeter for fuel testing	350 00
One small gasoline engine	250 00
One compound steam engine	3000 00
Total	$4770 00

On transferring the present shop equipment into the new building, four electric motors costing about $1,200, will be required to furnish the motive power.

Respectfully submitted,

P. F WALKER.

Professor of Mechanical Engineering.

REPORT ON CONSTRUCTION OF "LORD HALL"

To the Trustees of the University of Maine:

Sirs:—As superintendent of construction on "Lord Hall" I submit the following report on the progress made on the work to date, November 16, 1903.

FOUNDATIONS

The foundation walls and all footings for piers, columns, etc., have been completed according to the plans and specifications prepared by the architect, with the exception of such light footings as will be necessary under the wood partition walls in the foundry. The main walls are put in by M. C. Foster & Son, of Waterville, in a satisfactory manner. Field stone were used, laid in Portland cement mortar mixed in the proportion of one part cement to three parts sand. This mortar has set up in very good form. Shortly after completion the wall was examined at several points and found well filled and the mortar well set in every case. This was done to test the work at certain points built up during the absence of the superintendent. Outside of the wall is a layer of gravel filling, and at the bottom, outside, around the entire building there is laid a line of tile pipe leading through the wall into the sewer at two points. This is designed to take away the water collecting around the base of the wall. Cast iron pipe, caulked with lead joints, carries the water from the conductors to the sewer. By these precautions the committee feels assured that the important feature of good drainage has been secured. The work under this contract was completed and accepted June 17, 1903.

Foundations for steps at all outside entrances have been put in by John Grady & Son, of Bangor, on sub-contract from L. E. Bradstreet of Hallowell, contractor for the work on the entire superstructure. The step foundations were built of the same material as the main walls.

The footings for piers and partition walls in the basement of the main building, and for columns in the machine shop, have been put in by Grady & Son. These were of Portland concrete, mixed in the proportion of one part cement, two of sand, and five of gravel. This composition forms a firm and hard foundation, level and convenient to build upon, and, in my opinion, is well suited for the main foundation walls of any building that may be built by the University in the future.

RUBBLE STONE WORK

This stone, which is a prominent feature of the building, has been laid by Grady & Son under sub-contract. The work has been completed excepting about one yard over the front entrance arch. With the rubble work has gone the setting of the granite arch and all steps, copings, etc., at the outside entrance. Of this work only the setting of the arch has been done.

CONCRETE FLOORS

The concrete, forming the foundation of the solid floors in the front corners of the main building and in the machine shop, has been put in by Grady & Son. It is of the same composition as specified for the pier footings, and forms an excellent foundation on which the heaviest and fastest running machinery may be placed without fear of vibration. The earth filling below the concrete was put in by the same contractor. It was filled in layers about one foot thick, well wet down, and tamped to a solid bearing. The concrete floor in the basement of the main building has not yet been laid, and a little earth filling remains to be put in to form the floors in foundry and forge shop. The concrete arch forming the floor of the vestibule also lacks several inches to bring it to the proper height.

BRICKWORK

About eighty-five per cent. (85%) of the brick have been laid. The brick are all machine made, wire cut, from the yard of O'Brien of Brewer, and are being laid by William Sawyer of Bangor, under sub-contract. As a whole, the brick furnished have been very poor, being of greatly varying color and handled roughly in shipping. Many that are soft and poor have been thrown out altogether. The culling for face brick has been done carefully so that the front portion of the building will, I think, show very uniform color. A thorough job is being done in laying the brick, although the necessity of laying them in cold weather is to be regretted.

CARPENTER WORK

At the present date the entire first floor framing, the second floor framing in the wing, and the framing of the roof over forge shop and foundry has been completed and portions of the planking on those floors laid. All necessary work in connection with the building of the brick walls has, of course, been done. This part of the work is being done by Mr. Bradstreet himself.

PLUMBING, HEATING, ETC

Outside sewer and water connections have been made by Professor Webb, in charge of the general repairs, and connections with the central heating plant by Mr. S. J. Steward, in charge of heat and light. A tunnel for the latter, of the standard form, has been put in. At the present time surface pipes in the basement are being laid by F. C. Park of Orono, for connections to closets, urinals and wash basins both in the

basement and on the second floor, and to two surface drains in the basement floor.

The question of the system of heating to be adopted is under consideration by a committee, in whose report all matters pertaining thereto will be included.

FINANCIAL STANDING

In consideration of the fact that the State appropriation of $35,000 is likely to be insufficient to equip the building with heating appliances, etc., and to move the present shop and laboratory equipment into the new quarters, supply and install electric motors to furnish the power for running the same, and make such repairs on foundry and forge shop equipment as will be necessary to adjust the same to the new building, I append the following statement:

Paid, contract of M. C. Foster & Son,	$2,927 00
To be paid L. E. Bradstreet on completion of contract	28,973 00
To be paid to architects, about	1,000 00
Paid for superintendence	200 00
Paid for miscellaneous items, making sewer, water and steam connections, piping, etc., about	315 00
Total paid out or due on completion of present contract	$33,415 00
Balance remaining from appropriation	1,585 00

The following are estimates of the cost of doing the work and supplying the material necessary to put the new shops in running condition, with the machinery now on hand.

Installation of heating system	
Direct radiation	$900 00
Sturtevant system	1,800 00
Plumbing	400 00
Four electric motors to run machinery fans, etc	1,200 00
New shafting, belting, etc	200 00
Addition to foundry cupola and repairs on forges	100 00
Labor in moving and setting up machinery, building benches for wood shop, etc., if the work be done in summer when the time of regular employees will be available	250 00
Total, with direct heat	$3,050 00
Total, with Sturtevant heating system	$3,950 00
Balance, in excess of appropriation	$1,465 00
or	$2,365 00

The above estimate of cost is a conservative one, likely to be exceeded to some extent.

Respectfully submitted,

P. F WALKER.

SUPPLEMENTARY STATEMENT

Under the terms of the contract with Mr. L. E. Bradstreet all outside work on the building was to be completed by November 15th. That date has now been passed, and the building cannot, in my opinion, be closed in in less than three weeks, or one month; that is, two or three weeks subsequent to the meeting of the Trustees on the 24th. There is no good reason why this need be so. Every effort possible has been made to hasten the work, but with no forfeiture clause in the contract such efforts are of little avail. The work of laying the rubble stone was carried on in a dilatory manner, primitive methods being used at the quarry and small numbers of workmen employed. Work under the same contract is still dragging along unfinished, although it is not now delaying the other work. It has been difficult to find workmen during the past two months, which has been another cause of delay. As the building cannot be completed before December 24th, I consider it unwise to attempt to use it until the following September. This will give us the summer vacation in which to move the present outfit.

Very respectfully,

P. F WALKER.

REPORT OF THE DEPARTMENT OF CIVIL ENGINEERING

President G. E. Fellows:

SIR: Owing to the resignation of Professor Grover in June, 1903, it devolves upon me to report for the last two years that he was head of the department.

The work of the department has been conducted along the same lines as before without important changes. With the growth of the structural steel industries, the time devoted to this subject has been lengthened from seven hours a week for twelve weeks to ten hours in the fall term, and in the spring term, from twelve hours a week to fifteen. Also the course in Railroad Engineering has been increased from two and one half hours per week to three in the fall term.

Instruction is given in the three upper classes in Plane Surveying, Higher Surveying, Railroad Engineering, Hydraulic, Sanitary and Structural Engineerng. Besides these technical subjects, instructors in this department teach to all of the engineering students Free-hand Drawing, Mechanical Drawing, Descriptive Geometry, and Mechanics.

During this last year there were eighty-six students in Civil Engineering in the three upper classes, divided as follows:— Seniors twenty-one, Juniors thirty, Sophomores thirty-five. Fifteen men graduated in this department in 1902, and nineteen in 1903. These men have found employment in engineering work so far as has been desired.

We have recently purchased three transits of the following makes:— One Young & Sons, Philadelphia, one F. E. Brandis Sons & Co., Brooklyn, one Eugene Dietzen Co., New York. Also three levels as follows:— One Eugene Dietzen Co. Dumpy, one F. E. Brandis Sons & Co. Wye, one United States Coast & Geodetic Survey Model Level of Precision, made by G. N, Saegmuller, Washington. This gives the department seven first-class levels, six of which may be used in the regular field work, and eight first-class transits, seven of which are available for regular use. With the present force of instruction the spring work in the field with the sophomores must be conducted in one division. Last spring forty-five men were registered for this course, making it impossible for every man to have the practice with both instruments during the six weeks that he should have. Many of the students recognized this fact and voluntarily put in outside practice. Also it is necessary in the spring for certain of the senior class to use instruments in their thesis work, and for the junior class to use them in the higher

surveying. This makes the problem of dividing up the instruments a complicated one, and can only be solved successfully by either adding new instruments or increasing the force of instruction.

The department needs a triangulation Theodolite, and a Price Current Meter. The first should be of the same pattern as that used by the United States Coast & Geodetic Survey, and the second the same as that used by the United States Geological Survey. The latter is especially needed for the thesis work in Hydraulic Engineering, as the instruments belonging to the department for use in this work are too light for the swift water encountered in our rivers in the spring of the year.

The present drawing and recitation room space is inadequate for the number of students registered in the department, but this obstacle will be overcome on the completion of the new engineering building, if the space now taken up by the departments of Mechanical and Electrical Engineering be devoted to this department.

During the academic year of 1901-1902, H. S. Boardman was instructor in the department, and C. L. Cole tutor in drawing. In 1902-1903 H. S. Boardman was instructor, A. L. Grover instructor in Drawing, C. C. Alexander tutor in Drawing, and H. P. Hamlin, assistant.

Respectfully submitted,

HAROLD S. BOARDMAN,

Associate Professor of Civil Engineering.

REPORT OF THE DEPARTMENT OF ELECTRICAL ENGINEERING

President G. E. Fellows:

SIR:—There has been no material change in the work of this department since the last report. The number of students registering in Electrical Engineering has slightly increased. There are now fourteen seniors, twenty-five juniors, and twenty-five sophomores. The laboratory equipment is moderately adequate for direct current work. New apparatus is needed for alternate current work. There has been no important addition to laboratory equipment for four years. Two thousand dollars at least could be used to the very best advantage in the purchase of modern types of instruments and machines. It is hoped that such addition to the equipment may be authorized, when the new quarters in Lord Hall are occupied.

REPAIRS AND CONSTRUCTION

Repairs during the past year have been as follows:

Dairy Building.— Walls and ceiling of milk room sheathed in spruce with joints leaded. Sheathing painted two coats. Steam and water piping in milk room completely changed. New racks for milk cans and new sink installed. Outside platform and steps rebuilt.

Barns.—Five large windows have been put in the south side of basement of east barn, replacing three smaller ones. Foundations pointed up.

Maples.— New floor laid in dining room, kitchen, and back hall of south part. Ceiling of kitchen sheathed in hard pine. Dining room painted and papered. Back hallway painted. Old ice house torn down, shed set on brick piers and south side of roof shingled.

President's House.— Painted outside, and some painting inside. Stable resilled.

Coburn Hall.— Painted outside one coat. Ceiling of reading room kalsomined. Floors varnished. Chimneys repaired. New skylight put in roof.

Fernald Hall.— Walls and ceiling of lower laboratory painted. Some of the piping replaced. Chimneys repaired.

Oak Hall.— Painted one coat outside. Walls and ceiling of corridors kalsomined. Dust shute repaired. Chimneys painted.

Mt. Vernon House.— Painted outside one coat. Walls and ceiling of halls kalsomined. Floors varnished. Walls and ceiling of kitchen painted.

University Hall.— Dining room enlarged by removing partition, painted and papered. Hard pine floor laid in kitchen, walls and ceiling painted. Large new refrigerator installed. Painting and papering in number of the rooms. New cistern in the basement. A supply of hot water has been provided by putting heating coil into one of the kitchen stoves, with hot water reservoir on second floor. A tank on the third floor, into which water is pumped, supplies the hot water system. A room on the second floor is used as a washroom and has been fitted up with sink and faucets supplying hot and cold water.

Oak Hall Annex.— Painted one coat outside. Several of the rooms painted, papered, and kalsomined. Stove with hot water coil and tank put on first floor. Water closets built over. Foundation repaired. Base boards put in most of the rooms.

Experiment Station Extension.— This work not yet completed. The extension consists of a two story wing on the north side, 21½ by 46½ feet. A second story to the ell, and the inclosing of the space between the ell and new wing. It provides an assembly room 21 by 45 feet, a recitation room for the college of Agriculture, an office for the Professor of Agriculture, and additional quarters for the Experiment Station force.

Hospital.—In consideration of the possibility of an outbreak of smallpox, a one story wooden building, 15 by 38 feet, with two rooms, and a small ell for kitchen and shed, has been built for a hospital. This building has been located in the rear of Wingate Hall on the east side of field.

In addition to the foregoing there has been, of course, a multitude of small repairs.

WATER SUPPLY

A 4" branch has been run from the main pipe line to a new hydrant installed near the farm cottage. Branch supplied with 4" valves. Also ¾" tap connections for the hen yards and watering trough. A new stop valve with drip has been put in water main near the stand pipe. Stand pipe can thus be cut off, emptied, and repaired, without interfering with screws. This could not be done before. Stand pipe has been cleaned and painted, inside and out. New hydrant installed between Alumni Hall and the Experiment Station. The ¾" pipe to Alumni Hall has been replaced with 2" pipe. The further change of piping inside the building will give much better service in the bath room.

The hard water pipe has been extended from the Phi Gamma Delta House to the new Phi Kappa Sigma House. Connections have been made to the water system by the Chapter for the soft water supply.

The small house covering the intake cistern or settling basin of the river bank, was injured by the ice during the spring freshet, and later it was burned. Needed repairs have been made to brick work of the intake cistern. It has been covered by a good plank top. Over the whole a temporary shed or leanto has been built to protect from snow and frost. The floor of pumping station has been repaired, new drain put in, and piping overhauled.

Lord Hall has been connected to the hard and soft water systems by ¾" and 2" pipes respectively.

Both water systems are at present in very fair condition. Another year the pipes supplying the Beta Theta Pi House with hard water should be buried deeper in the ground, and a little work done at the windmill house. The soft water main should be supplied with two or three stop valves, in order to give more flexible control of water distribution during times of repair and breakdown.

SEWERS

The sewer from Professor Harrington's, from the Kappa Sigma House, Mt. Vernon House, and the Phi Gamma Delta House, have all been extended to the river. About six hundred feet of sewer, in all, was used. The most of this was 5" glazed tile laid with cement. Lord Hall has been connected with the sewer system by two hundred feet of 6" glazed tile.

In conclusion, your attention is called to the engineering work about the college, including care of heat, light, water, gas, repairs, and construction. The superintendence of the work is now distributed among some members of the faculty.

It requries an amount of time, attention, and energy which can ill be spared from the work of instruction. It is earnestly recommended that a man be engaged to attend to all of this engineering work.

Respectfully submitted,

H. S. WEBB,

Professor of Electrical Engineering.

REPORT OF THE DEPARTMENT OF PHYSICS

President G. E. Fellows:

SIR:—Since my last report instruction has been given in this department in the various courses listed in the catalog. The number of students in the required courses has largely increased and a considerable number have elected advanced work. Six members of the last graduating class received honors for special work in physics. While no distinctly graduate work is offered, courses have been arranged with physics as the major subject, leading to the master's degree. Mr. W. P. Beck, Dennison 1900, and Miss M. C. Rice, University of Maine 1902, have completed such courses. Some of the results of the original investigations carried on by these students, have been published in the Physical Review, the American Journal of Pharmacy, and the Monthly Weather Review. Mr. W. A. Mitchell, Trinity 1901, and Mr. E. H. Bowen, Colgate 1903, are registered for similar work.

The raising of the grade of my assistants to an instructorship and a tutorship has greatly increased the efficiency of the department. Mr. Burbank now has entire charge of the sophomore laboratory and the junior course in electrical measurements, while the general advanced courses and the senior special work are under my charge.

A number of new pieces of apparatus have been added to the equipment by purchase or construction. Among these may be mentioned a spectrum photometer, a heat equivalent apparatus, a conductivity bridge, a potentiometer, and an apparatus for the study of the magnetic properties of metals.

An examination of the catalogs of leading technical institutions has shown that the amount of work in the physical laboratory required of engineering students here is considerably below the average. An attempt has been made to remedy this situation, and for the electrical students it has been accomplished by requiring one hundred and eight hours in the junior laboratory. The mechanical juniors have recently been given an opportunity to devote thirty-six hours to problems in heat and metrology, and a course comprising selected subjects in optics and electricity is open to chemical students. It would seem that the best interests of the institution demand that in all courses there should be required such an amount of time in the physical laboratory as is given in the leading technical schools.

Since this department occupies quarters in a building designed for other uses, the work has always been hampered by the lack of solidly

mounted tables for work with delicate apparatus requiring freedom from vibrations; with the transfer of the mechanical and electrical departments to Lord Hall it is expected that this deficiency may be in part provided for by the appropriation of rooms on the first floor in which rigidly supported tables may be arranged.

In connection with the department of mathematics bi-weekly meetings for magazine work have been held during the past year. These meetings have been fairly well attended and have proved interesting and profitable. In general there is noted a very hearty co-operation on the part of students with the work in physics. As a rule they are industrious and ambitious to master the intricacies of the subject, and there are a considerable number in each class whose work is of a very high order of excellence.

Respectfully submitted,

JAMES S. STEVENS,

Professor of Physics.

REPORT OF THE DEPARTMENT OF CHEMISTRY

President G. E. Fellows:

SIR:—I have to report the following changes in the teaching force in this department. At the end of the last college year Doctor Gilbert H. Boggs accepted a position at the Georgia School of Technology, offering greater advantages for advancement than we could extend. Mr. F. H. Mitchell's term expired by limitation. I am happy to be able to express my appreciation of the excellent work done by these two gentlemen. The teaching force now consists, besides myself, of Mr. Grant T. Davis, A. B., instructor in elementary chemistry, Mr. J. B. Reed, tutor in qualitative analysis, both graduates of Michigan University, and Mr. H. M. Soper, B. S., one of our own graduates, who acts as assistant in qualitative analysis. With this slight increase in our teaching force we may expect better results, especially in the laboratory, but it still remains a fact that the present force is hardly adequate to the handling of our large classes.

Only minor changes have been made in the course of instruction. The course in technical chemistry has been somewhat extended and an additional course in technical analysis offered. It is impossible for us to give the best instruction in industrial chemistry unless a proper laboratory be fitted up. This cannot easily be done without building an addition to Fernald Hall. The work is, at present, carried on in the qualitative laboratory, which is, however, not well suited to the purpose. Besides this, considerable apparatus should be provided for this special work.

A room set aside for water analysis is also a necessary adjunct to every well equipped modern laboratory, and should be provided as soon as possible.

I also wish to draw attention to the very poor laboratory accommodations offered the class in elementary chemistry. It is situated in the basement and is very poorly lighted and ventilated. A better one should be provided immediately. This could be done by raising the roof of the ell of the building, which would make room for a well lighted and better ventilated laboratory.

All the laboratories should be supplied with some better method of ventilation than they now possess. It is important that something should be done in this direction, as the atmosphere in the building is, at times, absolutely harmful to breathe.

This department has received no accessions to its stock of apparatus for some time. It is most desirable that a sum of money, as large as

possible, be set aside for the occasional purchase of new and improved apparatus.

At the commencement in June, 1903, the degree of Bachelor of Science (in Chemistry) was conferred upon Messrs. E. L. Baker, N. A. Chase, H. K. Crocker, S. C. Dinsmore, H. M. Soper, C. W. Stone, and H. D. Whitney, they having completed the course in a satisfactory manner.

Respectfully submitted,

A. B. AUBERT,

Professor of Chemistry.

REPORT OF THE DEPARTMENT OF PHARMACY

President G. E. Fellows:

SIR:—Since my last report six have graduated from this department, two from the long course and four from the short course. One of the latter has entered the long course, in order to complete full collegiate work, the sole instance thus far; while there are two present instances of change from the long to the short course. One former short course graduate, however, afterwards completed the work of the chemical course, his previous training in chemical studies in the short course enabling him to complete this work in two additional years.

There have been several other instances in which the short course has served as a feeder of the chemical course, the student leaving the short course before completion in order to take up the regular work of the chemical course. As pharmacy is substantially but a special branch of applied chemistry, the desire for the broader training of the chemical course, and the resultant wider opportunities for work in various chemical fields, has proven in these instances doubtless wise for such as were not positively committed to pharmaceutical work hereafter. In these and other instances the relationship between the departments of chemistry and pharmacy has been, as it continues, close and mutually helpful.

The entering class this fall, eight in number, is much smaller than usual. While the number varies from year to year, it seems to a degree dependent on advertising, which usually has been very little, and the past year practically nothing. The latter fact was chiefly due to failure to issue the department circular, owing to excess of work already in the hands of the public printer. The relative percentage attendance, however, has been even higher than in the pharmacy departments of those of the larger universities whose catalogs I have examined. The quality of the entering class under the higher entrance requirements continues to improve year by year, a most encouraging feature.

The greatest drawback met with, one deserving the most serious attention of teachers in the common schools, is a uniform lack shown by the applicant of any real fitting in arithmetic. This has been so marked that more and more time has to be taken and greater and greater consequent encroachments made on our already overcrowded curriculum in order to complete work that should have been thoroughly done in the common schools. This is deplorable; but conference with colleagues in other departments reveals that this failure is not confined to pharmacy students. Questioning the students themselves we find that they complete

arithmetic between the thirteenth and sixteenth years. In fact arithmetic is usually not followed beyond the grammar school, algebra (for which they must be ill fitted) taking its place in the high school. Instead of this defect being generally recognized we note some educators complaining that too much time is already given to this study in the common schools, and that it should be displaced more largely by one or more of the newer claimants for attention upon the time of the overcrammed and under-trained child of the public school. It will be conceded that the study of arithmetic, as of all studies demanding primarily exercise of the reason rather than of the memory, should logically come late in the school course, and then be taught by teachers who emphasize "why" rather than "how." In this way the college will be relieved of doing first work over again, and the student saved humiliation and the crippling of his college curriculum. The short course is already too short to afford all the training really demanded. We view then with impatience this inexcusable encroachment on time so precious.

There has been no addition to the equipment the past year. Scarcely any addition either has been made to the library, in books; but several additional journals are being received, mostly gratuitous. We have now about fifteen purely pharmaceutical journals regularly on file, the systematic reading of which is a part of the required work, as heretofore pointed out. This feature we consider one of the most permanently valuable of the single items of training that the course affords.

There are two lady students in the present class, which is a new feature. Openings in pharmacy for women have not been numerous heretofore, but there are no apparent reasons why it may not, for some, prove a congenial field, and in certain localities meet a real public want.

Since its establishment in 1895, 107 have received instruction in this department; 91 in the short course and 16 in the long course. Thus far but 25 have graduated in the short course and six in the long course. The addresses and occupations of non-graduates are for the most part unknown; but of the graduates 14 are drug clerks, 8 proprietors or managers of drug houses, 3 are physicians, 1 a United States Army officer, 1 a professor of chemistry, 1 pursuing work of a higher degree, and 3 are in business not related to pharmacy.

As previously noted, the demand for well-equipped pharmacists is urgent and always in excess of the supply. This is a situation of many years standing, true in dull times as well as good, indicating a settled trade condition as highly encouraging to the young pharmacist as it is exceptional to the rule in other industries. That this would augur well for the stability and durability of pharmaceutical education seems apparent.

Respectfully submitted,

W. F. JACKMAN,

Professor of Pharmacy.

REPORT OF THE DEPARTMENT OF FORESTRY

President G. E. Fellows:

SIR:—I have the honor to submit the following report upon the work in this department:

The courses in forestry which were offered at the beginning of the fall term this year, were—

1. General Forestry.
2. and 3. Forest Botany.
4. and 5. Silviculture.
6. and 7. Forest Measurements.
8. Lumbering.
9. Forest Management.

Fifteen students were enrolled in General Forestry, two in Silviculture, and one took Forest Botany. Making a reduction for duplicate names on the roll, there are seventeen students in the department. Four students have chosen forestry as their major subject.

It will be seen that advanced work, as well as elementary, is already being taken in forestry, and, furthermore, much interest is being shown both by those engaged in this study and by other students in the University.

Respectfully submitted,

SAMUEL N. SPRING,

Professor of Forestry.

REPORT OF THE DEPARTMENT OF BIOLOGY

President G. E. Fellows:

SIR:—A few changes have been made in the courses of study offered in the Biological Department this year.

To accommodate the beginning courses to the needs of students in technical courses that have scant time for elective work the course in General Biology has been reduced from a three hour recitation, four hours laboratory course, to a two hours recitation, two hours laboratory course; and the course in Physiology has been reduced from a three hours recitation, four hours laboratory course, to a two hours recitation course. This change seems on the whole to be a desirable one, inasmuch as many students may now gain access to the courses that they were unable to, before, on account of time. The work in General Biology is picked up, for the most part, where it was dropped, by those that continue with biological work, in the second year in Zoology. No such arrangement is possible at present for Physiology. While the need for a more extensive course in Physiology is evident, a short course, such as is offered, is evidently very desirable for a large number of the students in the University. Possibly an advanced course may be offered later.

A new course in Organic Evolution will be offered during the spring term. This will be one hour a week and consist of lectures, tests, and one essay written by each student upon some especial phase of the subject assigned for the purpose. Inquiries are so frequent along the line that this course will treat, that it is hoped a need will be met.

Two important pieces of apparatus have been added this year. One in the form of a stereopticon for the projection of either lantern slides, or microscopic objects, that is proving itself of great value in all of the class room work, and the other a relief globe, 20 inches in diameter, showing not only the elevations of the land above the sea level but the shape of the ocean bottom as well. The globe is especially valuable for instruction in Geology.

Instruction in the department is being given this term in:

General Biology,	Two hours a week.	25 students.
Laboratory Biology,	†Two hours a week.	25 students.
Geology,	Three hours a week.	24 students.
Zoology,	Two hours a week.	3 students.
Laboratory Zoology,	†Six hours a week.	3 students.
Advanced Zoology,	†Six hours a week.	3 students.
Entomology,	†Four hours a week.	6 students.

One student in biological reading, minor work for advanced degree.

Miss Patch, the Experiment Station entomologist, has charge of the course in entomology, otherwise I have no assistance either for class room work, or the preparation for and cleaning after laboratory work. The need of assistance must be evident, especially when the work required in tending material and having it at the proper stage of development at the required time is considered. It is hoped that some arrangement may be made whereby botany may receive more attention in the near future.

Respectfully submitted,

GILMAN A. DREW,

Professor of Biology.

REPORT OF THE DEPARTMENT OF MATHEMATICS AND ASTRONOMY

President G. E. Fellows:

SIR:—During the spring term, 1903, instruction was given in the department as follows: Freshman trigonometry and solid geometry, an average of 116 students reciting in five divisions; Sophomore calculus, 81 students reciting in three divisions; practical astronomy and observatory work, 7 students; differential equations, 2 students; theory of equations, 1 student, making a total of 207 students, reciting in eleven classes, and 49 hours per week of teaching.

For the fall term, 1903, students are enrolled in our classes as follows: Freshman algebra, 150, reciting in six divisions; Sophomore analytical geometry, 75, in three divisions; Junior calculus, 77, in three divisions; elective in advanced calculus, 4; descriptive astronomy, 23; theory of orbits, 3, making a total of 332 students in fifteen classes, and 64 hours per week of teaching. A few names are, of course, counted more than once, being enrolled in two or more classes.

Mr. Lambert and Mr. Buck, who served very acceptably last year as tutors, were at the beginning of this year promoted to be instructors. Mr. R. M. Connor, a graduate of the University in the class of 1903, was appointed tutor, and is doing very creditable work.

Beginning with the present freshman class, solid geometry has been made an absolute entrance requirement for engineering students. The time formerly given to that subject during the second term of the first year will now be given to analytical geometry, and we shall be able to complete the course in analytical geometry and the calculus by the close of the second year. This earlier completion of the required mathematics will be of decided advantage to the engineering courses.

The suggestion made in my last report, that when new appointments were made in this department, it be done with a view to greater permanency, becomes more urgent as our classes increase in size. The fact that my own duties as Dean demand an increasing fraction of my time is an additional argument in the same direction. The first year of a young man's college course is, perhaps, the time when he most needs the guidance of an experienced teacher. We are putting the teaching of the majority of our freshmen in mathematics in the hands of tutors with little or no previous experience in teaching.

Respectfully submitted,

J. N. HART,

Professor of Mathematics and Astronomy.

REPORT OF THE DEPARTMENT OF ENGLISH

President G. E. Fellows:

SIR:—Since making my last report the record of the Department of English has been one of steady progress. At no time in its history has the department been so well equipped in men and in the means of study as it has for the past two years. One new instructor has been added to the teaching force; the number of books on English literature and English criticism has been considerably increased; the curriculum has been broadened by the addition of new courses; and students are appreciating more fully than ever before the necessity for a more thorough training in our mother tongue. The outlook for the Department of English is very satisfactory.

As the department grows its needs increase. Our greatest need at the present time is "The Oxford Dictionary", a work indispensable to the student of English. We need also special maps illustrative of the historical development of the language and literature.

In closing this brief report, I wish to bear witness to the conscientious work of the gentlemen associated with me in the Department; they have labored faithfully to make the teaching of English a success.

Respectfully submitted.

HORACE M. ESTABROOKE,

Professor of English.

REPORT OF THE DEPARTMENT OF LATIN

President G. E. Fellows:

SIR:—The progress of this department since my last published report is exceedingly gratifying. The number of students in the entering class in Latin has increased one hundred per cent. in two years; and a distinct advance has been made also in the number of advanced students in the several elective courses. Two members of the present senior class have made a specialty of Latin throughout their four years in college, and will be prepared to teach the language in the best schools. It is hoped that they may be but an advance guard of the coming host of teachers that shall so represent the University in the public schools of Maine.

In number and variety of Latin courses this institution is decidedly in advance of any other college in the State. The equipment also is excellent. An electric lantern in the Latin recitation room has been so arranged as to be available at any time of day for the exhibition of important illustrations to classes; and the stock of slides, already very respectable, is practically much increased by the valuable private collection of the professor in charge. Many of the slides in this collection were made from photographs taken during a visit made for this special purpose to classical localities of which no views are to be purchased in the open market, and thus furnish an apparatus in this respect unparalleled in America. A new wall map of ancient Rome has just been added to those already on hand.

The present condition of this department, therefore, amply justifies the expectations under which it was established, namely, that it would, at an expense trifling in comparison to that of most scientific and technical departments, be able to maintain a standard second to none in Maine, and worthy to rank with those in the other New England colleges.

It should not be inferred, however, that the department is without needs. It is the work of many years to collect a classical library of the first order, an essential to the best work in both Greek and Latin. All the new books, and old ones, whose purchase the available funds will permit, should be annually added to those now on the shelves.

It is very desirable that still other lantern slides should be obtained as soon as possible, especially a number from a catalog recently prepared especially for educational purposes in this country.

It is very much to be regretted that the University was allowed to lose its place, even temporarily, among the various colleges and universi-

ties that co-operate in the support of the American School of Classical Studies in Rome. The sum annually contributed was so modest, and the prestige thereby gained so important, in that this institution was thus openly allied with other leading institutions in supporting the lines of research being carried on by the Archaeological Institute of America in this country and in several foreign countries, that it would seem wise to lose no time in undertaking once more the annual payment towards the support of the school. There is no reason why, with our increasing numbers in this department, we should not expect before long to send graduate students to Rome to avail themselves there of the privilege of free tuition which is given to those coming from the institutions contributing towards its support.

A growing appreciation throughout the State of the importance and value of this department to its whole system of education is now assured.

Respectfully submitted,

KARL POMEROY HARRINGTON.

Professor of Latin.

REPORT OF THE DEPARTMENT OF GREEK

President G. E. Fellows:

SIR:—In the present report of the Greek department I have to record the innovation lately taken by the faculty of providing for instruction in preparatory Greek. This step was advocated by me in my last report and now that we have adopted this course we have placed our department of Classics on the same level with that of most of the state universities. In time the number of students taking the Classical course will be somewhat increased and the introduction of these preparatory courses will afford an opportunity for students to make up deficiencies where they come poorly fitted in Greek. And this leads me to say that the high schools of the State ought not to attempt to prepare students in Greek where the work can not be satisfactorily done, as is the case of a majority of our high schools. The instruction would best be given over to the colleges where specialists will be able to teach the preparatory work in a manner that will lead more students to continue their Greek beyond the preparatory years.

Besides the required work of the Freshman year there are now three elective courses being given in this department, and two students are doing major work in Greek.

Up to the present time the general charge of the Art Museum and the collection of art apparatus has fallen to the head of the department of Greek. This phase of work is some three years old and the Guild building is equipped with a collection of reproductions of the notable examples of art, ancient and modern, unequalled, it is safe to say, elsewhere in the State, and second in extensiveness to that of few institutions in the country. The instruction in the history of ancient and modern art, particularly sculpture and painting, is as yet confined to four courses. Instruction in this field can be done for the present without any addition to the teaching force; but there is every reason to believe that within a short time there will be a demand among our engineering students for courses in architecture that will be of a scientific character different from that adapted to the needs of the general student. One can readily see, therefore, that the department of art history can be made of great service both to the department of *belles-lettres* and the scientific schools.

It is a cause of great regret on the part of those who have the development of the collection at heart that so few of our students find time to use the museum, much less to take the courses offered in this

field. It would seem as though the history of art ought to be made a more vital part of a liberal education than one is led to think it is among our students, where only two asked for the course the present term. It is difficult to see how this state of affairs can be remedied unless the professors see fit to call the attention of their major students to the value of this line of work to supplement their history and literature.

Respectfully submitted,

J. H. HUDDILSTON,

Professor of Greek.

REPORT OF THE DEPARTMENT OF ROMANCE LANGUAGES

President G. E. Fellows:

SIR:—The department of Romance Languages, established in 1903, offers this year seven full year courses, distributed as follows: first year French, two divisions, five hours per week; second year French, two divisions, for those having offered French at entrance, three hours per week; the regular second year French, three hours per week; first year Spanish, three hours per week; second year Spanish, three hours per week; Italian, three hours per week.

Thirty-one hours per week are given in the department, divided as follows: eight hours of French by Mr. Shute; three hours of Spanish by Mr. Arana; three hours of Italian by Professor Huddilston; fourteen hours of French and three of Spanish by myself.

There are one hundred and fifty-five students now upon the rolls of the department, divided as follows: first year French, fifty-nine; second year French, intermediary course, thirty-eight; second year French, regular course, twenty-eight; third year French, eight; first year Spanish, fourteen; second year Spanish, three; Italian, five.

A larger place is now given to Spanish. But one course on alternate years has till now been offered. Henceforth two courses in Spanish, three hours per week each, will be offered every year.

There is a demand for a course in French composition and conversation. Such a course would be of great utility to students who prepare for the teaching of the language. A second course in Italian and a fourth course in French ought likewise to be added to the curriculum. These courses are actual wants, but cannot be supplied unless provision is made for a special instructor. The appointment of such an instructor has become an absolute necessity; it would enable the department to enlarge the scope and raise the efficiency of its work.

Respectfully submitted,

J. B. SEGALL,

Professor of Romance Languages.

REPORT OF THE DEPARTMENT OF GERMAN

President G. E. Fellows:

SIR:—At the commencement of the academic year 1903-1904 the Department of Modern Languages was divided into the Department of Romance Languages and the Department of German, the former Department being under the supervision of Professor J. B. Segall, and the Department of German remaining in my charge. This change was recommended in the last report of the Department of Modern Languages to the President, and has been much needed, for the greater efficiency of both departments.

At present the Department of German is giving 28 hours of instruction weekly. The class in Elementary German is in two divisions and numbers 83 students. Recitations are held 5 hours a week throughout the year. All courses in German except the first year are elective. Second year German, 3 hours a week, is taken by 18 students, and is conducted by Mr. Shute, who has added to his preparation in German by three months' study this last summer in Berlin. Mr. Shute also conducts one class in Elementary German. The other courses in German are conducted by the head of the department. Third year work is given, 3 hours a week, to a class of 8 students, and fourth year German, 3 hours a week, to 4 students. In addition two courses in composition and conversation are held, each twice a week, the elementary course being attended by 8, and the advanced course by 5 students.

Advanced students in the Department formed during the academic year of 1902-1903 a German Club, which is called the Deutscher Verein; its purpose is the study of the life and literature of Germany and the Germans, and the promotion of sociability among the members of the Verein. The membership rules of the Verein make membership of two years standing, or its equivalent, in the Department of German a requisite for admission to active membership. The Verein had a very successful first year of existence.

Illustrated lectures upon Germanic life, literature, and history, are given weekly to the class in Elementary German, and as time shall allow, the more advanced classes are to have the advantage of similar courses of lectures, which the department strongly believes in. As the work of the department advances from year to year the inadequacy of the department library in certain directions becomes more marked, although in many respects the provision of books for the use of the department compares excellently with colleges of larger enrollment and

means. The head of the department would respectfully suggest that a moderate expenditure each year for reference books, lantern slides, maps and pictures for the department rooms, would be extremely helpful. There is at present excellent provision of lantern, with electric light, and curtain, in a lecture room adjoining the German room, and available to the German Department.

Respectfully submitted,

ORLANDO F. LEWIS,

Professor of German.

REPORT OF THE DEPARTMENT OF PHILOSOPHY

President G. E. Fellows:

SIR:—The courses now offered in this department include General Psychology, Experimental Psychology, Comparative Psychology, Advanced Psychology, History of Education, Principles of Pedagogy and School Management, Logic, Ethics and the History of Philosophy. Until recently, General Psychology and Logic were required studies for nearly all students in the junior year. Under the present plan, of selection by students of major and minor subjects, all the courses of this department have been made elective.

When the new plan was adopted and went into effect, the work of the department of Philosophy appeared to be very much crippled. In fact, for the first year it was very much crippled. This time, however, seemed to be sufficient for adjustment to the new system.

At the beginning of the second year under the new arrangement, that is last September, the elections to the branches of this department were entirely satisfactory. Whereas in the first year, largely from conflicts with required studies, but ten students of the junior class were able to take the course in General Psychology, and none the course in Experimental Psychology, this year forty students are pursuing the former and eighteen students the latter.

The election to other courses offered by this department also indicates that even where technological studies must have a very prominent place, students will still elect and pursue branches along philosophical lines provided a way is clearly open for such selection.

As the work in this department is purely elective, students take it because they want it, and they illustrate the sound pedagogical principle, that one always pursues the branches in which he is interested with fruitful results; a principle which embodies the essential philosophy of what is sometimes termed the new education.

The time of commencing the studies of this department is about as it ought to be, namely, at the beginning of the junior year. By that period in the college course students have acquired methods of efficient study and have attained to the maturity of mind which prepare them to prosecute philosophical studies with satisfaction and success.

The outline of these studies is so arranged that it is possible for a student to take all that is offered by the department of Philosophy in his junior and senior year.

Respectfully submitted,

M. C. FERNALD,

Professor of Philosophy.

REPORT OF THE DEPARTMENT OF HISTORY

President G. E. Fellows:

SIR:—The department of History was separated from the department of Civics by a vote of the trustees in June, 1902, and placed in my charge. At the same time the board authorized the employment of an instructor in History who should do the larger part of the work under the direction of the head of the department. Accordingly, Doctor Caroline Colvin was employed. Doctor Colvin is a graduate of the Indiana University, and received the degree of Doctor of Philosophy from the University of Pennsylvania, and has studied abroad. Doctor Colvin is a member of several learned societies. and has had much experience in teaching History.

During the fall term of the year 1902 and 1903, classes were given in Medieval History; Eighteenth Century History; English History; Social and Industrial History of England; containing respectively seven, two (advanced work), nine, twenty-eight, students. In the spring term classes were given by the head of the department in Nineteenth Century History, and by Doctor Colvin in Modern History; Nineteenth Century History, and English History. In the Nineteenth Century class there were twenty-six students.

This being the first year in which History had been offered five days in a week throughout the year, it was anticipated that there could be but a small number of students who would be able to register for the work, but the total number of students taking work for the year was unexpectedly large, and very gratifying to the teachers in the department. A number of students have already signified their intention of taking History as a major subject. It seems probable that this department will share with the other departments the general increase of attendance.

In the present term Doctor Colvin has classes in English History; Medieval History; United States History; Fourteenth and Fifteenth Century History (advanced senior work); numbering respectively thirty-two, seven, eighteen, and one (senior).

The greatest need of the department is a working room in connection with the library, fitted with tables, where some books can be kept permanently and others temporarily, and where reports and papers may be prepared. We especially need the Dictionary of National Biography, which would be useful for some other departments; we also need original material in United States letters, documents, etc.

Respectfully submitted,

G. E. FELLOWS,
Professor of History.

REPORT OF THE DEPARTMENT OF POLITICAL ECONOMY

President G. E. Fellows:

SIR:—During the past year I have given instruction in Constitutional Law and History, Political Economy, Roman Law, Sociology, International Law, and Anthropology. The only changes that I have to report are the substitution of Anthropology for American History, and the addition of a course of lectures on "Colonial Problems."

The attendance in my classes has been fair, and the work done by those attending very satisfactory.

At the Law School I have given instruction in the History of Law, Admiralty, and Constitutional Law.

Respectfully submitted,

ALLEN E. ROGERS,

Professor of Civics and Constitutional Law.

REPORT OF THE LIBRARIAN

President G. E. Fellows:

SIR:—The accessions to the library during 1903 number 2,131, making a total of 24,755 bound volumes in the library on December 31, 1903.

We have been fortunate in retaining the services of Miss Geneva R. Hamilton, who has served as assistant librarian since May, 1900. Her work deserves recognition.

Durng the fall term of this year, the librarian has given lectures, at which the attendance of the new students was required, upon "The Library and its Use," "Classification and the Catalogue," and "Reference Books and Their Use." A course of lectures is to be given next spring upon the history of books and libraries, and some of the problems of library administration. This course will be one hour a week, and will be open to all students.

For several years past the library has been open daily, except Sunday, from 8.00 to 12.00 in the forenoon, and 1.30 to 5.30 in the afternoon. This fall the experiment has been tried of having it open each evening except Sunday from 7.00 to 9.30, and on Sunday afternoon from 2.00 to 6.00. There has been greater use made of it than was anticipated, and I hope it may be decided to continue the arrangement.

While the growth of the library during the last few years has been fairly satisfactory, it must be borne in mind that as the number of courses of instruction given at the University increases, the field which the library is obliged to cover widens, so that a sum of money which was sufficient to meet the demands upon it a few years ago is inadequate now. As it is, we are obliged to cover not only the field of general literature in a broad sense, but also the lines of science, technology, and law, in which the University offers instruction.

The increase in the number of volumes in the library, together with the growing use which is made of it, is such that in the near future an additional assistant will be required unless the efficiency of its administration is to be impaired.

In my report of last year it was stated that the problem of room for the growth of the next two years had been met. This was an over sanguine opinion. It is apparent already that owing to the increased number of students the reading room is too small to accommodate all who desire to use it during certain hours of the day. The stacks are already overcrowded, and books are piled on top of them as before. Plans have been made which will provide space enough for the acces-

sions of this year, but I can see no satisfactory way of providing shelf room for further growth.

The need of seminary rooms with the library for the use of such departments as history, economics, English. German, the Romance languages, Latin, Greek, and other departments which practically use the library as a laboratory, is one which we are at present entirely unable to meet, and until provision can be made for such accommodations these departments must be hampered in their work.

Within the last two years new library buildings have been erected at two of the colleges of this State, one of them probably the finest library building possessed by any of the smaller colleges of the United States. I believe there is no room for difference of opinion when it is stated that the time has come when it is highly important that the University of Maine shall have a library building of a type of architecture which shall be a credit to the University and the State, and so designed as to provide suitable accommodations for many years to come.

Respectfully submitted,

RALPH K. JONES,

Librarian.

REPORT OF THE DEPARTMENT OF MILITARY SCIENCE

President G. E. Fellows:

SIR:—I have the honor to submit the following report of the Military Department.

Academic Year 1902-1903:

During the greater part of the year there was no officer of the army on duty at the University. Captain A. H. Martin was here but a short time, and I reported for duty April 14, 1903.

Orders from the War Department require an extended course of military instruction, including practical as well as theoretical work.

To accomplish this work requires not only the presence of an army officer throughout the year, but in addition a careful and systematic use of the time allotted to this department.

In January, 1903, my predecessor reported to the War Department the impossibility to complete the course outlined, and, owing to the short time after my arrival, I was compelled to obtain the authority of the Secretary of War to omit Target Practice.

Shortly after my arrival I learned that my predecessor had outlined a course of instruction for the remainder of the year, and I consequently carried out his plan.

The instruction given during the year was all practical, and included the close order movements of the Infantry Drill Regulations.

Academic Year 1903-1904:

The work has been planned to include all the course required by the War Department.

The practical work is as follows:— Infantry Drill Regulations; Advance and Rear Guards, and Outposts; Marches; Infantry Target Practice; Instruction in First Aid to the Injured; Guard Duty.

The theoretical work is as follows:— Infantry Drill Regulations; Guard Duty; Small Arms Firing Regulations; The more important Articles of War; Records and Official Papers; Lectures on Military Subjects.

The War Department has furnished a limited number of text books. Recitations are planned to utilize these to the best advantage.

Captains are held responsible for the theoretical and practical instruction of their companies. They detail from their officers and sergeants such assistant instructors as may be required.

Proficiency in practical work is determined by examinations.

Proficiency in theoretical work is determined by daily marks in the section room.

Recommendations:

Owing to the short time that I have been on duty at the University, I prefer to study more the details before making any recommendations.

Attention, however, is respectfully called to the need of quarters on the campus for the Professor of Military Science and Tactics, as recommended by Captain M. L. Hersey in his report for 1894.

Respectfully submitted,

CHAS. J. SYMMONDS,

Captain 12th United States Cavalry,

Professor of Military Science and Tactics.

REPORT FOR POWER PLANT

President G. E. Fellows:

SIR:—The management of the Power Plant, including the lighting and heating of the buildings connected with the central system, was placed in my hands on July 1st, 1903.

Having for several years been in a position to observe the operation of the plant, I felt that I could introduce some methods of handling it that would increase its efficiency.

As is well known, any piece of mechanism, however well constructed, soon becomes an inefficient machine if not well cared for. The return pump which forces all the condensation from the buildings, back to the boiler, was so located that it was inacessible for proper care and inspection. As a result the pump was frequently out of commission. This reduced the efficiency of the boiler, as the condensation from the heating coils was very hot and large gains are made in boiler economy by obtaining hot feed water. The arrangement of the piping was inadequate for the utilization of all the exhaust from the engines and pumps. Similar conditions existed at Wingate Hall.

After making the changes I deemed necessary, and carrying through the year's work, I note the following results:

The station used 2 per cent. more coal than in the previous year and did 10.3 per cent. more lighting while the power and heat required remained about the same. After January 1st to the end of the year, the coal used was 11.9 per cent. poorer in heating value, by chemical analysis, than that used the year before and up to the date given above.

During the summer of 1902 the storage battery, having passed its stage of usefulness, was discarded and arrangements made with the Old-town Electric Company to supply the University with current for use in case of breakdowns, and after 12 o'clock P. M. The prevailing rate at that time was twenty cents per 1000 watt-hours from which we obtained a discount of 25 per cent. Later the management of the Company changed hands and the price was reduced so that we obtained a rate of nine cents per 1000 watt-hours.

The former price charged by the University for current sold was 8.5 cents. After February 1st, 1903, the price was reduced to 6 cents, with the following results in the financial condition of the plant

Operating expense	$10,839 44
Apparatus purchased	282 69
Total	$11,122 13

Supplies on hand July 1st, 1903,	$342 81
Income from sale of supplies	512 47
Income from sale of coal to individuals	1,551 56
Income from sale of light and heat	6,373 41
Value of apparatus purchased less 7 per cent depreciation	262 80
Coal on hand July 1st 1903	2,076 33
Total	$11,119 38
Net loss	$2 75

Respectfully submitted,

S. J. STEWARD,

Superintendent Heat and Light.

CATALOGUE OF THE GRADUATES.

An asterisk (*) indicates deceased, and a dagger (†) indicates not heard from.

1872.

†Gould, Benjamin Flint, C. E., Hollister, Calif.,
Irrigation Engineer.

Hammond, George Everett, C. E., Eliot,
Chief Clerk, Department of Yards and Docks, U. S. Navy Yard, Portsmouth, N. H.

Haskell, Edwin James, B. S., Westbrook,
Silk Manufacturer.

Hilliard, Heddle, C. E., Oldtown,
Civil Engineer.

Thomas, Eber Davis, Station B, R. F. D. No. 9, Grand Rapids, Mich.,
Farmer.

Weston, George Osmer, B. S., R. F. D. No. 2, Madison,
Farmer.

1873.

Eaton, Russell William, C. E., Brunswick,
Agent, Cabot Manufacturing Company.

Hamlin, George Herbert, C. E., Orono,
Civil Engineer.

Holt, Fred William, C. E., 94 Prince William St., St. John, N. B.,
Civil Engineer.

Oak, John Marshall, B. S., Bangor,
Postmaster, Bangor Post Office.

*Reed, Charles Emery, C. E.

Scribner, Frank Lamson-, B. S., Manila, Philippine Islands,
Chief of Insular Bureau of Agriculture.

Thayer, Harvey Bates, B. S., Presque Isle,
Druggist.

1874.

*Allen, William Albert, C. E.

*Balentine, Walter, M. S.

†Gerrish, William Herbert, B. S., M. D., Deering Centre,
Physician.
Gurney, John Irvine, B. S., Highland St., Dorchester, Mass.,
†Hunter, Rodney David, B. S., 535 25th St., Oakland, Calif.,
Insurance Agent.
Ramsdell, Louise Hammond, B. S., R. F. D. No. 1, Sebec Station,
(Mrs. Milton D. Noyes.)

1875.

Bates, Solomon Wheaton, C. E., First National Bank Building, Portland,
Patent Lawyer.
Bumps, Wilbur Allerd, C. E., M. D., M. S., Dexter,
Physician.
*Clapp, Samuel Hervey, C. E.
Coburn, Lewis Farrin, C. E., Yreka, Calif.,
Lawyer.
Colesworthy, Charles Franklin, B. S., Pendleton, Ore.,
Grain Dealer.
*Durham, Charles Frederick, C. E.
Goodale, Alfred Montgomery, B. S., 50 State St., Boston, Mass.
Treasurer, Boston Manufacturing Company.
Hitchings, Edson Forbes, C. E., M. S., Waterville,
Market Gardener.
Jordan, Whitman Howard, M. S., Sc. D., Geneva, N. Y.,
Director, New York Agricultural Experiment Station.
Mayo, Edward Dolliver, M. E., 2015 Elliot Ave., Minneapolis, Minn.,
Chief Engineer, Barnett & Record Company.
Mitchell, Albert Eliphalet, M. E., St. Paul, Minn.,
Superintendent of Motive Power, Northern Pacific Railway
Company.
Mitchell, Allen Gilmore, C. E., Pittsburg, Pa.,
Superintendent (Monongahela Division) Pennsylvania R. R.
*Moore, Fred Lamson, B. S.
Rogers, Luther Woodman, B. S., 97 South Forsyth St., Atlanta, Ga.,
Wholesale Grocer.
Sewall, Minot Wheelright, M. E., Roselle, N. J.,
Superintendent Engineering Department Babcock and Wilcox
Company, 85 Liberty St., New York, N. Y.
Shaw, George Moore, C. E., 969 Broadway, Oakland, Calif.,
Lawyer, firm of Johnson & Shaw.
Southard, Louis Carver, M. S., 73 Tremont St., Suite 601-3, Boston,
Mass.,
Lawyer. Lecturer, University of Maine School of Law.
Webb, Wesley, M. S., Dover, Del.,
Secretary of the State Board of Agriculture.
*Work, Edgar Alexander, C. E.

1876.

Abbott, Edmund, B. S., M. D. 148 Broadway, Providence, R. I.,
Physician and Surgeon.

Allen, Charles Plummer, B. S., Presque Isle,
Lawyer.

Beckler, Elbridge Harlow, C. E., 1838 Aldine Ave., Lake View, Chicago, Ill.
Director, Winston Bros. Company, R. R. Contractors.

Bisbee, Fred Milton, C. E., Fort Madison, Iowa.
Chief Engineer, B. Lautry Sons, General R. R. Contractors.

Blanding, Edward Mitchell, B. S., Bangor.
Editor and Publisher, Maine Industrial Journal

*Brainard, Charles M., B. S.

*Buker, George Haskell, B. S.

Cowan, Florence Helen, B. S., 28 Pond St., Lynn, Mass.

Crosby, Oliver, M. E., St. Paul, Minn.,
President and Engineer, American Hoist and Derrick Co.

*Cyr, Vetal, B. S.

*Dike, James Edward, C. E.

*Dike, Willis Oliver, B. S.

Estabrooke, Horace Melvyn, M. S., M. A., Orono,
Professor of English, University of Maine.

Farrington, Arthur Manly, B. S., D. V. M., 1436 Chapin St., Washington, D. C.,
Veterinarian, Chief of Inspection Division, Bureau of Animal Industry, U. S. Department of Agriculture.

Foss, George Obed, C. E., Morrissey, B. C.,
Contractor, Firm of Foss & McDonell.

Haines, William Thomas, B. S., LL. B., LL. D., Waterville,
Lawyer.

Hamilton, Harry Fairfield, B. S., D. M. D., 125 Marlborough St., Boston, Mass.,
Dentist.

Haskell, Newall Prince, B. S., Custom House, Portland.
Deputy Collector of Internal Revenue, District of N. H., 4th Division.

How, Edward Stevens, M. E., Baltimore, Md.,
Chief Clerk, Light House Inspector's Office.

Hubbard, Philip Wadsworth, B. S., 438 West 33 St., Los Angeles, Calif.,
Mail Carrier.

Jones, Samuel Messer, M. E., 35 Wilcox St., Springfield, Mass.,
Fiscal Agent.

Lewis, Albert Augustus, B. S., Lewiston, Me.,
Pastor Park St. M. E. Church.

*Long, Herbert Augustine, M. E.

Lothrop, Luther Ramsdell, C. E., 2021 Channing Way, Berkeley, Calif.,
Asst. Engineer, Western Pacific Railway.

Martin, Nelson Hussey, B. S., Fort Fairfield,
Merchant.
Oak, Charles Edson, M. E., Bangor,
Vice President and General Manager of American Realty Co.
Parks, George Daniel, C. E, Lafayette, Ind.,
Lawyer, County Attorney, Tippecanoe County.
Peirce, Hayward, B. S., Frankfort,
General Granite Business.
Reed, Frank Radford, C. E., No. 60 Franklin St., Rumford Falls,
Assistant Engineer, Rumford Falls Power Co.
Reynolds, Henry Jones, B. S., Eastport,
Pharmacist.
Rogers, Charles Wilson, M. E., 281-289 S. Clinton St., Chicago, Ill.,
With B. F. Sturtevant Co.
Stevens, William Lewis, M. E., 827 Guaranty Loan Building, Minneapolis, Minn.,
Exporter of Flour.
Williams, John Howard, B. S., Brooklyn Center, Minn.,
Farmer.

1877.

Blackington, Alvah De Orville., C. E., 507 Elm St., Dunmore, Pa.,
Treasurer Consumer's Ice Co., Treasurer Dr. Hand Condensed Milk Co., Treasurer Oak Hill Coal Co., Vice President Scranton Whetstone and Abrasine Wheel Co.
Burns, Robert Bruce, C. E., 2642 Vermont Ave., Los Angeles, Calif.,
Chief Engineer, A. T., & S. F. R'y Co. (Coast Lines), Southern Calif, Ry. Co., Sunset R. R. Co. and Grand R. R. Co.
Dakin, Eugene Herbert, B. S., 186 Exchange St., Bangor,
General Manager The S. L. Crosby Co.
Danforth, Edward Franklin, B. S., LL. B., Skowhegan,
Lawyer.
Elkins, Augustus Jerome, B. M. E., 31 Chamber of Commerce, Minneapolis, Minn.,
Bookkeeper, Minnesota & Western Grain Co.
Emery, Alicia Towne, B. S., Orono.
Gould, Samuel Wadsworth, B. S., Skowhegan,
Lawyer.
*Lunt, Joseph Cony, B. C. E.
Phillips, Fred Foster, B. S., 5 Mabel St., Portland, Maine.
*Shaw, Samuel, B. M. E.
Stevens, Thomas Jefferson, B M. E., Auburn,
Druggist.
Stone, Frank Pierce, B. S., 143 Main St., Norway,
Druggist.
†Sturgis, George Eugene, B. C. E., Portland, Ore.,
Travelling Salesman.
†Towne, Charles Elmer, B. C. E., Rocky Bar, Idaho,
Mining Engineer and Superintendent of Mines.

Webster, Ivan Eldorus, B. S., Orono.
Weeks, Nellie Estelle, B. S., Orono,
(Mrs. Llewellyn Spencer.)
Weeks, James Walter, B. M E., Castine, Me.,
Contracting Architect.

1878.

*Brown, Emma, B. S.
(Mrs. Charles Gilman.)
†Caldwell Andrew James., B. M. E., 120 Liberty St., New York, N. Y.,
General Superintendent and Mechanical Engineer, with Henry R. Worthington.
Chamberlain, Cecil Calvert, B. S., Enderlin, N. D.,
Lumber Dealer.
Fernald, George Everett, B. C. E., Wilmette, Ill.,
Commercial Salesman.
Heald, James, B. S., Orono, Me.
Locke, John, B. S., 238 St. John St., Portland,
Chief Clerk, General Freight Department, Maine Central R. R.
Oakes, Frank Judson, B. C. E., care of H. R Worthington, Brooklyn, N. Y.,
Mechanical Engineer.
Patterson, John Cameron, care of G. N. Ry. Co., St. Paul, Minn.
Prin. Asst. Engineer, Great Northern Railway Co.
Tripp, Winfield Eastman, B. C. E., LL. B., Iron River, Wis.,
Lawyer and Municipal Judge, Secretary and Treasurer of Kalama River Lumber Co.
Walker, Edward Colby, B. S., Bridgton.
Lawyer.
Webster, Otis Colby, B. S., Bowditch, Webster & Co., Augusta.
Druggist.

1879.

†Bean, Harry Percy, C. E., care of G. S. Bean, 4 Eden Ave., Campbell, Calif.,
Ranchman.
*Blake, Edward Josiah, C. E.
Crosby, Simon Percy, B. S., 803 Goodrich Ave., St. Paul, Minn.,
Lawyer, 634 Globe Building.
Cutter, John Dana, B. S., M. D., Tomahawk, Wis.,
Physician and Surgeon.
Decker, Wilbur Fisk, M. E., Andrus Building, Minneapolis, Minn.,
Vice President St. Anthony Falls Bank.
Decrow, David Augustus, B. C. E., Member American Society of Mechanical Engineers, Member Engineers Society of Western New York, Buffalo, N. Y.
Secretary and Chief Engineer, Holly Manufacturing Co.

†Ferguson, Willis Edwin, B. S., Tempe, Ariz.,
Superintendent and Local Manager Seedless Grape and Vineyard Co.
Gibbs, Charles Wingate, C. E., Telluride, Colo.,
Civil and Mining Engineer.
Gould, Annie May., B. S., 5044 a Fairmont Ave., St. Louis, Mo.,
(Mrs. Loomis F. Goodale.)
*Holt, Nellie Maud, B. S.
Kidder, Frank Eugene, C. E., Ph. D., Fellow American Institute of Architects, 628 14th St., Denver, Colo.,
Consulting Architect and Structural Engineer.
†Libby, Mark Dunnell, B. C. E., El Reno, Okl. Ter.,
Lawyer.
*Loring, Charles Sewall, B. M. E.
Merrill, George Perkins, M. S., Ph. D., U. S. National Museum, Washington, D. C.,
Head Curator, Department of Geology.
Meserve, John William, B. M. E., 32 Beech St., Rockland, Me.
Moore, Arthur Lee, B. S., Camden,
Agent, Eastern Steamship Co. and Supt. of Schools.
Morse, Charles Adelbert, C. E., 827 Harrison St., Topeka, Kansas,
Acting Chief Engineer, Atchinson, Topeka and Santa Fe Ry. Co.
Potter, Frederick David, B. M. E., 43 Cortland St., New York City, N. Y.,
President Potter Separator Co.
*Shaw, Alton Jhacellous, B. M. E.
Vinal, Percia Ann, M. S., Orono,
(Mrs. Albert White.)
Warren, George Otis, B. S., Fryeburg,
Merchant, Eastman & Warren Co.
†Webster, Herbert, B. S.

1880.

*Atwood, Horace Ward, B. S.,
Bartlett, James Monroe, M. S., Orono,
Chemist in the Maine Agricultural Experiment Station.
Brown, Albert Hinckley, B. S., Oldtown,
Treasurer and Clerk, Ounegan Woolen Company.
†Davis, Marcia, B. S., 337 South Fifteenth St., Denver, Colo.,
(Mrs. Joseph D. Stevens.)
†Elliott, Fred Burton, B. S., Waterville,
Principal, Waterville Business College.
*Farrington, Sarah Perkins, B. S.,
(Mrs. George P. Merrill.)
Fernald, Charles Wilbur, B. S., South Levant,
Merchant.
Fickett, Fred Wildon, M. S., 1021 Association Building, Chicago, Ill.,
Lawyer, firm Fickett and Brinker.
Lufkin, George William, B. C. E., 618 Main St., Coatsville, Pa.,
Civil Engineer, Parkesbury Iron Co., Parkesbury, Pa.

†Mansfield, Frank Albert, M. S., B. D., 182 State St., Hackensack, N. J.,
Clergyman.
Matthews, Annie Amelia, B. S., Stillwater,
Teacher.
†Murray, Henry Wilson, B. C. E., Napa Calif.,
Farmer and Teacher.
†Patten, Franklin Robert, C. E.
†Pease, Charles Trueman, B. S., LL. B., 1716 Marion St., Denver, Colo.,
Senior Member C. T. Pease & Co., Mining Titles, 308 Barclay Block.
Purington, James Frank, B. A., 1043 Washington St., Bath,
Clerk, Railway Mail Service.

1881.

Andrews, Henry Harris, M. E., Callaway, Neb.,
Cashier, Bank of Callaway.
Brown, Henry William, M. S., Literary Institution, New Hampton, N. H.,
Vice Principal and Professor Metaphysics and Geology.
Buck, Clara Louise, B. S., Eureka, Calif.,
(Mrs. Thomas W. Hine.)
Colburn, Fanny Eliza., B. S., 2404 Capitol Ave., Omaha, Neb.,
(Mrs. Arthur L. Fernald.)
Farrington, Edward Holyoke, M. S., 315 Mills St., Madison, Wis.,
Professor of Dairy Husbandry, University of Wisconsin.
Farrington, Oliver Cummings, M. S., Ph. D., Field Columbian Museum, Chicago, Ill.,
Curator of Geology, Field Columbian Museum, Chicago.
Fogg, Charles Henry, B. C. E., Greensburg, Pa.,
Civil and Mining Engineer.
Ingalls, Aldana Theodore, B. C. E., Boise, Idaho.
Civil Engineer.
*Johnson, Robert John, B. C. E.
Libby, Clara Alice, B. S., 221 Water St., Augusta,
Milliner.
McIntyre, Horace Flanders, M. E., Waldoboro,
Pension and Claim Agent.
Moor, Charles Lincoln, B. C. E., Hartland,
Bookkeeper, Linn Woolen Co.
*Murray, Benjamin Franklin, B. C. E.
†Osborn, Edwin Winthrop, B. C. E., Hotel Metropolitan, St. Paul, Minn.,
Chief Clerk for General Superintendent, Northern Pacific R. R.
Pease, Oscar Leroy, B. S., Tucson, Ariz.,
Train Dispatcher, S. P. R. R.
Plaisted, Harold Mason, M. E., 4413 Page Ave., St. Louis, Mo.,
Structural Engineer with Louisiana Purchase Exposition Co.
Ring, Alice Isabel, B. S., Orono,
(Mrs. Charles J. Dunn.)

Ring, Mary Lillian, B. S., Callaway, Neb.,
(Mrs. H. H. Andrews.)
*Smith, Roscoe Loring, B. S.
Sturtevant, George Washington, Jr., B. C. E., 1208 Fisher Building, Chicago, Ill.,
Consulting Engineer firm of Sturtevant & Todd; also President Phoenix Construction Co.
Wade, Frank Swan, B. S., M. D., New Richmond, Wis.,
Physician and Surgeon; Attending Physician to the St. Croix County Asylum for Insane.
*White, Walter Adelbert, B. C. E.
*Wilson, John Barrows, B. S.
Wyman, Levi Augustus, B. C. E., South Pasadena, Calif.,
Real Estate Lawyer.

1882.

Bickford, Charles Swan, B. S., Belfast,
Secretary, The Swan and Sibley Co., Jobbers of Grain and Groceries.
†Boynton, Jacob Leighton, B. S., Lynn, Mass.
Browne, Charles Weston Hopkins, B. M. E., Takoma Park, D. C.,
U. S. Patent Office, Washington, D. C. Member of the Faculty of the National Correspondence Institute, Washington, D. C.
Buzzell, Stephen Jennings, B. C. E., Oldtown,
General Engineering Work.
†Dunton, Oscar Howard, M. E., Cincinnati, Ohio.
Flint, Walter, M. E., Port Deposit, Md.,
Supervising Engineer, Jacob Tome Institute.
Fuller, George Ripley, B. S., South West Harbor,
Lawyer.
Garland, Charles Clinton, B. S., Debsconeag, Maine,
Treasurer Debsconeag Fish and Game Club.
Gould, Joseph French, B. S., Oldtown,
Lawyer.
Hine, Thomas Walton, B. S., Eureka, Calif.,
President California Iron Works Co.
Howard, Will Russell, B. S., Friends School, Providence, R. I.,
Governor, Friends School.
Hurd, Alonzo L., B. S., M. D., Somers, Conn.,
Physician and Surgeon.
†Keith, Alfred Justin, B. C. E., Oldtown.
Kimball, Frank Issacher, C. E., Herminie, Pa.,
Superintendent Ocean Coal Co.
Patten, James Herbert, B. S., M. D., Amherst, Maine,
Physician and Surgeon.
Reed, Frederick Martin, B. M. E., New Bedford, Mass.
Draftsman, Johnson Typesetter Co.
Snow, Gleason Cyprian, B. S., North Orrington,
Farmer.

Starrett, Avery Palmer, B. S., Warren,
Market Gardener; Statistical Correspondent U. S. Department of Agriculture for Knox County.

†Todd, Frank Herbert, B. C. E., 1208 Fisher Building, Chicago, Ill.
Consulting Engineer and Superintendent, firm of Sturtevant & Todd.

Webster, Eben Crowell, B. S., Orono,
Treasurer Nekonegan Paper Co. and Treasurer Union Land Co., Oldtown.

†Wight, Willard Alberto, B. C. E., Trindad, Colo., and Atlanta, Colo.,
Stock Raising and Fruit Business.

Woodward, Daniel Carr, M. E., 105 Elmwood Ave., Wollaston, Mass.,
Mechanical and Electrical Engineer, Fore River Ship and Engine Co., Quincy, Mass.

1883.

Cain, James Henry, B. S., Orono,
Contractor, Dam Building.

Cilley, Jonathan Vernet, B. C. E., Dr. Eng'g., Cruz del Eji, Prov. of Cordoba, Argentina,
General Manager, Ferro-Carril Argentino del Norte.

†Emery, Frank Edwin, M. S., Laramie, Wyoming,
Professor of Agriculture and Horticulture and V. Director, Wyoming Agricultural Experiment Station.

Fernald, Arthur Liddell, B. S., 2404 Capitol Ave., Omaha, Neb.,
Agent, The American Thread Co. of New York & Chicago.

*Kelleher, Bartholomew Patrick, B. S., M. D.

Merrill, Lucius Herbert, B. S., Orono,
Professor of Biological Chemistry, University of Maine, and Chemist in the Agricultural Experiment Station.

Michaels, Janie Chase, M. S., Merrymount Road, Quincy, Mass.,
Teacher of German, Quincy High School.

Mullen, Charles Ward, B. C. E., Bangor,
Manufacturer.

Patten, Truman Miller, B. C. E., Glasgow, Montana
Civil Engineer.

†Powers, Harry Wilson, B. S., 45 Armandine St., New Dorchester, Boston, Mass.,
Real Estate Agent, No 1 Hancock St., Boston, Mass.

Putnam, Charles Edgar, B. C. E., Jamaica Plain, Mass.,
Engineer, Park Department, Boston, Mass.

Robinson, Lewis, Jr., B. M. E., M. D., Carmel,
Physician.

Sutton, George Arthur, B. C. E., Orono,
Farmer.

Taylor, Levi William, M. S., Waverley, Iowa,
Marble Worker.

1884.

Allan, George Herman, B. S., 191 Middle St., Portland,
Lawyer; U. S. Appraiser, District of Portland.
*Bureigh, Will Hall, B. C. E.
*Conroy, Mary Frances, B. S.,
(Mrs. A. R. Saunders.)
Cutter, Leslie Willard, B. C. E., Bangor,
Contractor and Builder.
Fernald, Harriet Convers, M. S., Spokane, Wash.,
(Mrs. John A. Pierce.)
*Hatch, Elmer Ellsworth, B. S.
†Hill, John Edward, B. C. E., Anoka, Minn.,
Civil Engineer.
†Kelly, Joseph Grant, B. C. E., C. E., Portland, Oregon,
Superintendent for the Port of Portland Commission.
Ladd, Edwin Fremont, B. S., Agricultural College, Fargo, N. D.,
Professor of Chemistry, North Dakota Agricultural College; Chemist in Experiment Station; Food Commissioner for North Dakota; and Editor of the North Dakota Farmer and Sanitary Home.
Lunt, Charles Sumner, B. C. E., Rochester, N. Y.,
C. S. Lunt & Co., Bankers and Brokers.
Stevens, Fred Leroy, B. S., V. S., 310 Washington St., Somerville, Mass.,
U. S. Government Inspector (Bureau of Animal Industry).
Webber, William, M. E., 889 S. Sawyer Ave., Chicago, Ill.
Head Draftsman, McCormick Harvesting Machine Co.

1885.

Chamberlain, George Walter, M. S., Weymouth, Mass. (10 mo.), West Lebanon, Me. (July and August).
Prin. Hunt School, Weymouth.
Dole, Asher, B. C. E., Carroll, Iowa,
Civil Engineer.
Dutton, Orion Jesse, B. S., 9 Hillside Terrace, New Dorchester, Mass.,
Philatelist.
Fernald, Henry Torsey, M. S., Ph. D., Amherst, Mass.,
Professor of Entomology, Mass. Agricultural College, and Associate Entomologist, Hatch Experiment Station.
Goodridge, Elmer Orlando, M. E., 148 E. Foster St., Melrose, Mass.,
Master Mechanic, Boston Rubber Shoe Co., Malden, Mass.
Hanscom, George Loring, B. S., 134 Quitman St., Newark, N. J.,
Clergyman, First Congregational Church.
Hart, James Norris, C. E., M. S., Orono,
Professor of Mathematics and Astronomy, University of Maine.
Hull, Frank Eugene, C. E., Member of American Society of Civil Engineers, Warren, Me.

Keyes, Austin Herbert, B. C. E., B. Ph., M. A., Ph. D., Lee, Mass.,
Superintendent of Schools, Lee, Monterey, Otis, Tyringham.
†Morey, William, Jr., B. C. E.
Moulton, Joseph Perkins, B. S., Springvale,
Farmer.
Paine, Leonard Gregory, M. E., 1416 South Penn Sq., Philadelphia, Pa.,
Agent Standard Plunger Elevator Co. and Passaic Steel Co.
†Pennell, Elmer Ellsworth, B. M. E.
Riggs, Louis Warner, B. M. E., Ph. D., First Ave. and 28th St, New York City, N. Y.,
Chemist and Instructor in Chemistry, Cornell University Medical College.
Russell, Fremont Lincoln, B. S., V. S., Orono,
Professor of Biology, University of Maine, and Veterinarian of the Agricultural Experiment Station.

1886.

Allan, Bert John, B. C. E., Middleboro, Mass.,
Lawyer.
†Ayer, Josiah Murch, C. E., Hotel Hamlet, Somerville, Mass.,
Assistant Engineer, Boston Elevated Railway.
†Barker, George Greenleaf, B. M. E.
Black, George Fuller, C. E., Portland,
Superintendent, Mt. Div., Maine Central Railroad.
Blagden, John Decker, B. C. E., Weather Bureau, Memphis, Tenn.,
Observer, U. S. Weather Bureau.
French, Heywood Sanford, C. E., Newtonville, Mass.,
Boston representative, The J. W. Bishop Co., Essex Bldg., 683 Atlantic Ave., Boston, Mass.
Graves, Edwin Dwight, C. E., 650 Main St., Hartford, Ct.,
Civil Engineer. Chief Engineer for Commissioners Connecticut River Bridge and Highway District.
Jones, Ralph Kneeland, B. S., Orono,
Librarian, University of Maine.
Lenfest, Elmer, B. C. E., Snohomish, Wash.,
Civil Engineer and Surveyor. U. S. Deputy Mineral Surveyor.
Lockwood, James Frederick, M. E., 17 Battery Place, New York, N. Y.,
Asst. Gen'l Supt. of Construction, Otis Elevator Company.
Lull, George Frederick, M. S., Niagara Falls, N. Y.,
Superintendent By-Products Paper Co.
Merriam, Willis Henry, B. C. E., S. 358 Coeur d'Alene St., Spokane, Wash.,
Lawyer, 339 "The Rookery."
†Merritt, Elmer Ellsworth, M. E.
Page, Arthur Dean, C. E., Chicago, Ill.,
Bridge Engineer, Chicago, Rock Island and Pacific Ry.
Ray, Irving Burton, B. C. E., 167 Cambridge St., Boston, Mass.,
Grocer.

Twombly, Sidney Smith, B. S., D. V. S., Fullerton, Calif.,
Instructor in Chemistry and Agriculture, Cal. Polytechnic School.

1887.

Burleigh, John Henry, B. C. E., 93 Main St., Waterville,
Civil Engineer.
Cilley, Luis Vernet Prince, B. C. E., 59 Calle Rivadona, San Isidore, Prov. Buenos Ayres, Argentine Republic, S. A.
Clark, Bertrand Elmer, M. S., Bar Harbor,
Lawyer.
Coffin, Edward Voranus, B. C. E., Harrington,
Salesman.
Colby, David Wilder, B. S., Skowhegan,
Superintendent of Schools.
Hicks, Alice Albur, M. S., Portland,
(Mrs. George F. Black.)
Lazell, James Draper, B. M. E., 5 Nassau St., New York, N. Y.,
With Transit Finance Co.
McNally, Henry Allan, B. C. E., Philadelphia, Pa.,
Observer, U. S. Weather Bureau.
† Mason, Charles Ayers, B. C. E., Little Rock, Ark.,
Engineer, Choctaw & Memphis R. R.; in charge St. Francis and White River Bridges.
† Merrill, Fenton, B. C. E., Lawrence, Wash.,
Lumberman.
Saunders, Addison Roberts, M. E., 362 Essex St., Lawrence, Mass.,
Manager.
† Sears, Cassius Almon, B. C. E., Lyman, Wash.
† Stevens, Charles Hildreth, B. M. E., Fort Fairfield,
Lumber Manufacturer.
† Sturtevant, Charles Fremont, C. E., 2249 Sherman Ave., Evanston, Ill.,
Trask, Frank Ellsworth, B. C. E., Member American Society Civil Engineers, 405-406 Douglas Building, Los Angeles, Calif.,
Consulting Engineer.
Vose, Charles Thatcher, B. C. E., 122 Sherman St., Portland,
Assistant Civil Engineer, Maine Central R. R.
Webb, Howard Scott, M. E., E. E., Orono,
Professor of Electrical Engineering, University of Maine.
Williams, John Sumner, B. S., LL. B., Guilford,
Lawyer.

1888.

Andrews, Hiram Bertrand, B. C. E., 101 Milk St., Boston, Mass.,
Civil Engineer, Boston Elevated Railway Co.
*Batchelder, George Stetson, B. M. E.
Blanchard, Charles DeWitt, B. C. E., Oldtown, Me.

Boardman, John Russell, B. S., 3 West 29th St., New York, N. Y.,
County Work Secretary International Committee Young Men's Christian Associations

Brick, Francis Stephen, M. S., Uxbridge, Mass.,
Superintendent of Schools for towns of Uxbridge and Douglas.

Butler, Harry, B. S., M. D., Bangor,
Physician.

Campbell, Dudley, C. E., Newport, R. I.,
Principal, Coddington School.

Eastman, Fred Langdon, M. E., 158 Highland Ave., Wollaston, Mass.,
Electrical Assistant to Inspector of Equipment, Fore River Ship and Engine Co., Quincy, Mass.

*Elwell, Edward Henry, B. S.

Hancock, William Jerome, M. S., Erasmus Hall High School, Brooklyn, N. Y.,
Teacher of Chemistry, Erasmus Hall High School.

Hatch, John Wood, M. S., Winterport, Me.,
Pastor of M. E. Church.

Howes, Claude Lorraine, B. M. E., M. E., 188 Summer St., Boston, Mass.,
Senior member, Howes-Hill Manufacturing Co.; Asst. Engr. City of Boston; Treas. Franklin Howes Medicine Co.

Lincoln, Harry Foster, B. S., M. E., St. Albans, Vt.,
City Engineer, Supt. of Streets and Water System.

Lord, Thomas George, M. S., Skowhegan,
Farmer.

Marsh, Ralph Hemenway, B. S., M. D., Guilford,
Physician.

*Miller, Seymore Farrington, B. C. E.

Philbrook, William, B. C. E., Worcester, Mass.,
With Plunger Elevator Co.

*Rogers, Seymore Everett, B. M. E.,

†Seabury, George Edwin, B. M. E.

Small, Frank Llewellyn, B. M. E., King St., Hampton, Va.,
Merchant.

*Smith, Frank Adelbert, C. E.

Wilson, Nathaniel Estes, M. S., 109 Maple St., Reno, Nevada.
Vice Director and Chemist Nevada Expt. Sta., and Professor of Chemistry, Nevada State University.

1889.

*Briggs, Fred Percy, B. S.

Cushman, Charles Granville, B. M. E., 30 Broad St., New York City,
Chief Draughtsman, International Paper Company.

Edgerly, Joseph Willard, B. C. E., Princeton,
Farmer.

Ferguson, Jeremiah Sweetser, M. S., M. D., 330 West 28th St., New York, N. Y.,
Physician; Instructor in Histology, Cornell University Medical College.

Freeman, George Gifford, B. S., Cherryfield,
Lawyer and Insurance Agent.
†Gay, George Melville, B. S., Damariscotta,
Clerk.
Haggett, Eben Raymond, B. S., 32 Marine Bank Building, Baltimore, Md.,
Secretary and Manager, J. S. Hoskins Lumber Co.
Leavitt, Nellie Louise, B. S., Skowhegan.
†Reed, John, B. C. E., 3 Depot St., Concord, N. H.,
Assistant Engineer, B. & M. R. R.
Reed, Nellie Waterhouse, B. S., Stillwater, Me.,
(Mrs. Edwin R. Jordan.)
*Stevens, Fred, B. M. E.
Vickery, Gilbert Scovil, B. C. E., Harrisburg, Pa.,
Civil Engineer with Pa. Steel Co.
*White, Mark Elmer, B. C. E.
Wilson, Mortimer Frank, B. S., Essex St., Bangor,
Market Gardener.

1890.

†Andrews, Franklin Orris, B. M. E., care of American Machinery Co., Willoughby, Ohio.
Mechanical Engineer.
Babb, George Herbert, B. M. E., 79 Concord St., Woodfords,
Principal of Walker Manual Training School, Portland.
Bird, John, B. M. E., Rockland,
Manager, Camden Anchor—Rockland Machine Co.
*Blackington, Ralph Harvey, B. S.
Bowden, George Irving, B. C. E., 25 Dyer Ave., Everett, Mass.,
Principal of Webster School.
Clark, Hugo, B. C. E., C. E., Suite 9 Columbia Building, Bangor, Me.,
Lawyer. Resident Lecturer on Equity Pleading and Practice, University of Maine School of Law.
*Coffin, Alphonso John, B. S.
Croxford, Walter Everett, B. M. E., 170 Van Vranken Ave., Schenectady, N. Y.,
Draftsman for General Electric Co.
Dow, Fred Todd, B. M. E., Bangor, Me.,
Consulting and Designing Engineer.
Drew, Albert Wilson, B. M. E., 116 28th St., Newport News, Va.,
Leading Hull Draftsman with Newport News Shipbuilding & Dry Dock Co.
†Dunton, Harris Drummond, B. M. E., Providence, R. I.,
Chief Draftsman, Moseberg & Granville Manufacturing Co.
Farrington, Horace Parker, B. M. E., Schenectady, N. Y.,
Engineer.
Gould, George Pendleton, B. S., 68 Jefferson St., Bangor,
Railway Postal Clerk, Bangor and Boston R. P. O.

Grover, Nathan Clifford, B. S., C. E., Orono,
Engineer, U. S. Geological Survey.
†Hardison, Allen Crosby, B. C. E., 1017 W. 24th St., Los Angeles, Calif.,
Manager and Superintendent of "Gladiator Mine," Crown King, Ariz.
Harvey, Chandler Cushman, B. C. E., C. E., Fort Fairfield,
Editor and Proprietor Ft. Fairfield Review.
Hayes, Samuel Henry Tewksbury, M. S., 421 N. Charles St., Baltimore, Md.,
Manager, The Walker-Gordon Laboratory. (Modified Milk.)
Heath, Everett Fenno, B. M. E., 222 48th St., Newport News, Va.,
Leading Hull Draftsman, Newport News Shipbuilding and Dry Dock Co.
Kelley, Edward Havener, B. S., 187 No. Main St., Brewer,
Managing Editor, Bangor Daily Commercial.
*Keyes, George Edwin, B. M. E.
Leavitt, Hannah Ellis, B. S., Port Deposit, Md.,
(Mrs. Walter Flint.)
Morey, Elmer Lake, B. C. E., Columbo, Ceylon.
Vice and Deputy U. S. Consul at Ceylon.
Morrill, Edmund Needham, B. S., Warren, N. H.,
Chemist, Warren Separator Co.
Owen, John Wesley, B. C. E., 101 Milk St., Boston, Mass.,
Civil Engineer, Boston Elevated Railway.
†Pierce, Varna John, B. M. E., 6540 Drexel Ave., Chicago, Ill.,
With Goodman Manufacturing Co.
Pierce, William Bridgham, B. M. E., 49 Hammond St., Bangor.
Lawyer.
†Pierce, William Barron, B. M. E., 58 Bancroft Park, Hopedale, Mass.,
Draughtsman, Draper Co.
Pillsbury, George Melville, B. S., Lowell, Wash.
Superintendent & Chemist of Pulp Mill, Everett Pulp & Paper Co.
Quincy, Frederick Grant, B. M. E., 499 State St., Bangor,
Manufacturer of long and short lumber, St. Francis. Me.
Rackliffe, Joseph Riley, B. C. E., 619 Edmond St., St. Joseph, Mo.,
Rackcliffe & Gibson, Engineers and Contractors, Public Works.
†Reed, Fullerton Paul B. C. E., Ash Forks, Arizona,
Wool Grower.
Sawyer, Frank Wade B. S., M. D., Prescott, Ariz.,
Physician and Surgeon.
Swan, Clarance Buzzell, B. M. E., Oldtown,
Member of firm, Star Printing Co., and Treas. and Mgr. Damon Perforator Co.
Wallace, Chester Jay, B. C. E., Town Hall, Brookline, Mass.,
Principal Assistant of the Town Engineer.
Webb, Winfield Scott, C. E., Caribou,
Superintendent of Schools.

*Wight, Ralph Holbrook, C. E.,

Williams, Charles Sampson, M. S., 420 Ditmars Ave., Long Island City, N. Y.,
Chemist, Oakes Manufacturing Co.

1891.

Arey, Ralph Jesse, C. E., Williams, Arizona,
Assistant Engineer, the A. T. & S. F. Ry. Coast Lines.

Bailey, William Melvin, B. C. E., 29 Auburn St., Malden, Mass.,
Engineer, Eastern Expanded Metal Co., Boston, Mass.

Clark, Edmund, B. S., M. S., 426 Sanford Ave., Flushing, L. I., N. Y.,
Assistant Chemist, Department of Health, New York City.

Clayton, Charles, B. S., Taopi, Minn.,
Manager of Farm; General Merchant.

Farrington, Wallace Rider, B. S., Honolulu, Hawaiian Islands,
Editor Evening Bulletin; President Bulletin Publishing Co.

Farrington, William Rowe, B. C. E., C. E. 75 S. Main St., Middl boro, Mass.,
Division Engineer, Massachusetts Highway Commission.

Flanagan, John Henry, B. M. E., Rockland,
Mailing Clerk, Rockland P. O.

Graves, Joseph Colburn, M. E., 17 Battery Place, New York, N. Y.,
With Otis Elevator Company.

Hall, Herbert Austin, C. E., Kennebunk,
Treasurer and Engineer, Kennebunk Electric Light and Power Co.

Hamlin, Cyrus, B. S., M. D., 150 Putnam Ave., Brooklyn, N. Y.,
Physician.

Keyes, Prescott, Jr., C. E., M. A., Bangor, Me.,
Supt. Prin. Grammar Schools.

Kilbourne, Charles Herbert, B. S., 2254 7th Ave., New York, N. Y.,
Inspector of Foods, Dept. of Health, 55th St. and 6th Ave., N. Y. City.

Lord, Robert William, B. M. E., Skowhegan,
Draftsman.

†Menges, Hugo Gustave, B. M. E., 22 Monument Square, Charleston, Mass.,
Assistant Engineer, Metropolitan Water Board.

Merrill, True Lander, B. M. E., Deming, Wash.,
Lumberman.

Moulton, Fred Charles, M. S., Wallstreet, Colo.,
Mining, Assaying.

Patten, William Nickels, B. C. E., C. E., 84 State St., Boston, Mass.,
Civil and Electrical Engineer with Stone and Webster.

Starrett, Henry Vaill, B. S., Warren,
Market Gardener, and Travelling Salesman for Maine Register.

Steward, John White, B. M. E., Skowhegan,
Miller.

Taylor, Charles Norton, C. E., 1 Waban St., Wellesley, Mass.,
Thompson, George Edward, B. C. E., Orono,
Lawyer.
Valentine, William Alton, M. E., 1933 Parrish St., Philadelphia, Pa.,
Draftsman, with J. Henry Mitchell, 821 N. 13th St., Philadelphia.

1892.

*Atherton, George Frederick, B. M. E.
†Atkinson, William Hacker, B. C. E., Malden, Mass.,
Superintendent of construction.
Bristol, Mortimer Lucius, B. M. E., West Hartford, Ct.,
Assistant Superintendent, Colt's Patent Fire Arms Manufacturing Co.
Butterfield, William Rowe, B. C. E., Room 715 Battery Park Building, New York City.
Clark, Roscoe Conkling, B. M. E., 60 Elm St., Saco, Maine,
Draftsman, Saco and Pettee Machine Co.
†Danforth, Ernest Wilbur, B. C. E., 468 Medford St., Somerville, Mass.,
Assistant City Engineer, in Charge of Sewers.
†Doolittle, Herbert Edward, B. C. E., East Northfield, Mass.,
Dealer in Lumber.
Farrington, Mellin Edward, B. M. E., 104 Franklin St., Bangor, Me.,
Mechanical Engineer and Millwright with Penobscot Machine Co.
Fernald, Robert Heywood, B. M. E., M. E., M. A., Ph. D., Washington University, St. Louis, Mo.
Professor of Mechanical Engineering.
Gibbs, John Clinton, B. M. E., 144 Munroe St., Lynn, Mass.,
Florist.
Grover, Arthur Curtis, B. C. E., 48 Prospect St., Rutland, Vt.,
City Engineer and Superintendent of Streets and Water Works.
Healey, Warren Evans, B. M. E., Box 1804, Boston, Mass.,
Salesman, Rockland-Rockport Lime Co.
Holden, William Cross, M. E., Public High School, Hartford, Conn.,
Director of Manual Training and Instructor in Mathematics.
Maguire, George, C. E., Room 408 State Mutual Building, Worcester, Mass.
Member of firm, Ferranti and Maguire, Road Builders.
Randlette, Charles Maurice, B. S., M. D., Monmouth,
Physician.
Timberlake, Stanley Milton, C. E., 259 South Clinton St., Chicago, Ill.,
Chief Engineer of Fire Protection Western Electric Co.
Tolman, Frank Stevens, B. C. E., 779 Steinway Ave., Long Island City, N. Y.,
Superintendent, Oakes Manufacturing Co.
†Tyler, Joseph Albert, B. C. E., 26 Lexington St., E. Boston, Mass.,
Engineer and Assistant Superintendent, East Boston Gas Co.

1893.

Buck, Hosea Ballou, C. E., Room 1 Columbia Building, Bangor,
With Messrs. Coe & Pingree, Timberlands.
Crosby, Walter Wilson, B. C. E., C. E., Towson, Md.,
Engineer, Baltimore County Roads.
†French, Charles Frederick, B. M. E., 7 Fayette St., Beverly, Mass.,
With Consolidated and McKay Machine Co.
Gannett, Charles Henry, B. C. E., 7 Academy St., Arlington, Mass.,
Civil Engineer, Office 1102 Exchange Building, Boston, Mass.
Gould, Harris Perley, M. S., Department of Agriculture, Washington, D. C.,
Assistant Pomologist, Bureau of Plant Industry, U. S. Department of Agriculture.
†Hutchinson, George Weymouth, B. C. E., Greensburg, Pa.,
Civil Engineer.
Jack, Walter Dows, B. S., Box 42, Carteret, N. J.,
Supt. International Phosphate Co.
Jordan, Alva Thomas, B. S., New Brunswick, N. J.,
Horticulturist, New Jersey State Experiment Station.
†Kittredge, Charles Partridge, B. S., Turner,
Pastor, Baptist Church.
Lewis, Hugh McLellan, B. C. E., South Berwick,
Civil Engineer.
Murphy, Charles Clark, B. C. E., Cheesman, Colo.
Inspector of Masonry for the Denver Union Water Co.
Rowe, George Freeman, B. M. E., Bangor,
Mechanical Engineer with N. M. Jones, Lincoln, Me.
Shaw, Orrin John, B. C. E., D. D. S., Ludlow, Vt.,
Dentist.
Smith, Harry Maubec, B. M. E., 23 Second St., Bangor,
With Eastern Mfg. Co., So. Brewer.
Webster, John Milton, B. S., 3364 F. St., San Diego, Calif.,
Whitney, George Ansel, B. M. E., 235 Main St., Lewiston,
Hardware Merchant.
Williams, Hiram, B. S., M. D., 154 Monroe St., Passaic, N. J.,
Physician.

1894.

Bowler, Frank Colburn, B. M. E., 148 Ohio St., Bangor,
Assistant Engineer with H. S. Ferguson, Chief Engineer for Great Northern Paper Co., Millinocket.
Cowan, Edward Henry, B. C. E., Marion, Ohio,
Supt., Marion City Water Company.
†Cowan, George Parker, B. C. E.
*Durham, Leroy Tolford, B. C. E.
†Gilbert, Charles Edward, B. M. E., Orono.
Civil Engineer.
Assistant Engineer, The Lake Superior Power Co.

Gray, Jesse Alexander, B. S., Oldtown,
Traveling Salesman, United States and England, Bickmore Gall Cure Co.

Hall, George Henry, M. E., 417 West 150 St. New York, N. Y.
Associate Editor, "Machinery" Industrial Press, 66 West Broadway, New York City.

Harvey, James Elmore, B. M. E., Oakland, Me.,
With Brown Woolen Co.

†Hayes, Augustus Daniel, B. C. E., 185 High St., Belfast,
City Engineer, Belfast.

†Jose, Wallace Hight, B. S., 649 Tremont Building, Boston, Mass.,
Lawyer.

*Kimball, James Mayberry, B. C. E.

Murray, Herbert, B. S., Everett, Wash.
Mining.

Norwood, Leon Orlando, B. C. E., Munising, Mich.
Civil Engineer with J. H. Wallace, C. E., Temple Court Building N. Y., Resident Engr. Munising Paper Co.

Rumball, George Washington, Jr., B. M. E., Beverly, Mass.,
Foreman, United Shoe Machinery Co.

Wood, Edward Butler, B. M. E., 93 Federal St., Boston, Mass.,
Supt. of Construction with Lockwood, Green & Co., Mill Architects and Engineers.

1895.

Atwood, Gustavus Gilbert, B. C. E., 26 Upton St., Boston, Mass.,
Bookkeeper for Holbrook, Cabot and Rollins, Contractors.

Boardman, Harold Sherburne, C. E., Main St., Orono,
Associate Professor of Civil Engineering, University of Maine.

Buck, Alfred Howard, B. M. E., N. E. Cor. Perry Ave. and 205th St. New York City, N. Y.,
Asst. Wire Chief, New York Telephone Co.

Calderwood, Isaac Glidden, B. C. E., Room 131 State House, Boston, Mass.,
Civil Engineer on dock construction, Massachusetts Harbor and Land Commission.

Chase, Wendell W., C. E., 39 Rosseter St., Dorchester, Mass.,
The Scarborough Co., 144 Essex St., Boston, Mass.

Damon, Frank Hardy, B. S., Bangor,
In charge of Department of Physics and Chemistry, Bangor High School.

†Ellis, Merton Eugene, B. M. E., 145 Lothrope St., Beverly, Mass.,
Foreman, United Shoe Machinery Co.

Folsom, Leroy Rowell, B. S., Norridgewock,
Lawyer, Superintendent of Schools.

Frost, Charles Albert, B. C. E., 8 Winthrop St., Malden, Mass.,
Civil Engineer, Metropolitan Water Board.

†Grover, Oscar Llewellyn, B. M. E., B. C. E., 802 North 6th St., Harrisburg, Penn.,
Draughtsman with the Pennsylvania Steel Co., Bridge and Construction Dept.

†de Haseth, Gerard Andries, B. C. E., Seattle, Wash.,
Assistant Engineer, Seattle Electric Co.

Knight, Ora Willis, M. S., 84 Forest Ave., Bangor,
State Assayer, Analytical and Consulting Chemist and Microscopist.

Martin, James William, B. C. E., 525 Van Buren St., Pueblo, Col.
Engineer with the Col. Fuel and Iron Co.

Merrill, Earl Clinton, B. C. E., East Eddington.

†Moulton, Albion, B. M. E., 3435 N. 3rd St., Philadelphia, Pa.,
Superintendent, North Penn. Iron Co.

Murphy, Walter Marshall, B. C. E., 280 Front St., Bath,
Gas Piper and Fitter for Sagadahoc Light and Power Co.

Pattee, Clifford James, B. C. E., Belfast,
Insurance Agent, firm James Pattee & Son.

Robinson, Halbert Gardner, B. C. E., Patten.
Civil Engineer.

Rollins, Melville Fredierick, B. C. E., 71 Third St., Bangor,
Assistant Engineer, C. M. & St. P. Ry., Milwaukee, Wis.

Thomas, Charles Dura, B. C. E., 221 Cumberland St., Brooklyn, N. Y.,
Civil Engineer, Employed by the United States Government at Navy Yard, Brooklyn, N. Y.

1896.

Farrell, Harry Clifford, B. M. E., Manchester, N. H.,
Manchester Traction, Light and Power Co.

*Fernald, Roy Lynde, B. C. E.

Gibbs, Edward Everett, B. C. E., 1216 Boston St., Baltimore, Md.,
President Southern Car Co.

Glidden, Everett Gray, B. M. E., 313 Germania Ave., Schenectady, N. Y.
Designer and Draftsman, General Electric Co.

Hobbs, Frederick Andrews, B. S., South Berwick,
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Erecting Engineer, Jones Under Feed Stoker Co., of America, Marquette Building, Chicago, Ill.
Delano, Edward Warren, B. S., Jacksonville, Ill.,
Civil Engineer.
Duren, Harry Elwood, B. S., 612 Smith St., Schenectady, N. Y.
Section Foreman, Testing Dept., General Electric Co.

Durgan, George Washington, Jr., B. S., 66 Orchard St., Medford, Mass.,
Newspaper Work.
Eldridge, Walter Hampton, B. S., 5 Oakdale St., Jamaica Plain, Mass.,
Electrical Draftsman with the B. F. Sturtevant Co.
†Elliott, Wesley Clarendon, B. S.
Farrington, Herbert Oscar, B. S., 33 Smith St., Portland,
Draftsman, Portland Company.
Fessenden, Lothrop Edwin, B. S., 31 Milk St., Boston, Mass.
Surveyor and Draftsman, The Associated Factory Mutual Fire Insurance Co.
Foster, Arthur Brookhouse, B. S., College Park, Md.,
Instructor in Chemistry, Maryland Agricultural College.
French, Henry Carter, B. S., Rumford Falls, Me.
Gilbert, Eugene Clarence, B. S., Orono,
Lumbering, With T. Gilbert.
Hamlin, Horace Parlin, B. S., Orono.
Instructor in Civil Engineering, University of Maine.
Holmes, Fred Eugene, B. S., Waterville,
Assistant to Roadmaster, Second Division, M. C. R. R.
†Johnson, Elbridge Augustus, B. S.
Kallom, Frank Winthrop, B. S., 4 Worcester Square, Boston, Mass.,
Engineering Dept., American Tel. & Tel. Co., Boston, Mass.
Kelley, Burchard Valentine, B. S., 810 State St., Schenectady, N. Y.,
Draftsman, General Electric Co.
Kneeland, Henry Wilton, B. S., 84 State St., Boston, Mass.,
Special Agent, American Casualty Co.
Knight, Perley Charles, B. S., Gorham.
Lumberman.
Knowles, Lida May, B. S., 68 Fifth St,, Bangor,
Second Assistant, Presque Isle High School.
Lowe, Sumner Sturdivant, B. S., 198 Bryant St., North Tonawanda, N. Y.,
Asst. Supervisor of Track, N. Y. Central & Hudson River R. R.
Lyon, Alpheus Crosby, B. S., 107 University Road, Brookline, Mass.,
Student Massachusetts Institute of Technology.
McCarthy, Patrick Edward, B. S., Milton, N. H.,
Hydraulic Engineer, With I. W. Jones.
Mansfield, Harold Wilder, B. S., 28 Eagle St., Schenectady, N. Y.,
Draftsman, General Electric Co.
Margesson, Charles William, B. S., Schenectady, N. Y.,
With Gen. Electric Co.
Mosher, Percival Hildreth, B. S., 355 Linden St., Memphis, Tenn.,
Civil Engineer, Yazoo & Mississippi Valley R. R.
Peck, Luther, B. S., 237 South Ingalls St., Ann Arbor, Mich.,
Student in Homeopathic Medical College, University of Michigan.
Pressey, Frank Ethelbert, B. S., 487 Union St., Bangor.,
Engineering Aid in U. S. Geological Survey.

Rackliffe, Clinton Nathaniel, B. S., 316 Germania Ave., Schenectady,
Student in Testing Department, General Electric Co.
Rice, Marie Cecilia, B. S., M. S., 115 Chestnut St., Camden, Me.,
Teacher in Camden High School.
Ross, Edwin Bishop, B. S., 1528 Mt. Vernon St., Philadelphia, Pa.,
Third Class Apprentice, Baldwin Locomotive Works.
Russell, Roy Elvert, B. S., Minneapolis, Minn.,
Employed by W. I. Gray & Co.
Sewall, Herbert Elmer, B. S., 514 Washington Boulevard, Chicago, Ill.
Silver, Arthur Elmer, B. S., 316 Germania Ave., Schenectady, N. Y.,
Testing Department, General Electric Co.
Stephens, Charles Walter, B. S., 323 2nd Ave., New York City, N. Y.,
Structural Draftsman, Milliken Bros., 11 Broadway, New York.
Stilphen, Charles Augustus, B. S., 11 Lester Place, Jamaica Plain, Mass.,
Draftsman, With B. F. Sturtevant Co.
Thombs, William Brackett, B. S., 39 Eastern Promenade, Portland, Me.,
Travelling Salesman.
True, Edwin Stanley, B. S., 9 St. Paul St., Baltimore, Md.,
Telephone Engineering.
Warren, John Clifford, B. S., 14 Pleasant St., Westbrook,
Student, Boston University School of Law.
Watson, Alvin Morrison, B. S., Silverton, Colo.,
Electrical Engineer.
Wheeler, Allen Francis, B. S., Portland,
Draftsman, Portland Company.
Whittier, Ralph, B. S., 54 Forest Ave., Bangor, Me.

1903.

Baker, Ernest Linwood, B. S., East Putney, Vt.,
Telephone Operator, B. & M. R. R.
†Benner, Archie Ray, B. S.
Carr, Cleora May, B. S., Old Town,
Assistant in High School, Old Town.
Chandler, Robert Flint, B. S., 16 Colchester Ave., Burlington, Vt.,
Instructor in Civil Engineering, University of Vermont.
†Chase, Nathan Ajalon, B. S.,
Coffin, Roy Milton, B. S., 49 Miller St., Utica, N. Y.,
Instructor in the Utica Preparatory School.
Collins, Fred, B. S., Berlin, N. H.,
Assistant Engineer in Paper and Pulp Mill Construction.
Connor, Ralph Melvin, B. S., Orono,
Tutor in Mathematics, University of Maine.
Crabtree, Leroy Brown, B. S., Hancock, Me.
*Crocker, Henry Kennedy, B. S.
Davis, Rodney Clinton, B. S., Ambridge, Pa.,
Draftsman, With the American Bridge Co.

Dinsmore, Sanford Crosby, B. S., Orono,
Assistant Chemist, Maine Agricultural Experiment Station.
Dorticos, Carlos, B. S., Old Colony Sub-Station, Brockton, Mass.,
With General Electric Co.
Douglass, Frank Libby, B. S., 487 LaSalle Ave., Chicago, Ill.
With Illinois Steel Co.
Dyer, William Norman, B. S., Northeast Harbor,
Surveyor.
Ellstrom, Victor Edwin, B. S., 501 La Salle Ave., Chicago, Ill.,
With Illinois Seel Co.
Foster, Samuel Joshua, B. S., Oakland,
With S. S. Lightbody & Co., Pharmacists.
Freeman, George Leonard, B. S., Milton, N. H.,
Draftsman, With I. W. Jones.
†Gage, Arthur Willard, B. S.
Goodridge, Oren Leslie, B. S., Millinocket, Me.,
Transitman, with Great Northern Paper Co.
Goodwin, Burton Woodbury, B. S., Ridlonville, Me.,
Goodwin Bros., Hardware & Plumbing.
Graves, Shirley Preston, B. S., 1536 Cambridge St., Cambridge, Mass.,
Law Student.
Harris, Philip Howard, B. S., 316 Germania Ave., Schenectady, N. Y.,
Testing Department, General Electric Co.
Hartford, Edward Goodnow, B. S., 132 Grove St., Stamford, Conn.,
With W. B. Pierce, Civil and Sanitary Engineer.
Hilliard, John Heddle, A. B., 1586 Cambridge St., Cambridge, Mass.,
Student at Harvard Law School.
Hinchliffe, Henry John, B. S., 11 Salem St., Worcester, Mass.,
Teacher.
Hinckley, Frances Augusta, B. Ph., Old Town.
Kittridge, Claude Abbott, B. S., 332 Summit Ave., Schenectady, N. Y.,
Testing Department, General Electric Co.
Libby, Arthur Stephen, B. Ph., M. A., Brown University, Providence, R. I.,
Instructor in French.
†Loud, Warren Cornelius, B. S.
McCready, John Hollis, B. S., 316 Germania Ave., Schenectady, N. Y.,
Testing Department, General Electric Co.
*Maxfield, Amy Inez, B. S.
Mullaney, Roderick Edward, B. S. 41 Birch St., Bangor,
Civil Engineering Work in Dummer, N. H.
Patrick, Stephen Edmund, B. S., Gorham,
Teacher of Manual Training, Walker Manual Training School, Portland.
Porter, Ernest Albee, B. S., Fort Andrews, Boston Harbor, Mass.,
Rodman for U. S. E. Dept.
Sheahan, Harold Vose, B. S., Brunswick,
Civil Engineering Asst. to Roadmaster, M. C. R. R.

Simpson, Paul Dyer, B. S., Sullivan Harbor,
Tutor in Civil Engineering, University of Maine.
Small, Silas Gilman, B. S., Roxbury, Mass.,
Drug Clerk, Waverly Drug Co.
Smith, Howard Ausburn, B. S., 55 Cedar St., Lynn, Mass.,
Testing Course, General Electric Co.
Soper, Henry Melville, B. S., Old Town,
Assistant in Chemistry, University of Maine.
Stone, Charles Wesley, Jr., B. S., 119 Main St., Johnstown, Pa.,
Chemist with the Cambria Steel Co.
Towse, Arthur Roy, B. S., 203 State St., Portland, Maine,
Instrumentman with M. C. R. R. Co.
Treworgy, Isaac Emery, B. S., Mt. Desert,
Principal of High School, Mt. Desert.
White, Ralph Henry, B. S., Indian Orchard, Mass.,
Employed by Chapman Valve Mfg. Co.,
Whitney, Harvey David, B. S., 452 Whitehall St., Atlanta, Ga.,
Manager of Atlanta Office for A. Klipstein & Co., New York City, Manufacturers and Importers of Anilines, Dyestuffs, and Chemicals.
Wiley, Mellen Cleaveland, B. S., 487 La Salle Ave., Chicago, Ill.,
Structural Work, with Illinois Steel Co.

GRADUATES OF SHORT COURSES.

These students were awarded certificates. Those marked (L. E.) completed the course in library economy; others the short pharmacy course.

1895.

Hamilton, Geneva Ring, (L. E.), Orono,
Assistant Librarian, University of Maine.
Ring, Virginia Mary (L. E.), Sangerville, Me.,
(Mrs. David O. Campbell.)
Sheridan, Lena Matilda (L. E.), Orono, Me.,
(Mrs. A. B. Aubert.)

1896.

Green, Carrie Smythe (L. E.), Rose Place, Bangor,
Librarian, Bangor Theological Seminary.
Vinall, Rena Pearl (L. E.), Orono,
Song Writer.

1897.

Bartlett, Charles Simming, Auburn,
Drug Clerk with Ralph F. Burnham.
Bird, James Alfred, Arlington, Mass.,
Druggist.

Gardner, Hope (L. E.), 33 Winslow St., Watertown, N. Y.,
(Mrs. S. C. Dillingham.)
Keirstead, Alvin Willard, Lisbon Falls, Me.,
Druggist.
†McCrillis, Ernest Julian, Beecher Falls, Vt.,
Druggist, Beecher Falls Drug Co.
†McCrillis, William George, Bristol, N. H.,
Drug Clerk with Fowler & Co.
Nute, Albert James, Ph. G., B. S., M. D., 4 Washington Ave., Winthrop Station, Boston, Mass.,
Physician.
Parker, Dora Lucinda (L. E.,) 118 High St., Danvers, Mass.,
Stenographer, Boston, Mass.
White, Charles Harry, Orono,
Clerk in Postoffice.

1898.

†Cleaves, Daniel Lunt, B. S., Amherst, Mass.,
Instructor in Chemistry, Mass. Agricultural College.
Hall, Fred Elmer, Houlton, Me.
†MacDougal, Wilbur Edwin, Main St., Lewiston,
Shipping Clerk.
Mitchell, Curtis Boyd, 263 Main St., Bangor,
Drug Clerk with Fifield & Co.
Walton, Russell Davenport, M. D., Frankfort, Me.,
Physician.

1899.

Webster, William Bryant, Ph. G., 720 Broad St., E. Weymouth, Mass.,
Druggist.

1900.

Crowell, William Henry, New Britain, Conn.,
Druggist. Proprietor of Park Drug Store.
Larrabee, George Pearson, Ph. C., Presque Isle, Me.,
Pharmacist with F. G. Kerr.
Taft, DeForest Reed., Keene, N. H.,
With G. L. Hitchcock.

1901.

Berry, Richard Henry, Ph. C., Pittsfield, Me.,
Drug Clerk.
Sanford, John Foy, Ph. C., 10 Somerset St., Bangor, Me.,
Pharmacist with Caldwell Sweet.

1902.

Burns, Frank Percy, Ph. C., Westbrook, Me.,
Manager Woodman's Pharmacy.

Clarke, Ralph Everett, Ph. C., 669 Forest Ave., Woodfords,
Druggist.
Tate, Walter Maurice, Ph. C., 10 Somerset St., Bangor,
Pharmacist, with Caldwell Sweet.

1903.

Cowan, Ernest Lester, Ph. C., 10 Somerset St., Bangor, Me.,
Pharmacist, with Caldwell Sweet.
Cowles, Harry Davis, Ph. C., Athol, Mass.,
Student University of Maine.
Hoyt, Andy Laurin, Ph. C., Dover,
Druggist.
Race, James Leroy, Ph. C., South Gardiner, Me.,
With H. R. Sawyer.

SCHOOL OF LAW.

1899.

Fenderson, Frank Devereux, LL. B., Limerick,
Lawyer.
†Graham, Herbert Lewis, LL. B., Bar Harbor,
Lawyer.
McGill, Laurence Vincent, LL. B., East Rochester, N. H.,
Lawyer.

1900.

Barker, Lewis Appleton, LL. B., Bangor,
Lawyer.
Cook, Harold Elijah, LL. B., Cor. Main and Common Sts., Waterville,
Lawyer. (Cook & Small.)
Dolan, John Frederick, LL. B., Bangor,
†Foss, Paul Frank, LL. B., Philippine Islands.
†Gerrish, Hiram, LL. B., Brownville,
Lawyer.
Gibbs, Bernard, Ph. B., LL. B., Madison,
Lawyer.
Graton, Claude Dewing, M. A., LL. B., Burlington, Vt.,
Lawyer.
Hobson, Ernest Emery, LL. B., Palmer, Mass.,
Lawyer.
Hutchings, Edward, LL. B., 4 Liberty Sq., Boston, Mass.,
Lawyer.
Jones, Freeland, LL. B., Bangor,
Lawyer.
Ludgate, Verdi, LL. B., Sherman Mills,
Lawyer.

McCarthy, Matthew, LL. B., Lewiston, Me.,
Lawyer.
Mackay, John Daniel, LL. B., Savings Bank Building, Quincy, Mass.,
Lawyer.
Mills, Chester Horace, LL. B., Skowhegan,
Lawyer.
Phillips, Harold John, LL. B., Skowhegan,
Lawyer.
Pierce, Howard, LL. B., Fort Kent,
Lawyer, firm of Fenlason & Pierce.
*Price, Arthur Wellington, LL. B.
†Robinson, Agnes May, LL. B.
Sargent, Walter Joseph, LL. B., Brewer,
Lawyer.
Schwartz, Lewis Harry, LL. B., Central Building, Lawrence, Mass.,
Lawyer.
Small, Frank Judson, A. B., LL. B., Cor. Main and Common Sts., Waterville,
Lawyer. (Cook & Small.)
Stevenson, James Blisset, LL. B., Rumford Falls,
Lawyer.
Theriault, Dana Leo, LL. B., Fort Kent,
Lawyer.
Thompson, Frederick Everett, A. B., LL. B., Westminster Hotel, Boston, Mass.,
Broker.
Waterhouse, William Henry, LL. B., Oldtown,
Lawyer.
Williams, Dana Scott, LL. B., 215 Lisbon St., Lewiston,
Lawyer, firm of Belleau & Willliams.

1901.

Butler, Ernest Clifford, LL. B., Skowhegan,
Lawyer, firm of Butler & Butler.
†Butterfield, Benjamin Franklin, LL. B., 13 Franklin Block, Bridgeport, Conn.,
Clerk in office of law firm.
Foster, Nathan Grant, A. M., LL. B., Livermore Falls, Me.,
Lawyer.
Plumstead, Frank, LL. B., Wiscasset.

1902.

Anderson, Thomas Alexander, LL. B., Pittsfield,
Lawyer.
Dunn, Patrick Henry, LL. B., Chamberlain St., Brewer,
Real Estate Agent, 49 Hammond St., Bangor.

Holman, Charles Vey, LL. B., LL. M., Hotel Lenox, Boston, Mass., Counsellor at Law, 20 Pemberton Sq., Boston, Mass., Lecturer on Mining Law at Boston, on Wills and Mining Law at University of Maine Law School.
Kenniston, Hartley Garfield, LL. B., 117 Exchange St., Bangor, Insurance Agent.
Lord, Harry, LL. B., 82 Cumberland St., Bangor, Me., Insurance Agent.
†McKay, Malcolm, LL. B.
Putnam, Varney Arthur, LL. B., Danforth, Me.
Ritter, George William, LL. B., 225 Ball Building, Holyoke, Mass., Attorney at Law.
Robinson, William Henry, LL. B., 27 Dillingham St., Bangor. Lawyer.
Selkirk, Robert William, LL. B., 16 Broad St., Bangor. Lawyer.
†Thurlough, Harry Harding, LL. B.
†Weatherbee, Albert Washington, LL. B.
Wilson, Frank Palmer, LL. B., Belfast, Lawyer.

1903.

Bennett, Waldo Horace, LL. B., Newport, Lawyer.
Buckley, William Wallace, LL. B., Winchendon, Mass., Attorney at Law.
†Geary, Thomas Reardon, LL. B.
Morson, James Herbert, LL. B., 32 Milford St., Boston, Mass., Attorney at Law.
†Mudgett, Ulysses Grant, LL. B.
Murray, Edward Patrick, LL. B.
†Noble, Ernest Eugene, LL. B.
Potter, Paul, LL. B., Ostego Road, Worcester, Mass., Lawyer, 502 State Mutual Building, Worcester, Mass.,
Reid, Charles Hickson, LL. B., 60 Lincoln St., Bangor, Attorney at Law.
Snow, Donald Francis, LL. B., 134 Ohio St., Bangor, Post Graduate Work at University of Maine Law School.
†Thombs, George Warren, LL. B.
Violette, Nil Louis, LL. B., Van Buren.
Winn, George Hayes, 315 Bates St., Lewiston, Law Clerk, with McGillicuddy & Morey.

ALPHABETICAL LIST OF GRADUATES

Abbott, E 1876
Allan, B. J 1886
Allan, G. H 1884
Allen, C. P 1876
*Allen, W. A 1874
Andrews, F. O 1890
Andrews, H. B 1888
Andrews, H. H 1881
Arey, R. J 1891
Atherton, G. F 1892
Atkinson, W. H 1892
Atwood, E. M 1897
Atwood, G. G 1895
Atwood, H. W 1890
Ayer, J. M 1886
Babb, G. H 1890
Bachelder, A. W 1902
Bailey, F. W 1898
Bailey, W. M 1891
Baker, E. L 1903
*Balentine, W 1874
Barker, G. G 1886
Barron, W. D 1898
Barrows, W. E., Jr 1902
Bartlett, C. W 1901
Bartlett, E. J 1902
Bartlett, J. M 1880
Bartlett, M. J 1901
Bartlett, W. R 1901
Bassett, E. P 1899
Batchelder, F. L 1899
*Batchelder, G. S 1888
Bates, S. W 1875
Bean, H. P 1879
Beckler, E. H 1876
Beedle, H. W 1900
Belcher, W. E 1899
Benner, A. R 1903
Bickford, C. S 1882
Bird, A. L 1900
Bird, J 1890
Bisbee, F. W 1876
Bixby, J. H 1901
Bixby, O. M 1901
Black, G. F 1886
Blackington, A. DeO 1877
*Blackington, R. H 1890
Blackwell, C. E 1599
Blagden, J. D 1886
*Blake, E. J 1877
Blanchard, C. D 1888
Blanding, E.M 1876
Boardman, H. S 1895
Boardman, J. R 1888
Boardman, W. H 1901
Bogart, F. H. H 1901
Boland, M. G. (Miss) 1902
Bowden, G. I 1890
Bowerman, F. H 1900
Bowler, F. C 1894
Boynton, A. E 1899
Boynton, J. L 1892
*Brainard, C. M 1876
Brann, L. J 1899
Brastow, W. T 1897
Brick, F. S 1888
*Briggs, F. P 1889
Bristol, M. L 1892
Brown, A. H 1890
Brown, E. (Mrs. C. Gilman) 1878
Brown, H. W 1881
Brown, J. W 1899
Brown, W. B 1897
Browne, C. W. H 1882
Bryer, C. S 1897
Buck, A. H 1895
Buck, C. L. (Mrs. T. W. Hine) 1881
Buck, H. A 1902
Buck, H. B 1893
Buck, T 1901
*Buker, G. H 1876
Bunker, S. S 1897
Bumps, W. A 1875
Burgess, W. J 1900
Burleigh, J. H 1887
*Burleigh, W. H 1884
Burnham, A. R. (Miss) 1900
Burns, R. B 1887

Bussell, E. M.(Miss) 1902
Butler, H. 1888
Butman, J. W. 1902
Butterfield, W. R. 1892
Buzzell, S. J. 1882
Cain, J. H 1883
Calderwood, I. G 1895
Caldwell, A. J 1878
Campbell, D. E 1888
Cargill, W. N 1900
Carlton, R. H 1899
Carr, C. M. (Miss) 1903
Carr, H. M 1902
Cary, L. R 1901
Caswell, W. B 1899
Caswell, W. H 1900
Chadbourne, H. W 1902
Chamberlain, C. C 1878
Chamberlain, G. W 1885
Chandler, R. F 1903
Chase, J. P 1897
Chase, N. A 1903
Chase, W. W 1895
Cilley, J. V 1883
Cilley, L. V. P 1887
*Clapp, S. H 1875
Clark, B. E 1887
Clark, E 1891
Clark, H 1890
Clark, H. H 1899
Clark, R. C 1892
Clark, S 1892
Clark, W. C 1900
Clary, J. R. 1897
Clayton, C. 1891
Cleaves, D. L 1899
Closson, J. E 1900
Cobb, A. L 1901
*Coffin, A. J 1890
Coffin, E. V 1887
Coffin, L. M 1903
Colburn, F. E., (Mrs. A. L. Fernald) 1881
Colburn, L. F 1875
Colby, D. W 1875
Cole, C. L 1900
Cole, H. E 1902
Colesworthy, C. F 1875
Collins, F 1903
Collins, G 1899
Connor, R. M 1903
Cosmey, S. H 1897
*Conroy, M. F., (Mrs. A. R. Saunders) 1884
Cowan, E. H 1894
Cowan, F. H., (Miss) 1876
Cowan, G. P 1894
Crabtree, L. B 1903
*Crocker, H. K 1903
Crockett, C. W 1899
Crosby, C. E 1901
Crosby, O 1876
Crosby, S. P 1879
Crosby, W. W 1893
Crowell, C. P 1898
Croxford, W. E 1890
Cushman, C. G 1889
Cutter, J. D 1879
Cutter, L. W 1884
*Cyr, V 1876
Dakin, E. H. 1877
Damon, F. H 1895
Danforth, E. F 1877
Danforth, E. W 1892
Davis, A. R 1902
Davis, E. H 1898
Davis, F. M 1901
Davis, G. H 1901
Davis, H. A 1900
Davis, M., (Mrs. J. D. Stevens) 1880
Davis, R. C 1903
Davis, S. P 1902
Dearborn, J. W 1898
Decker, W. F 1879
Decrow, D. A 1879
Delano, E. W 1902
*Dike, J. E 1876
*Dike, W. O 1876
Dillingham, S. C 1898
Dinsmore, S. C 1903
Dole, A 1885
Dolley, W 1898
Doolittle, H. E 1892
Dorticos, C 1903
Douglass, F. L 1903
Dow, F. T 1890
Dow, L. E 1898
Downing, M. B 1899
Drew, A. W 1890
Drew, I. H 1899
Drummond, H. F 1900
Duncan, L 1897
Dunn, J. S 1900
Dunn, R. E 1898
Dunn, R. O 1898
Dunton, H. D 1890
Dunton, O. H 1882
Duren, H. E 1902
Durgan, G. W., Jr 1902
*Durham, C. F 1875
*Durham, L. T 1894
Dutton, O. J 1885
Dyer, W. N 1903
Eastman, F. L 1900
Eaton, H. D 1900
Eaton, R. W 1873
Edgerly, J. W 1889
Edwards, L. N 1898

Eldridge, W. H. 1902
Elkins, A. J 1877
Elliot, F. B. 1880
Elliott, W. C. 1902
Ellis, W. E. 1895
Ellis, W. L. 1898
*Elwell, E. H. 1888
Emery, A. (Miss) 1877
Emery, F. E. 1883
Estabrooke, H. M 1876
Farnham, C. H. 1897
Farrar, L. G. 1898
Farrell, H. C 1896
Farrington, A. M 1876
Farrington. E. H. 1881
Farrington, H. O. 1902
Farrington, H. P 1890
Farrington, H. R. 1891
Farrington, M. E 1892
Farrington, O. C. 1881
*Farrington, S. B. (Mrs. G. P. Merrill) 1880
Farrington, Wallace R. 1891
Farrington, William R. 1891
Faunce, B. F 1901
Ferguson, J. S. 1889
Ferguson, W. E. 1879
Fernald, A. L 1883
Fernald, C. W. 1880
Fernald, G. E. 1878
Fernald, H. C. (Mrs. J. A. Pierce). 1884
Fernald, H. T. 1885
Fernald, R. H. 1892
*Fernald, Roy L 1896
Fernald, Reginald L. 1899
Fernandez, G L.(Miss) 1898
Fessenden, L. E. 1902
Fickett, F. W. 1880
Fitzgerald, E. E. (Miss) 1901
Flanagan, J. H. 1891
Flint, B. W 1899
Flint, W. 1882
Fogg, C. H. 1881
Folsom, H. M 1901
Folsom, L. R. 1895
Ford, L. H. 1899
Foss, G. O 1876
Foster, A. B. 1902
Foster, S. J. 1903
Fraser, G. L. (Miss) 1901
Freeman, G. G. 1889
Freeman, G. L. 1903
French, C. F. 1893
French, H. C. 1902
French, H. S. 1886
French, J. E. 1901
Frost, C. A 1895
Frost, G. S. 1898
Fuller, G. R. 1882
Gage, A. W. 1903
Gannett, C. H. 1893
Garland, C. C. 1882
Gay, G. M. 1889
Gerrish, W. H. 1874
Gibbs, B. 1898
Gibbs, C. W. 1879
Gibbs, E. E. 1896
Gibbs, J. C. 1892
Gilbert, C. E 1894
Gilbert, E. C 1902
Glidden, E. G. 1899
Goodale, A. M. 1875
Goodridge, E. O. 1885
Goodridge, O. L. 1903
Goodridge, P. F. 1897
Goodwin, B. W. 1903
Goodwin, G. E. 1901
Goodwin, P. R 1900
Gorham, F. E. 1897
Gould, A. M. (Mrs. L. F. Goodale) 1879
Gould, B. F 1872
Gould, F. G 1894
Gould, G. P. 1890
Gould, H. P 1893
Gould, J. F. 1882
Gould, S. W 1877
Gould, V. K. 1897
Graves, E. D. 1886
Graves, J. C. 1891
Graves, S. P. 1903
Gray, C. P. 1900
Gray, J. A 1894
Grover, A. C 1892
Grover, A. L 1899
Grover, N. C. 1890
Grover, O. L. 1895
Gurney, J. I. 1874
Haggett, E. R. 1889
Haines, W. T. 1876
Hall, G. A 1894
Hall, H. A 1891
Hamilton, H. F 1876
Hamlin, C. 1891
Hamlin, E. (Miss) 1901
Hamlin, G. H 1873
Hamlin, G. O. 1900
Hamlin, H. P. 1902
Hamlin, R. 1898
Hammond, G. E 1872
Hancock, W. J 1888
Haney, W. W. 1899
Hanscom, G. L. 1885
Hardison, A. C 1890
Harris, P. H. 1903
Hart, J. N. 1885
Hart, M. C. 1900
Hartford, E. G 1903
Harvey, C. C 1890

Harvey, C. D. 1901
Harvey, J. E. 1894
Harvey, L. H. 1901
Haskell, E. J. 1872
Haskell, N. P. 1876
de Haseth, G. A. 1895
Hatch, E. E. 1884
Hatch, H. A. 1900
Hatch, J. W. 1888
Hayes, A. D. 1894
Hayes, C. M. 1859
Hayes, J. A. 1900
Hayes, S. H. T. 1890
Heald, J. 1878
Healey, W. E. 1892
Heath, E. F. 1890
Heath, S. J. 1897
Hersey, G. A. 1900
Hersey, G. W. 1899
Heyer, H. S. 1899
Hicks, A. A., (Mrs. G. F. Black) . . . 1887
Higgins, H. A. 1898
Hill, J. E. 1884
Hilliard, H 1872
Hilliard, J. H. 1903
Hilton, G. L. 1899
Hinchliffe, H. J. 1903
Hinckley, F. A. (Miss) 1903
Hine, T. W 1882
Hitchings, E. F. 1875
Hobbs, F. A. 1896
Holden, W. C. 1892
Holly, C. D 1900
Holmes, F. E 1902
Holt, F. W. 1873
*Holt, N. M., (Miss) 1879
Holyoke, W. L. 1897
Horner, L. H 1900
How, E 1876
Howard, W. R 1882
Howe, E. J. 1901
Howes, C. L. 1888
Hoxie, H. F. 1899
Hoyt, H, P. 1901
Hubbard, P. W. 1876
Hull, F. E. 1885
Hunter, R. D. 1874
Hurd, A. L. 1882
Hutchinson, G. W. 1893
Ingalls, A. T 1881
Jack, W. D. 1893
Jeffery, G. W. 1896
Johnson, B. R 1898
Johnson, E. A 1902
*Johnson, R. J. 1881
Jones, R. K. 1886
Jones, S. M 1876
Jones, W. G. 1901
Jordan, A. T 1894
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Jose, W. H 1894
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Kallom, F. W 1902
Keith, A. J 1882
*Kelleher, B. P 1883
Keller, P. R. 1901
Kelley, B. V 1902
Kelley, E. H 1890
Kelley, J. G. 1884
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*Keyes, C. E 1890
Keyes, P., Jr. 1891
Kidder, E. E 1896
Kidder, F. E 1879
Kilburn, C. H 1891
Kimball, F. I. 1882
*Kimball, J. M 1894
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Kittredge, C. P 1893
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Knight, P. C 1902
Knowles, L. M 1902
Ladd, E. F 1884
Lawrence, G. W 1898
Lazell, J. D 1887
Leathers, H. H 1900
Leavitt, H. E., (Mrs. W. Flint) 1890
Leavitt, N. L., (Miss) 1889
Lenfest, E. 1886
Leonard, H. H 1901
Lewis, A. A 1876
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Libby, A. D. T 1898
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Libby, C. A., (Miss) 1881
Libby, F. J. 1896
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Libby, M. D. 1879
Lincoln, H. F. 1888
Lincoln, H. M 1898
Locke, J., Jr 1878
Lockwood, J. F. 1886
Lombard, C. H 1900
Long, H. A. 1876
Lord, R. W 1891
Lord, T. G. 1888
*Loring, C. S 1879
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*Love, A 1900
Lowe, S. S. 1902
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Lull, G. F 1886
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*Lunt, J. C 1877
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Lyon, A. C 1902
Maddocks, H. L 1900
Macloon, E. H 1897
Maguire, G 1892
Mann, E. J 1900
Mansfield, E. R 1899
Mansfield, F. A 1880
Mansfield, H. W 1902
Manson, R. H 1898
Manter, R. B 1896
Margesson, C. W 1902
Marsh, R. H. 1888
Marston, F. L 1896
Martin, B. C 1901
Martin, F. L 1901
Martin, H. S 1896
Martin, J. W 1895
Martin, N. H 1876
Mason, C. A 1887
Matthews, A. A 1880
*Maxfield, A. I.(Miss) 1903
Mayo, E. D. 1875
Mayo, H. P 1899
McCarthy, P. E 1902
McCready, J. H 1903
McDonald, F 1900
McIntyre, H. F 1881
McNally, H. A 1887
Menges, H. G 1891
Merriam, W. H 1886
Merrill, D. T 1898
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Merrill, E. C 1895
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Merrill, H. P 1898
Merrill, T. L 1891
Merrill, L. H 1883
Merrill, M. B 1901
Merrill, W. L 1900
Merritt, E. E 1886
Meserve, J. W 1879
Michaels, J. C. (Miss) 1883
*Miller, S. F 1888
Mitchell, A. E 1875
Mitchell, A. G 1875
Mitchell, C. A 1901
Mitchell, F. C 1900
Mitchell, F. H 1900
Moor, C. L 1881
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*Moore, F. L 1875
Morell, W. B 1899
Morey, E. L 1890
Morey, W., Jr 1885
Morrill, E. N 1890
Morrill, W. J 1899
Morse, C. A 1879
Mosher, E. S. E 1899
Mosher, P. H 1902
Moulton, A 1895
Moulton, F. C 1891
Moulton, J 1885
Mullaney, R. E 1903
Mullen, C. W 1883
Murphy, C. C 1893
Murphy, G. F 1900
Murphy, W. M 1895
*Murray, B. F 1881
Murray, H 1894
Murray, H. W 1880
Murray, W. A 1899
Nelson, W 1899
Niles, H. L 1896
Norwood, L. O 1894
Noyes, F. A 1900
Oak, C. E 1876
Oak, J. M 1873
Oakes, F. J 1878
Osborn, E. W 1881
Oswald, H. H 1899
Owen, A. B 1900
Owen, J. W 1890
Page, A. D 1886
Page, A. S 1900
Page, W. R 1896
Paine, L. G 1885
Palmer, E. E 1899
Palmer, P. B 1896
Parks, G. D 1876
Patrick, S. E 1903
Pattee, C. J 1895
Patten, A. J 1897
Patten, J. H 1882
Patten, T. M 1880
Patten, W. N 1891
Patterson, J. C 1878
Pearce, C. A 1898
Pease, C. T 1880
Pease, O. L 1881
Peck, L 1902
Peirce, H 1876
Peirce, V. J 1890
Peirce, W. B 1890
Pierce, W. B 1890
Pennell, E. E 1885
Perkins, D. H 1900
Philbrook, W 1888
Phillips, F. F 1877
Philoon, D. L 1900
Pillsbury, G. M 1890
Plaisted, H. M 1881
Porter, B. F 1897
Porter, C. O 1900
Porter, E. A 1903
Porter, J. W. H 1897
Potter, F. D 1879
Powell, M. H., (Miss) 1899

Powell, M. L. 1899
Powers, H. W. 1883
Pressey, F. E. 1902
Pretto, J. H. 1899
Pride, E. P. 1896
Pritham, H. C. 1901
Purrington, J. F. 1880
Putnam, C. E. 1883
Quincy, F. G. 1890
Rackliffe, C. N. 1902
Rackliffe, J. R. 1890
Ramsdell, L. H., (Mrs. M. D. Noyes) 1874
Randlette, C. M. 1892
Randlette, J. W. 1896
Ray, I. B. 1886
*Reed, C. E. 1873
Reed, F. R. 1876
Reed, F. M. 1882
Reed, F. P. 1890
Reed, J. 1889
Reed, N. W., (Mrs. E. R. Jordan) 1889
Reynolds, H. J. 1876
Rice, M. C. (Miss) 1902
Ricker, P. L. 1900
Riggs, L. W. 1885
Ring, A. I. (Mrs. C. J. Dunn) 1881
Ring, M. L., (Mrs. H. H. Andrews) 1881
Robbins, C. A. 1900
Robinson, A. H. 1901
Robinson, H. G. 1895
Robinson, L., Jr. 1883
Rogers, A. 1897
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Rogers, L. A. 1896
Rogers, L. W. 1875
Rogers, S. E. 1888
*Rollins, C. H. 1900
Rollins, F. M. 1895
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Ross, E. B. 1902
Ross, M. 1901
Rowe, G. F. 1893
Rumball, G. W. 1894
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*Shaw, A. J. 1879
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*Smith, R. L. 1881
Snow, G. C. 1882
Snowdeal, A. (Miss) 1900
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*White, W. A..... 1881
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*Wight, R. H 1890
Wight, W. A..... 1882
Wiley, M. C..... 1903
Wilkins, G. B..... 1896
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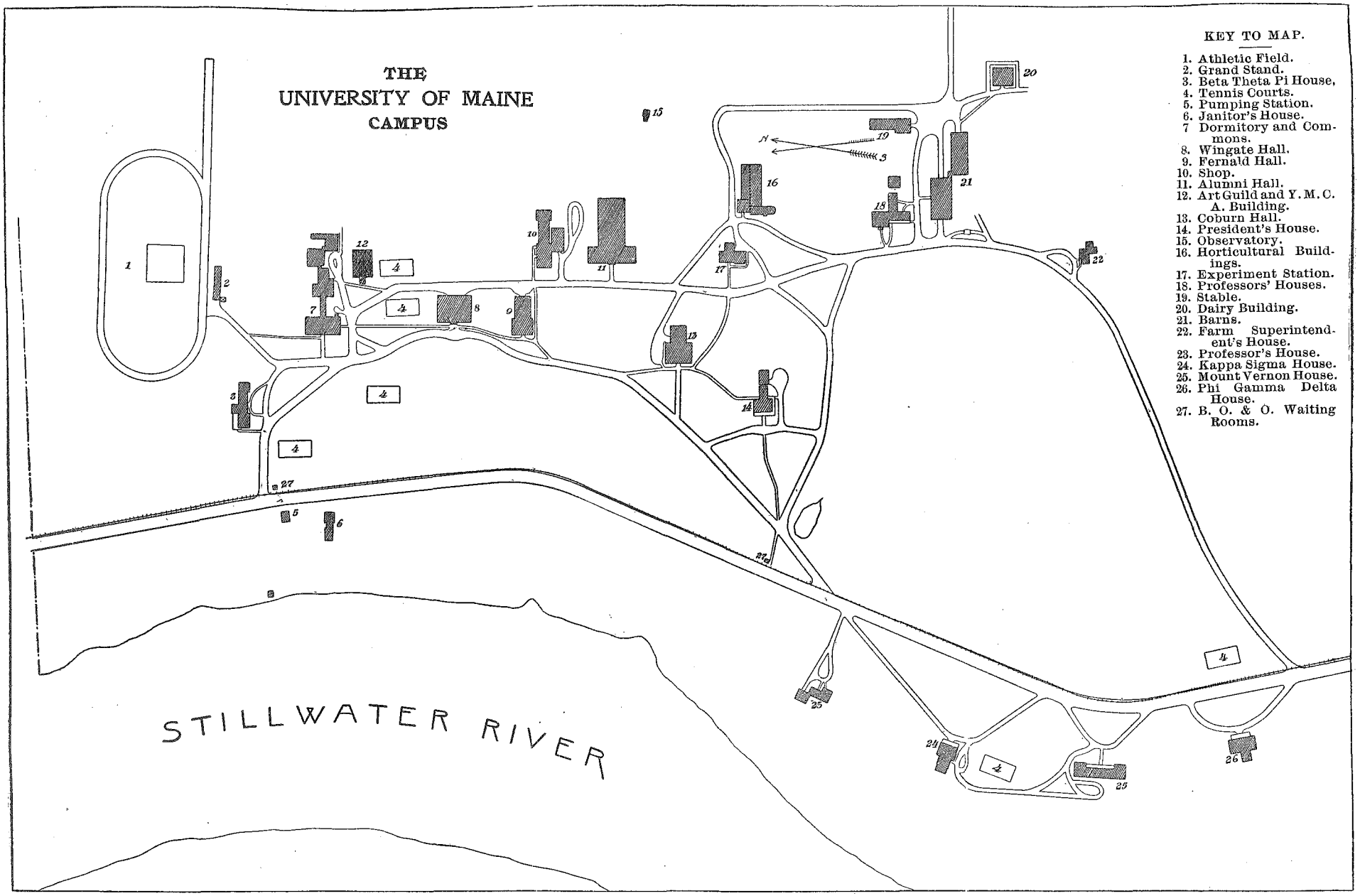
Williams, H. 1893
Williams, J. H 1876
Williams, J. S..... 1887
*Wilson, J. B..... 1881
Wilson, M. F.... 1889
Wilson, N. E. 1888
Wiswell, C. G..... 1898
Wood, E. B 1894
Woodbury, S. E 1901
Woodward, D. C..... 1882
*Work, E. A 1875
Wormell, R. G..... 1901
Wyman, L. A..... 1881

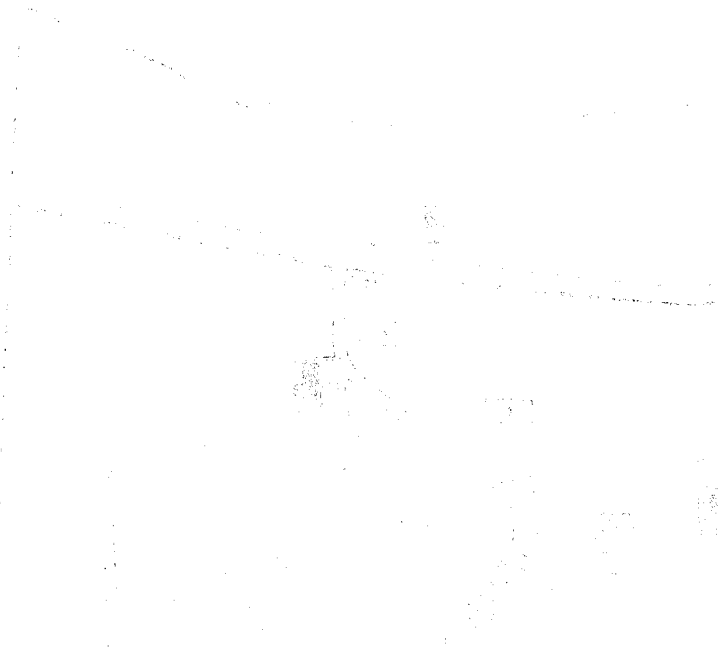
ALPHABETICAL LIST OF GRADUATES OF SHORT COURSES

Bartlett, C. S	1897	McCrillis, E. J	1897
Berry, R. H	1901	McCrillis, W. G	1897
Bird, J. F	1897	MacDougal, W. E.	1898
Burns, F. P	1902	Mitchell, C. B	1898
Clarke, R. E	1902	Nute, A. J	1897
Cleaves, D. L	1898	Parker, D. L. (Miss)	1897
Cowan, E. L	1903	Race, J. L	1903
Cowles, H. D	1903	Ring, V. M. (Mrs. D. O. Campbell).	1895
Crowell, W. H	1900	Sanford, J. F	1901
Gardner, H. (Mrs. S. C. Dillingham)	1897	Sheridan, L. M. (Mrs. A. B. Aubert)	1895
Green, C. S. (Miss)	1896	Taft, D. R	1900
Hall, F. E	1898	Tate, W. M	1902
Hamilton, G. R. (Miss)	1895	Vinal, R. P. (Miss)	1896
Hoyt, A. L	1903	Walton, R. D	1898
Keirstead, A. W	1897	Webster, W. B	1899
Larrabee, G. P	1900	White, C. H	1897

ALPHABETICAL LIST OF GRADUATES OF THE SCHOOL OF LAW

Anderson, T. A	1902	Mudgett, U. G	1903
Barker, L. A	1900	Murray, E. P	1903
Bennett, W. H	1903	Noble, E. E	1903
Buckley, W. W	1903	O'Halloran, J	1902
Butler, E. C	1901	Phillips, H. J	1900
Butterfield, B. F	1901	Pierce, H	1900
Cook, H. E	1900	Plumstead, F	1901
Dolan, J. F	1900	Potter, P	1903
Dunn, P. H	1902	*Price, A. W	1900
Fenderson, F. D	1899	Putnam, V. A	1902
Foss, P. F	1900	Reid, C. H	1903
Foster, N. G	1901	Ritter, G. W	1902
Geary, T. R	1903	Robinson, A. M. (Miss)	1900
Gerrish H	1900	Robinson, W. H	1902
Gibbs, B	1900	Sargent, W. J	1900
Graham, H L	1899	Schwartz, L. H	1900
Graton, C. D	1900	Selkirk, R. W	1902
Hobson, E. E	1900	Small, F. J	1900
Holman, C. V	1902	Snow, D. F	1903
Hutchings, E	1900	Stevenson, J. B	1900
Jones, F	1900	Theriault, D. L	1900
Kenniston, H. G	1902	Thombs, G. W	1903
Lord, H	1902	Thompson, F. E	1900
Ludgate, V	1900	Thurlough, H. H	1902
McCarthy, M	1900	Violette, N. L	1903
McGill, L. V	1899	Waterhouse, W. H	1900
Mackay, J. D	1900	Weatherbee, A. W	1902
Mackay, M	1902	Williams, D. S	1900
Mills, C. H	1900	Wilson, F. P	1900
Morson, J. H	1903	Winn, G. H	1903


THE
UNIVERSITY OF MAINE
CAMPUS
STILLWATER RIVER
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. Shop.
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.



CATALOGUE

OF THE

University of Maine

1903-1904

ORONO, MAINE

AUGUSTA, MAINE
KENNEBEC JOURNAL PRINT
1903

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CALENDAR

FALL TERM, 1903

September 14, Monday,	Arrearage examinations begin.
September 15, Tuesday,	Entrance examinations begin.
September 17, Thursday,	Fall term begins.
November 24, Tuesday,	Meeting of the Board of Trustees.
November 25, Wednesday,	Thanksgiving recess begins, 12 M.
December 1, Tuesday,	Thanksgiving recess ends, 7.45 A. M.
December 4, Friday,	Sophomore prize declamations.
December 23, Wednesday,	Christmas recess begins, 5.30 P. M.

1904

January 1, Friday,	Arrearage examinations begin (Spring term studies).
January 4, Monday,	Christmas recess ends, 7.45 A. M.
January 29, Friday,	Fall term ends.

SPRING TERM, 1904

February 1, Monday,	Spring term begins.
March 30, Wednesday,	Easter recess begins, 5.30 P. M.
April 4, Monday,	Arrearage examinations begin (Fall term studies).
April 6, Wednesday,	Easter recess ends, 7.45 A. M.
June 4, Saturday,	Junior exhibition.

June 5, Sunday,	Baccalaureate address.
June 6, Monday,	Convocation.
June 6, Monday,	Class day.
June 6, Monday,	Reception by the President.
June 7, Tuesday,	Meeting of the Board of Trustees.
June 7, Tuesday,	Receptions by the fraternities.
June 8, Wednesday,	COMMENCEMENT.
June 8, Wednesday,	Commencement dinner.
June 8, Wednesday,	Meeting of the Alumni Association.
June 8, Wednesday,	Commencement concert.
June 9, Thursday,	Entrance examinations begin.

FALL TERM, 1904

September 19, Monday,	Arrearage examinations begin.
September 20, Tuesday,	Entrance examinations begin.
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 6, Monday,	Spring term begins.
June 14, Wednesday,	COMMENCEMENT.

CALENDAR OF THE COLLEGE OF LAW

1903

October 7, Wednesday, Fall term begins.

December 23, Wednesday, Fall term ends.

1904

January 6, Wednesday, Winter term begins.

March 16, Wednesday, Winter term ends.

March 23, Wednesday, Spring term begins.

June 8, Wednesday, COMMENCEMENT.

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.

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in the Experiment Station.

JAMES NORRIS HART, C. E., M. S.,.....Campus.
Professor of Mathematics and Astronomy, and Dean.

FREMONT LINCOLN RUSSELL, B. S., V. S.,.....85 Main Street.
Professor of Biology, and Veterinarian of the
Experiment Station.

WELTON MARKS MUNSON, PH. D.,.....76 Main Street.
Professor of Horticulture, and Horticulturist of
the Experiment Station.

HORACE MELVYN ESTABROOKE, M. A.,.....80 Main Street.
Professor of English.

JAMES STACY STEVENS, M. S.....Main Street.
Professor of Physics.

GILBERT MOTTIER GOWELL, M. S.,.....Campus.
Professor of Animal Industry.

CHARLES DAYTON WOODS, B. S.,.....55 Main Street.
Director of the Experiment Station, and Professor of Agricultural Chemistry.

HOWARD SCOTT WEBB, M. E., E. E.,.....32 North Main Street.
Professor of Electrical Engineering.

KARL POMEROY HARRINGTON, M. A.,.....Campus.
Professor of Latin.

JOHN HOMER HUDDILSTON, PH. D.,.....59 Main Street.
Professor of Greek.

WILLIAM EMANUEL WALZ, M. A., LL. B., 183 Cedar St., Bangor.
Professor of Law, and Dean of the College of Law.

GILMAN ARTHUR DREW, PH. D.,.....College Street.
Professor of Biology.

WILBUR FISK JACKMAN, B. S., PH. C.,.....36 Pine Street.
Professor of Pharmacy.

RALPH KNEELAND JONES, B. S.,.....26 Bennoch Street.
Librarian.

ORLANDO FAULKLAND LEWIS, PH. D.,.....Main Street.
Professor of Germanic Languages.

PERLEY F WALKER, M. M. E.,.....57 Main Street.
Professor of Mechanical Engineering.

CHARLES J. SYMMONDS, CAPTAIN 12th U. S. CAVALRY, Park St.
Professor of Military Science.

SAMUEL NEWTON SPRING, M. F.,.....39 Mill Street.
Professor of Forestry.

ERNEST GUSTAVUS LORENZEN, PH. B., LL. B., J. U. D., Bangor.
Professor of Law.

WILLIAM DANIEL HURD, B. S.,.....2 Middle Street.
Professor of Agriculture.

JACOB BERNARD SEGALL, PH. D.,.....61 Mill Street.
Professor of Romance Languages.

HAROLD SHERBURNE BOARDMAN, C. E.,.....Main Street.
Associate Professor of Civil Engineering.

CAROLINE COLVIN, PH. D.,.....Campus.
Assistant Professor of History.

EDGAR MYRICK SIMPSON, B. A.,.....5 Broadway, Bangor.
Instructor in Real Property and Corporations.

GUY ANDREW THOMPSON, M. A.,.....Mrs. Graves.
Instructor in English.

JOHN EMERSON BURBANK, M. A.,.....2 Forest Street.
Instructor in Physics.

ARCHER LEWIS GROVER, B. S.,.....44 Main Street.
Physical Director, and Instructor in Drawing.

EUGENE CLEMENT DONWORTH, LL. B.,..7 South Street, Bangor.
Instructor in Contracts.

BERTRAM LEIGH FLETCHER, LL. B.,....28 Second Street, Bangor.
Instructor in Agency.

GEORGE HENRY WORSTER,.....234 Center Street, Bangor.
Instructor in Insurance.

STANLEY JOHN STEWARD, M. E.,.....3 Middle Street.
Instructor in Mechanical Engineering.

THOMAS BUCK, B. S.,.....88 Main Street.
Instructor in Mathematics.

WALTER DAVIS LAMBERT, M. A.,.....Mrs. Graves.
Instructor in Mathematics.

HENRY MARTIN SHUTE, M. A.,.....44 Main Street.
Instructor in Modern Languages.

HORACE PARLIN HAMLIN, B. S.,.....Main Street.
Instructor in Civil Engineering.

MARSHALL BAXTER CUMMINGS, B. S.,.....Mrs. Graves.
Instructor in Botany, and Assistant Horticulturist.

GRANT TRAIN DAVIS, B. A.,.....61 Main Street.
Instructor in Chemistry.

JOHN BYRON REED, B. A.,.....61 Main Street.
Instructor in Chemistry.

FOREST JOHN MARTIN, LL. B.,..105 Cumberland Street, Bangor.
Resident Lecturer on Common Law Pleading and Maine Practice.

HUGO CLARK, C. E.,.....5 Broadway, Bangor.
Resident Lecturer on Equity Pleading and Practice.

CHARLES HAMLIN, M. A.,.....25 Fifth Street, Bangor.
Lecturer on Bankruptcy and Federal Procedure.
LUCILIUS ALONZO EMERY, LL. D.,.....Ellsworth.
Lecturer on Roman Law and Probate Law.
ANDREW PETERS WISWELL, LL. D.,.....Ellsworth.
Lecturer on Evidence.
LOUIS CARVER SOUTHARD, M. S.,.....Boston.
Lecturer on Medico-Legal Relations.
ARTHUR WILLIAMS COLE, B. S.,.....37 Mill Street.
Instructor in Shop Work.
NEWELL WALTER EDSON, B. A.,.....Mrs. Graves.
Instructor in English.
VICTOR MANUEL ARANA, M. E. IN E. E.,.....University Hall.
Instructor in Electrical Engineering.
ARTHUR CRAWFORD JEWETT, B. S.,.....5 Broadway, Bangor.
Instructor in Mechanical Engineering.
CHARLES VEY HOLMAN, LL. B.,.....88 Broadway, Bangor.
Lecturer on Mining Law.
RALPH MELVIN CONNER, B. S.,.....University Hall.
Tutor in Mathematics.
EVERETT HARLOW BOWEN, B. A.,.....2 Bennoch Street.
Tutor in Physics.
PAUL DYER SIMPSON, B. S.,.....University Hall.
Tutor in Civil Engineering.
HENRY MELVILLE SOPER, B. S.,.....Oak Hall Annex.
Assistant in Chemistry.
HERMAN HERBERT HANSON, B. S.,.....61 Main Street.
Assistant Chemist in the Experiment Station.
EVERETT WILLARD DAVEE,.....Bridge Street.
Assistant in Shop Work.
EDITH MARION PATCH, B. S.,.....Campus.
Assistant in Entomology in the Experiment Station.
SANFORD CROSBY DINSMORE, B. S.,.....Oak Hall Annex.
Assistant Chemist in the Experiment Station.
GENEVA RING HAMILTON,.....14 Myrtle Street.
Assistant Librarian.
ELIZABETH ABBOTT BALENTINE,.....Campus.
Secretary to the President, and Secretary of the Faculty.

STANDING COMMITTEES OF THE FACULTY

Admission to Examinations

Professor Fernald, Professor Webb, Professor Drew.

Approved Schools

Professor Estabrooke, Professor Fernald, Professor Harrington (Secretary), Professor Hart, Professor Huddilston, Professor Lewis, Professor Stevens.

Athletics

Professor Jones, Professor Lewis, Mr. Grover.

Catalogue

Professor Harrington (Editor), Professor Walker, Professor Hurd.

Course of Study

Professor Drew, Professor Hart, Professor Lewis, Professor Walker.

Delinquents

Professor Webb, Professor Boardman, Professor Munson, Mr. Buck, Mr. Thompson.

Graduate Degrees

Professor Fernald, Professor Estabrooke, Professor Harrington (Secretary), Professor Munson, Professor Walker.

Health

Professor Rogers, Professor Jackman, Professor Russell, Professor Colvin, Mr. Grover.

Honors

Professor Stevens, Professor Huddilston, Professor Munson, Professor Drew.

Library

Professor Jones, Professor Estabrooke, Professor Walker, Professor Jackman.

Military

Professor Symmonds, Professor Woods, Professor Walker.

Musical Organizations

Professor Lewis, Professor Jones, Professor Spring.

Rules

Professor Woods, Professor Stevens, Professor Munson.

Student Advisers

For Freshmen in all courses: Dean Hart.

For all other students: the head of the department in which their major subject is taken.

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 will 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 apparatus room. On the third floor are large, well lighted drawing rooms. In the basement are the dynamo laboratory and the testing room of the department of civil engineering. The testing room contains a Riehle testing machine of 60,000 pounds capacity, cement testing machine, etc. 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.

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. It was remodeled in 1895. An annex added during the summer of 1903 furnishes accommodations for thirty students more.

UNIVERSITY HALL.—This building, recently equipped as a dormitory and boarding house, is centrally located on Main Street, near the post office and churches, and on the electric car line which passes through the campus. It contains about twenty-five rooms, varying in size, and accommodates about forty students.

FERNALD HALL.—This building, named in honor of Merritt C. Fernald, Ph. 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 the recitation room of the professor of English. On the second floor are the botanical and zoological laboratories, and recitation rooms for the department of biology, English, and modern languages. Over the library is the museum. The collections 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 aperature. These instruments, together with sextants, sidereal chronometer, etc., furnish excellent facilities for instruction in both descriptive and practical astronomy.

THE MACHINE SHOP.—In the rear of Fernald Hall is the machine shop, a wooden building 125 feet long and two stories high, containing the foundry, forge shop, carpenter shop, machine

shop and tool room. The building is thoroughly equipped. An adjoining building, 30 by 71 feet, 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.

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, which is already in process of erection, will consist 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 will contain three recitation rooms, a large drawing room, the shops, suitable laboratories, and offices for the professors and instructors in the two departments concerned. The increased space will permit also a decided increase in equipment.

THE EXPERIMENT STATION BUILDING.—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 of the University, and the offices 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 HORTICULTURAL BUILDING.—East of the Experiment Station is the Horticultural Building, consisting of a headhouse and three greenhouses. In the headhouse are the office of the professor of horticulture, a work room, a seed storage room, a photographing room, the janitor's room, and a room used for storage. The main greenhouse, 20 feet by 100 feet, is devoted to the use of the Experiment Station, and to the instruction of students. A second structure, 20 feet by 80 feet, running parallel to the main greenhouse, is divided, one-half being used for growing plants, and the remainder as a potting and storage room. The third greenhouse is designed for investigations in plant nutrition. In the south end of this house is the conservatory.

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 from the university plant. 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.—Six of the student fraternities occupy club houses. Four 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.

OTHER BUILDINGS.—In addition to the buildings already described, there are six 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 yards 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-five 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 in departmental rooms are maintained by those departments which require them.

Nearly half of the volumes in the library have been added within the last five years, the accessions having averaged more than twenty-five hundred annually during this period; the greater part of these have been acquired by purchase, and in large part have been selected by the heads of departments with particular reference to making the collection of the greatest working value. The time and manner of the selection and purchase of the books result in a particularly useful collection.

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 two volumes at a time, to be retained two 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.

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. 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 A. M. to 12 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 AND HERBARIUM

The museum is located in the wing of Coburn Hall. The mineral cabinet embraces a general collection of three hundred species of the more common minerals, a collection of economic minerals furnished by the National Museum, an educational series of rocks from the U. S. Geological Survey, and a collection of the more important fragmental, crystalline, and volcanic rocks.

There is a small collection of plant and animal fossils, a set of type exotic mammals, a number of the larger mammals of the State, and working collections of the lower group of both vertebrate and invertebrate animals.

The herbarium comprises the original collection of Maine plants of about 500 species; the new collection of Maine plants of 800 species; the Blake herbarium of 7,000 species, including phænogams and cryptogams; Ellis and Everhard's North American Fungi, comprising thirty-five centuries; Halsted's Lichens of New England; Underwood's Hepaticæ; Cummings and Seymour's North American Lichens; Cook's Illustrative Fungi; Collins's Algæ of the Maine Coast; a collection of illustrative cryptogams in boxes; Harvey's Weeds and Forage Plants of Maine, 300 species; Halsted's Weeds; a collection of grasses and forage plants of 400 species; a collection of United States woods prepared by the United States Department of Agriculture; a collection of seeds and fruits.

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 (for women); Γ Η Γ, Σ Β Π (in the College of Law.)

ASSOCIATIONS.—The following is a list of other organizations existing in the University: Scientific Association, Philological Club, German Club, University Guild, Debating Society, Electrical Society, Honorary Society (Phi Kappa Phi), Young Men's Christian Association, Athletic Association, Glee Club, Instrumental Club, Band.

THE SCIENTIFIC ASSOCIATION.—The Scientific Association was organized to promote interest in scientific study and investigation in various departments. It holds a general meeting once a month, and is divided into four groups, each of which has its own stated meetings. Papers describing original work, and those of a more popular nature, are presented from time to time.

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 new Art Museum and holds four regular meetings 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.

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 and Latin-Scientific Courses; 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 CAMPUS.—This is a journal published semi-monthly during the university 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 and a band, 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.

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 blue cap, army regulation style, with crossed rifles and the letters U. M. embroidered in gold on the front. For commissioned officers, the regulation

fatigue uniform 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 for all ranks is $13.70. 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, provided the complete uniform is worn.

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 optional for members of the junior and senior classes.

PHYSICAL TRAINING

The new gymnasium, completed in the spring of 1901, affords unexcelled 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.

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 freshmen and sophomores from November 15th to April 15th.

A physical examination of each student is made, together with measurements and strength tests. From the data thus procured special exercises are prescribed with a view to the systematic development of the entire physicial system.

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, counts 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 scholarships 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. 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.

DEGREES

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

The degree of Bachelor of Philosophy (Ph. B.) is conferred upon students that complete the Latin-Scientific Course.

The degree of Bachelor of Science (B. S.) is conferred upon students that complete the Scientific, Chemical, Agricultural, Forestry, Civil Engineering, Mechanical Engineering, Electrical Engineering, Mining Engineering, 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 Philosophy (M. Ph.), 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. 49), 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 not later than May 20. 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, about	20 00
Total,	$213 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 38.

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 $3.00 a week. Board may be obtained in clubs or private families at prices ranging from $2.50 to $3.25 a week.

The charges for rooms in Oak Hall are $0.60 a week for each student, when two occupy a room. This pays for heat and light, for the lighting and care of the halls and public rooms of the dormitory, and for ordinary damages. 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.

Students in University Hall pay $1.00 a week for room and $3.00 a week for board.

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 the heat, light and care of their rooms and 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, University Hall, or Mt. Vernon House, and $30.00 from others. 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 June preceding. 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 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.

ADMISSION

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.

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 not for any part of the college work, unless done in a college. A student who has accomplished half of the preparatory course may be examined on that part, and receive credit therefor.

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 or Latin-Scientific courses should devote special attention to Latin composition, Roman history, and constant practice in pronouncing Latin according to the Roman method.

Persons, not candidates for a degree, who wish to take special studies, may be permitted to do so upon giving 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 entrance examinations.

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

College graduates who wish to enter a technical course are admitted to the junior class without examination. Students in general college courses, who expect to pursue technical courses after graduation, should avail themselves of opportunities for the study of mathematics, physics, chemistry, and drawing, as a preparation for engineering courses; and of physics, chemistry, and drawing, for chemical and biological courses.

For admission to the College of Law, see page 119.

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 these days. 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 uniform with the following plan of college entrance requirements which was adopted by the Maine Association of Colleges and Preparatory Schools at its annual meeting in Augusta, October 25th, 1902:

To gain admission into any of the courses leading to the degrees of B. A., Ph., B. 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

All Subjects Required

College Entrance English	counts	4	points
Latin	"	8	"
Greek	"	6	"
Algebra	"	4	"
Plane Geometry	"	2	"
Roman History	"	1	point
Greek "	"	1	"
		26	

FOR THE Ph. B. COURSE

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.)

Greek	counts	6	points
Each year of French	"	2	"
" " " German	"	2	"
*Chemistry	"	2	"
*Physics	"	2	"
Solid Geometry	"	1	point
Greek History	"	1	"
English "	"	1	"
American History and Civil Government	"	1	"

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

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 "
*Chemistry	"	2 "
*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.

Substitutes.—One year of Latin will be accepted as a substitute for either of the following groups: (a) Geography, Arithmetic, English Grammar, and Physiology; (b) One science.

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

One year of French or German will be accepted as a substitute for either of the following groups: (a) Geography, Arithmetic, English Grammar, Physiology; (b) One science.

Other equivalents will be accepted for any of the requirements except Mathematics.

For the requirements for admission to the College of Law, see the article on the College of Law, page 119.

REQUIREMENTS IN DETAIL

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

Language

ENGLISH.—*Grammar.* The usual school course. Attention should be given to punctuation and the use of capital letters.

Reading and Practice. Each candidate will be required to present evidence of a general knowledge of the substance of the books mentioned below and to answer simple questions on the lives of their authors. The examination will usually be the writing of one or two paragraphs on each of several topics. The treatment of these topics is designed to test the power of clear and accurate expression, and will call for only a general knowledge of the substance of the books. 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 1904 and 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 1904 and 1905 it will be based upon: Shakespeare'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; abundant 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; abstracts 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. 46) 400-600 pages of ordinary difficulty; constant practice in French paraphrases, abstracts, reproductions from memory; study of a 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 pas-

sages 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 such as may be obtained from Allen's Short History of the Roman People, or from Myers's Rome: Its Rise and Fall, to the death of Marcus Aurelius.

GREEK HISTORY.—Pennell'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 History of England.

UNITED STATES HISTORY.—A knowledge such as may be obtained from Higginson'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. Required only of candidates for the engineering courses.

*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 course in pharmacy 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 are accepted only from graduates of schools approved by the New England College Entrance Certificate Board. 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 to the Secretary of the Board, Professor Nathaniel F. Davis, 159 Brown St., Providence, R. I.

*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.

REQUIREMENTS FOR GRADUATION.

(These do not apply to the College of Law and the Short Pharmacy Course. See pp. 115, 118.)

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 credits thus represent the minimum work of a year. 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.

Candidates for graduation are required to complete a four-years course of study by securing at least twenty-four credits. Certain courses require a larger number, as stated below. The credits are distributed as follows:

REQUIRED WORK.—This work must be done by all students that are candidates for a degree, unless a special excuse is obtained from the faculty committee on required work, and is common to all courses. The required work includes:

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), one language the equivalent of two years, or two languages the equivalent of one year each, five hours a week. Of students in the engineering courses, however, only 3 credits in language are required. A student beginning German or French must receive at least two credits in the subject to count it towards a degree. Preparatory Greek is not counted towards a degree.

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, except that in the engineering and pharmacy courses the maximum is ten credits, and in the chemical course it is eleven 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. In the more technical courses this provision naturally makes most of the work practically prescribed.

DEPARTMENTS OF INSTRUCTION

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 neither takes the place of preparatory Greek, nor counts toward a degree in the classical course. It is open to all students, but to freshmen only on permission of the instructor. *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 and who desire to take the Classical Course the following courses in preparatory Greek are offered. None of these courses will be counted towards a degree. It is expected that the maturity of the students will enable the instructor to cover the usual three years of preparatory Greek in two years.

Gk 20. ELEMENTARY GREEK.—A thorough mastery of the declensions, conjugations, and most common principles of syntax. Ball's The Elements of Greek will be used. *Four hours a week.* Spring term.

Gk 21. XENOPHON.—Anabasis, Books I-II, and daily writing of composition in Greek based on the text. Kelsey's Anabasis of Xenophon, Goodwin's Greek Grammar. *Four hours a week.* Spring term.

Gk 22. XENOPHON.—Anabasis, Books III-IV; Sight reading in Attic prose; composition and grammar; text as in the preceeding course. *Four hours a week.* Fall term.

Gk 23. HOMER.—Benner's selections from Homer's Iliad. This course will include a general survey of Homer's great epic, and a special study of Achilles, the hero of the poem. *Four 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.

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.

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 five 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.

ROMANCE LANGUAGES

PROFESSOR SEGALL; MR. SHUTE.

Rm 1. FRENCH.—Elementary Course. Chardenal, Complete French Course; Super, French Reader; François and Giroud, Simple French; Fontaine, Livre de Lecture et de Conversation; Labiche, Voyage de M. Perrichon. *Five hours a week.* Fall term. PROFESSOR SEGALL; MR. SHUTE.

Rm 2. FRENCH.—A continuation of course 1. *Five hours a week.* Spring term. PROFESSOR SEGALL; MR. SHUTE.

Rm 2a. FRENCH.—For students that offer French at entrance. François, Prose Composition, Introductory Course; Le Sage, Gil Blas; Maupassant, Huit Contes Choisis; Mérimée, Quatre Contes; Fontaine, Fleurs de France; Labiche, Moi; Augier, Le Gendre de M. Poirier. *Three hours a week.* Fall term. PROFESSOR SEGALL; MR. SHUTE.

Rm 2b. FRENCH.—A continuation of course 2a. *Three hours a week.* Spring term. PROFESSOR SEGALL; MR. SHUTE.

Rm 3a. FRENCH.—For students that have taken courses 1 and 2, or their equivalent. Daudet, Morceaux Choisis; Alliot, Contes et Nouvelles; Balzac, Le Curé de Tours and other stories; Loti, Pêcheur d' Islande; Molière, L'Avare, and Le Misanthrope; François, French Composition, Advanced Course. *Three hours a week.* Fall term. PROFESSOR SEGALL.

Rm 3b. FRENCH.—A continuation of course 3a. *Two hours a week.* Spring term. PROFESSOR SEGALL.

Rm 4a. FRENCH.—Crane, La Société Française au Dix-septième Siècle; Warren, French Prose of the 17th Century; Molière, Les Femmes Savantes, and Tartuffe; Cohn and Wood-

ward, French Prose of the XVIIIth Century; Beaumarchais, Le Mariage de Figaro; Taine, Introduction à l'Histoire de la Litt. Anglaise and Les Origines de la France Contemporaine; Leune, Difficult Modern French; 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 9a. SPANISH.—Elementary Course. Loiseaux, Grammar; Matzke, First Spanish Readings; De Haan, Cuentos Modernos, and Tres Comedias Modernas; Alarcon, El Capitan Veneno; Galdos, Marianela. *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. Mantilla, Historia del Mundo. Composition and Conversation. *Three hours a week.* Fall term. MR. ARANA.

Rm 10b. SPANISH.—A continuation of course 10a. *Three hours a week.* Spring term. MR. ARANA.

Rm 11a. ITALIAN.—An elementary course, elective for students that have completed course 2. The text-books are: 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. The text-books are: 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.

GERMAN

PROFESSOR LEWIS; MR. SHUTE.

Gm 1. GERMAN.—Elementary course. Lange, German Method; Harris, German Lessons; Andersen, Märchen; Storm, Immensee; Heyse, L'Arrabbiata; Gerstäcker, Germelshausen. *Five hours a week.* Fall term. PROFESSOR LEWIS; MR. SHUTE.

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

Gm 2a. GERMAN.—For students that offer German at entrance. The equivalent of the first half of course 2. *Three hours a week.* Fall term. PROFESSOR LEWIS.

Gm 2b. GERMAN.—A continuation of course 2a. The equivlent of the last half of course 2. *Five hours a fortnight.* Spring term. PROFESSOR LEWIS.

Gm 3a. GERMAN.—For students that have taken courses 1 and 2, or their equivalent. Lessing, Minna von Barnhelm; Schiller, Wilhelm Tell; Sudermann, Frau Sorge; Gore, Science Reader. Review of grammatical principles; Harris, German Composition. *Three hours a week.* Fall term. MR. SHUTE.

Gm 3b. GERMAN.—A continuation of course 3a. *Two hours a week.* Spring term. 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.

ENGLISH

PROFESSOR ESTABROOKE; MR. THOMPSON; MR. EDSON.

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, the work consists in the study and rendering of model public addresses of various forms. At these exercises the speakers are freely criticized with reference to voice, gesture, and interpretation, and the principles involved are explained and discussed. During the second term these principles are applied to the delivery of speeches of the student's own composition. The text-book is Riddle's Modern Reader and Speaker.

Throughout the year each student speaks *once every two weeks.*

This course may be taken either in the freshman or sophomore year. 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. *Eight themes are required,* each containing from 1,000 to 1,200 words. There will be a conference on each theme. MR. THOMPSON; MR. EDSON.

Eh 3. ENGLISH COMPOSITION.—This course gives both theoretical and practical instruction. The theory is taught by classroom work based on Genung's Outlines of 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 rhetoric 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.* MR. THOMPSON; MR. EDSON.

Eh 4. ENGLISH COMPOSITION.—Extended study of narration and description, argumentative composition, and persuasion; 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 A. S. Hill's Principles of Rhetoric and Newcomer's Elements of Rheoric. This course 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 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. *Three hours a week.* Spring term. PROFESSOR ESTABROOKE.

Eh 10. ENGLISH LITERATURE.—In this course particular attention is paid to the development of the English novel and to the Lake poets. *Two hours a week.* Fall term. PROFESSOR ESTABROOKE.

Eh 11. ENGLISH LITERATURE.—A continuation of course 10, including a study of the most important American authors of the present century. *Three hours a week.* Spring term. PROFESSOR ESTABROOKE.

Eh 12. ENGLISH LITERATURE.—Readings from English fiction. In this course selections from English novelists (chiefly later ones) are read critically, in order to determine the characteristic qualities of each. At least one entire work of a selected author is carefully studied. *Two hours a week.* Fall term. PROFESSOR ESTABROOKE.

Eh 13. ENGLISH LITERATURE.—A continuation of course 12. *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.

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 teaching; 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 tranference, 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 the introspection of these processes by modern experimental 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. Pl. 9 precedes Pl 4 in the course 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.

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.

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 2. 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.

Five 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.

Five 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.

MATHEMATICS AND ASTRONOMY

PROFESSOR HART; MR. LAMBERT; MR. BUCK; MR. CONNER.

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

The text-book is Wells' Solid Geometry. *Five hours a week for eight weeks.* Spring term. MR. LAMBERT; MR. BUCK.

Required of all Freshmen except engineering students, for whom it is an entrance requirement.

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; probability; theory of equations.

The text-book is Wentworth's College Algebra. *Five hours a week.* Fall term. MR. LAMBERT; MR. BUCK; MR. CONNER.

Ms 4. PLANE TRIGONOMETRY.—The text-book is Crockett's Trigonometry. *Five hours a week.* Spring term, first ten weeks. PROFESSOR HART; MR. LAMBERT; MR. BUCK; MR. CONNER.

Courses 2, 4, and 1 or 19, 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 6. ANALYTIC GEOMETRY.—A more extended course. The straight line; conic sections; transformation of coördinates; equation of the second degree; higher plane curves; introduction to solid analytic geometry. Open to students that have taken courses 1, 2 and 4.

The text-book is Ashton's Analytic Geometry. *Five hours a week.* Fall term. PROFESSOR HART; MR. LAMBERT; MR. BUCK.

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

The text-book is Hall's Differential and Integral Calculus, *Five hours a week.* Spring term. PROFESSOR HART; MR. LAMBERT; MR. BUCK.

Ms 8. CALCULUS.—A continuation of course 7. Applications of differential and integral calculus. *Three hours a week.* Fall term. PROFESSOR HART; MR. LAMBERT; MR. BUCK.

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. PROFESSOR HART.

Ms 10. PRACTICAL ASTRONOMY.—A course arranged to meet the needs of engineering students, and consisting largely 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. *Five hours a week.* Spring term, last eight weeks. PROFESSOR HART; MR. BUCK. [Omitted in 1903-1904.]

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

PHYSICS

PROFESSOR STEVENS; MR. BURBANK; 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. BURBANK.

Open to students that have taken Ms 4.

Ps 2. GENERAL PHYSICS.—A continuation of course 1; heat and electricity. *Three hours a week.* Spring term. PROFESSOR STEVENS; MR. BURBANK.

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 Wentworth and Hill's 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. BURBANK; 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. ADVANCED 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. ADVANCED PHYSICS.—One course in advanced physics is offered each year. This year a lecture course in Meteorology is given. *Two hours a week.* Fall term. PROFESSOR STEVENS.

Open to students that have taken Ms 8.

Ps 9. LABORATORY PHYSICS.—General laboratory work in continuation of course 5. †*Six hours a week.* Fall term. PROFESSOR STEVENS.

Ps 10. LABORATORY PHYSICS.—Advanced laboratory work in optics, in continuation of course 9. †*Four hours a week.* Spring term. PROFESSOR STEVENS.

Ps 11. ELECTRICAL MEASUREMENT AND TESTING.—The measurement of resistance, potential, current and capacity; the testing of galvanometers, etc. The charge for this course is $2.50. †*Six hours a week.* Fall term. MR. BURBANK; 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. LABORATORY PHYSICS.—A special 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. LABORATORY PHYSICS.—A continuation of course 15. †*Six hours a week.* PROFESSOR STEVENS.

Ps 17. ELECTROCHEMISTRY.—A lecture course on the modern theory of electrolysis and some of its practical applications. Attention will be given to the theory of battery cells, to the application of electrolysis in mining and purification of metals, and other commercial applications. The lectures are supplemented by references. *Three hours a week.* Spring term. MR. BURBANK.

Open to students that have taken Ps 5 and Ch 2.

Ps 18. ELECTRICITY AND OPTICS.—Experiments selected from courses 10 and 11 to meet the needs of students in chemistry. †*Four hours a week.* Fall term. MR. BURBANK.

CHEMISTRY

PROFESSOR AUBERT; PROFESSOR WOODS; PROFESSOR MERRILL; MR. DAVIS; MR. REED; MR. SOPER.

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 Remsen's Introduction to the Study of 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 Remsen and Randall's Chemical Experiments. †*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 Richter's Inorganic Chemistry. *Two hours a week.* Fall term. PROFESSOR AUBERT; MR. SOPER. No credit is given 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. SOPER.

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 specially admitted. PROFESSOR AUBERT; MR. SOPER.

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. SOPER.

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 Dennis and Whittlesey's Qualitative Chemical 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 18 and 19. PROFESSOR AUBERT AND MR. SOPER.

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 Ch 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 in 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 Organique, 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 27. LABORATORY PHYSIOLOGICAL CHEMISTRY.—Qualitative tests of fats, carbohydrates, protein, blood, milk, etc. The text is Novy's Physiological Chemistry. †*Ten hours a week for nine weeks.* Fall term. PROFESSOR JACKMAN.

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. *Two hours a week.* Given in the spring term of even years. Open to students that have completed courses 1, 2, 3, and 4. PROFESSOR WOODS.

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.

BIOLOGY

PROFESSOR DREW; PROFESSOR RUSSELL; PROFESSOR MUNSON; PROFESSOR MERRILL; 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. These followed by course 9 count one credit.

Bl 1. GENERAL BIOLOGY.—This course is devoted to the study of the general principles of biology as illustrated by a few forms of plants and animals. It is open to all students and should form

the basis for other biological work. 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.

Bl 3. CRYPTOGAMIC BOTANY.—Type forms of flowerless plants are studied in the laboratory and in the field. Attention is given to their relation to other forms, their structures and their life histories. This course should be preceded by courses 1 and 2. †*Four hours a week.* Given in the fall term of odd years. PROFESSOR DREW.

Bl 5. ZOOLOGY (Invertebrate animals).—Representatives of the invertebrate groups of animals that 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.* Given in the fall term of even years. PROFESSOR DREW.

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 OR BOTANY.—This course offers an opportunity for special biological 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.

Ch 30. BIOLOGICAL CHEMISTRY.—For description of this course see p. 76. *Five hours a week.* Fall term. PROFESSOR MERRILL.

Ht 1. GENERAL BOTANY.—For description of this course see p. 82. †*Four hours a week.* Spring term. PROFESSOR MUNSON; MR. CUMMINGS.

Ht 2. HISTOLOGY OF PLANTS.—For description of this course see p. 82. †*Four hours a week.* Spring term. MR. CUMMINGS.

Ht 11. PLANT BREEDING.—For description of this course see p. 83. *Three hours a week.* Given in the spring term of odd years. PROFESSOR MUNSON.

AGRICULTURE

PROFESSOR HURD.

Ag 1. CROPS AND CROP PRODUCTION.—Lectures and recitations, beginning with the fundamental principles of agriculture. The essential elements of plant food; where and how these are obtained. A short study of the formation of soils and of the agencies still at work in their formation. The different soils and their relation to the crops. The factors determining fertility, and the physical properties of ideal soils. The conservation of soil moisture. The objects, benefits, and methods of tillage. The rotation of crops, and agricultural importance of same. The preparation of land for crops. The history, distribution, chief characteristics, uses, and adaptability of the principal farm crops. The best methods of producing them; a study and treatment of the injurious insects and diseases affecting them. The harvesting, marketing, and storing of crops.

This course is supplemented by laboratory and field work, the student being required to take part in, as well as observe, the various operations necessary to care for, and produce a crop. *Three hours a week.* Fall term.

Ag 2. FARM MANAGEMENT AND OPERATIONS.—Lectures and laboratory work in the keeping of farm accounts, the planning of the coming season's work, the management of men and teams, and the estimated cost of the different operations. †*Four hours a week.* Fall term.

Ag 3.—A continuation of course 1. *Three hours a week.* Spring term.

Ag 4. AGRICULTURAL ENGINEERING.—Farm surveying and drainage. The plotting of farms and the measurement of land. Conditions requiring, necessity for, and advantages of drainage. Levelling for drains. Tile vs. surface drainage; estimating size of tile required, cost of drain, etc. The making of roads, with practical field work in the laying of drains and the construction of roads on the college farm.

Farm mechanics: A study of some 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 implements in possession of the college. The relative merits of wind, steam, gasolene, and electricity as a means of furnishing power. The construction and ventilation of farm buildings. †*Four hours a week.* Spring term.

Ag 5. ADVANCED AGRICULTURE.—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. *Time to be arranged.*

Ag 6. ADVANCED AGRICULTURE.—A continuation of course 5. *Time to be arranged.*

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. *Three hours a week.* Fall term.

An 2. LABORATORY ANIMAL BREEDING.—Handling and judging cattle and horses in the barns and laboratory. Studying the different breeds; practice in the use of score cards in judging animals. *Four hours a week.* Fall 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 for four weeks.* Spring 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. *Three hours a week for six weeks.* Spring term.

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

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

HORTICULTURE

PROFESSOR MUNSON; MR. CUMMINGS.

Ht 1. GENERAL BOTANY.—The structure and functions of the organs of plants; the development and relationship of the leading groups; plant societies; plant distribution; fertilization. Lectures, text book, and laboratory work. †*Four hours a week.* Spring term. PROFESSOR MUNSON; MR. CUMMINGS.

Ht 2. HISTOLOGY OF PLANTS.—A description and comparison of tissues, and studies of the minute anatomy of plants. Open to students that have taken course 1. Lectures and laboratory investigations. †*Four hours a week.* Spring term. MR. CUMMINGS.

Ht 3. FRUIT GROWING.—The principles and practice of growing fruits, including a discussion of climatic conditions, soils, culture, pruning, harvesting, marketing, etc. Lectures and text-book. *Two hours a week.* Fall term. PROFESSOR MUNSON.

Ht 4. VEGETABLE GARDENING.—The principles and practice of growing vegetables. The culture of the leading garden vegetables in the field and under glass; truck farming; market and home gardening; requisites and returns. Lectures and text-book. *Two hours a week.* Spring term. PROFESSOR MUNSON.

Ht 5. LABORATORY HORTICULTURE.—Practical work in orchard and gardens supplementing course 3. A study of soils; cover crops; harvesting, storing and marketing fruits; pruning; winter protection, and other similar operations. †*Four hours a week.* Fall term. PROFESSOR MUNSON; MR. CUMMINGS.

Ht 6. LABORATORY HORTICULTURE.—A continuation of course 5. Greenhouse work; propagation of plants; a study of seeds; making hot-beds; preparing and planting the garden; excursions to neighboring market gardens. †*Four hours a week.* Spring term. PROFESSOR MUNSON; MR. CUMMINGS.

Ht 7. LANDSCAPE GARDENING.—The principles of landscape art and their application to rural conditions; selection of site; arrangement and construction of walks and drives; grading;

planting trees; rural school yards and cemeteries; the making of plans for the improvement of home grounds. *One hour a week.* Spring term. PROFESSOR MUNSON.

Ht 8. SYSTEMATIC POMOLOGY.—Lectures and critical studies of the leading natural groups of fruits. *One hour a week.* Given in the fall term of even years. PROFESSOR MUNSON.

Ht 9. LABORATORY HORTICULTURE.—Greenhouse construction and management; studies of the literature of horticulture; investigation of assigned topics. †*Four hours a week.* Given in the fall term of even years. PROFESSOR MUNSON.

Ht 10. LABORATORY HORTICULTURE.—A continuation of course 9. Studies of plant diseases; economic botany; original investigations of assigned topics. †*Four hours a week.* Given in the spring term of odd years. PROFESSOR MUNSON; MR. CUMMINGS.

Ht 11. PLANT BREEDING.—The origin, distribution and variation of cultivated plants; studies in heredity; the production of improved types. Open to students that have taken course 1. Lectures and investigations. *Three hours a week.* Given in the spring term of odd years. PROFESSOR MUNSON.

Ht 12. HORTICULTURAL INVESTIGATIONS.—Advanced work for those desiring to become teachers or investigators. Open to seniors or to graduate students. *Time to be arranged.* PROFESSOR MUNSON.

FORESTRY

PROFESSOR SPRING.

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.* Fall term. To be given also in the spring term of 1904.

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 Ht 1; to be taken in connection with course 4. *Two hours a week.* Fall term.

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

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.

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

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.

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

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

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

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.

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

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.

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 the spring term.* Open to those who have taken courses 6, 7, 8, 9, 10 and 11.

CIVIL ENGINEERING

PROFESSOR BOARDMAN; MR. HAMLIN; MR. SIMPSON.

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. MR. HAMLIN; MR. SIMPSON.

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. †*Four hours a week.* Spring term. MR. HAMLIN; MR. SIMPSON.

Ce 3. RAILROAD CURVES AND EARTHWORK.—Lectures and recitations on the theory of railroad curves, switches, turnouts, slope stakes and the calculation of earthworks.

The text-book is Allen's Railroad Curves and Earthwork. *Three hours a week.* Fall term. PROFESSOR BOARDMAN; MR. HAMLIN.

Ce 4. RAILROAD WORK.—The location and detailed survey of a railroad several miles long. The curves are laid out, levels taken, and all the necessary measurements made to enable the student to compute the excavations and embankments and estimate the cost of construction. †*Six hours a week.* Fall term. MR. HAMLIN; MR. SIMPSON.

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. MR. SIMPSON.

Ce 6. 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. MR. JEWETT.

Ce 7. MECHANICS.—A continuation of course 6. *Five hours a week.* Spring term. MR. JEWETT.

Ce 8. SANITARY ENGINEERING.—Drainage of land; plumbing of houses; drainage and sewerage of towns; sewage disposal; water supply and purification; ventilation of houses.

The text-book is Folwell's Sewerage. *Two hours a week.* Given in the spring term of odd years. PROFESSOR BOARDMAN.

Ce 9. HIGHER SURVEYING.—The plane table, stadia measurements, topographical surveying, the elements of geodesy, the measurement of base lines, calculation of a system of triangulation. †*Ten hours a week for eight weeks.* Spring term. PROFESSOR BOARDMAN; MR. HAMLIN; MR. SIMPSON.

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. HYDRAULICS FIELD WORK.—The measurement of the flow of rivers is illustrated by the application of the current meter and the various forms of floats to the Penobscot river or some of its large branches. †*Ten hours a week for six weeks.* 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 several of the common types of wooden and steel structures, and preparation of drawings for the shop. †*Ten hours a week for twelve weeks.* Fall term. PROFESSOR BOARDMAN; MR. SIMPSON.

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. SIMPSON.

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.—An advanced course discussing the economics of railroad location, also the subjects of brakes, signals, rolling-stock, yards, stations, etc. *Two hours a week.* Given in the spring term of even years. PROFESSOR BOARDMAN.

Open to students that have taken course 3.

MECHANICAL ENGINEERING.

PROFESSOR WALKER; MR. STEWARD; MR. JEWETT; MR. COLE; MR. DAVEE.

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. MR. DAVEE.

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. †*Four hours a week.* Spring term. MR. DAVEE.

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 for Mechanical Engineering students.* †*Five hours a week for Electrical Engineering students.* Fall and spring terms. MR. COLE.

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

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. MR. STEWARD.

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. Given by lectures and notes. *Three hours a week.* Spring term. MR. JEWETT. (b) Designing as assigned to accompany course (a). †*Three 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. JEWETT.

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. PROFESSOR WALKER.

Me 11. THERMODYNAMICS.—The laws of gases during heat interchanges, with applications to steam and other heat engines. The text-book is Reeves's Thermodynamics of Heat Engines.

Three hours a week. Fall term. PROFESSOR WALKER.

Me 12. STEAM BOILER DESIGN.—Complete design of some type of steam boiler, worked up in drawing room. †*Nine hours a week for regular students.* †*Six hours a week for students specializing in Marine Engineering.* Fall term. PROFESSOR WALKER; MR. STEWARD.

Me 13. HYDRAULIC MACHINERY.—Theory of steam pumps, water motors and turbine water wheels, with practical problems in designing. †*Four hours a week.* Fall term. MR. STEWARD.

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.* Fall and spring terms. PROFESSOR WALKER; MR. JEWETT.

Me 16. STEAM ENGINE.—A continuation of course 11, covering the methods of designing and testing. Lectures. *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; MR. STEWARD.

Me 18. GENERAL DESIGNING.—Work as assigned. †*Four hours a week.* Spring term. MR. STEWARD.

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. ESTIMATES AND SPECIFICATIONS.—A short lecture course on forms of contracts and specifications, and methods of making cost estimates. *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.

ELECTRICAL ENGINEERING

PROFESSOR WEBB; MR. ARANA.

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. ARANA.

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. ARANA.

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. *Five hours a fortnight.* 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. †*Five 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 $5. †*Six hours a week.* Fall term. Required of seniors in Electrical Engineering. MR. ARANA.

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. ARANA.

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. ARANA.

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. ARANA.

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.

DRAWING

PROFESSOR BOARDMAN; MR. GROVER; MR. COLE; MR. SIMPSON.

Dr 1. DRAWING.—Free-hand work in perspective and model drawing; lettering.

†*Four hours a week.* Fall term. MR. GROVER.

Dr 3. 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 Cole's Notes on Mechanical Drawing.

†*Four hours a week.* Spring term. MR. GROVER.; MR. SIMPSON.

Dr 4. MECHANICAL DRAWING.—Problems in projections, shades and shadows, and dimension drawing.

†*Four hours a week.* Fall term. MR. SIMPSON.

Dr 5. GENERAL DRAWING.—Isometric and cabinet projections, perspective, and the preparation of working drawings. Lectures and exercises in the drawing room.

†*Ten hours a week for five weeks.* Spring term. MR. SIMPSON.

Dr 6. 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 Geometry. *Two hours a week.* Fall term. MR. COLE.

Dr 7. DESCRIPTIVE GEOMETRY.—A continuation of course 6. *Two hours a week.* Spring term. MR. COLE.

Dr 8. STEREOTOMY.—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 five weeks.* Spring term. MR. SIMPSON.

PHARMACY

PROFESSOR JACKMAN.

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 Pm 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.

MILITARY SCIENCE AND TACTICS

PROFESSOR SYMMONDS.

Each man student is required to take military drill, unless physically unfit, and to attend recitations in military science, during the first two years of his college course.

COURSE OF INSTRUCTION

(a) PRACTICAL:

Infantry Drill Regulations, through the school of the battalion in close and extended order.

Advance and rear guards, and outposts.

Marches.

The ceremonies of battalion review, inspection, parades, guard mounting, and escort of the colors.
Infantry target practice.
Instruction in First Aid to the Injured.

(b) THEORETICAL:

The Infantry Drill Regulations covered by the practical instruction.
The Manual of Guard Duty.
Small-arms Firing Regulations.
The Articles of War.
Enlistment and discharge papers, including descriptive lists.
Morning Reports.
Field and monthly returns.
Muster rolls.
Rosters.
Ration returns.
Requisitions.
Property returns.

Ten lectures each year on military subjects, notes to be taken by the students and to be made the basis of subsequent recitations.

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 Latin-Scientific Course
- The Scientific Course

COLLEGE OF AGRICULTURE
- The Agricultural Course
- The Horticultural Course
- The Forestry 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

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 Latin-Scientific Course
The Scientific Course

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 Greek and Latin must be included in the required work stated on p. 49. 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 Latin-Scientific Course

This course differs from the classical course by omitting Greek.

During the freshman year Latin must be included among the required studies. 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 Philosophy. 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 Philosophy.

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 on p. 49. 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.

COLLEGE OF AGRICULTURE

The College of Agriculture comprises the Departments of Agriculture, Horticulture, Forestry, 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 inevstigators 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 Forestry 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.

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 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 (see also p. 49):

FIRST YEAR

Eh 1, 3 & 4	English	1.6 credits
Bl 1, 2 & 4	Biology	1 credit
Ag 1, 2, 3 & 4	Agriculture	2 credits
Ch 1, 2, 3 & 4	Chemistry	1 credit
Dr 1	Free Hand Drawing	0.4 credit
Bl 11	Entomology	0.4 credit
Ht 1	Botany	0.4 credit

SECOND YEAR

Ms 1, 2 & 4	Mathematics	.2 credits
Ch 14 & 15	Chemistry	1.2 credits
An 1, 2, 3, 4, 5 & 6	Animal Industry	.2 credits
Eh 2	English	0.4 credit
Rm 1 & 2 / Gm 1 & 2	French or German	.2 credits

THIRD YEAR

Gm 1 & 2 / Rm 1 & 2	German or French	.2 credits
Ht 3, 4, 5, 6 & 7	Horticulture	.2 credits
Ch 30	Biological Chemistry	1 credit
Ch 29	Agricultural Chemistry	0.4 credit
Bl 16	Veterinary Science	0.6 credit

FOURTH YEAR

Agriculture, Horticulture or Animal Industry.....2 credits

The following subjects are included in a major in Agriculture:

Ag 1 to 6	Agriculture	4 credits
Ht 3 to 7	Horticulture	.2 credits
An 1 to 6	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.

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. The work required for graduation is practically the same as in the preceding course. Special attention, however, is given to related botanical and biological lines, as well as to technical horticultural subjects.

The following subjects are included in this major:

Ht 1.....Botany .....0.4 credit
Ht 2.....Histology of Plants.....0.4 credit
Ht 3 to 12..Horticulture.....4 credits
Ag 1 to 4...Agriculture.....4 credits
Ch 30.....Biological Chemistry.....1 credit
Bl 1 and 2..Biology .....0.6 credit
Bl 11.....Entomology .....0.4 credit

Physics, Cryptogamic Botany and Bacteriology are essential and should be elected as far as practicable by the student.

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 practical 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.

When Forestry is taken as a major subject the following are requisite courses for receiving a degree at graduation:

Ht 1.....General Botany.....0.4
Fy 1.....General Forestry.....0.6
Fy 2 and 3..Forest Botany.....0.8
Fy 4 and 5..Forest Botany (Field and Laboratory work) 0.8
Fy 6 and 7..Silviculture 0.8
Fy 8 and 9..Silviculture (Field work).....0.9
Fy 10.....Forest Measurements.....0.4
Fy 11.....Forest Measurements (Field work).....0.5
Fy 12.....Lumbering 0.2
Fy 13.....Forest Management.....0.2
A written report on two weeks study of lumbering while in a lumber camp..... .5

6.1 credits

In connection with forestry certain allied courses are essential and should be chosen with the advice of the professor,—Algebra, Solid Geometry and Plane Trigonometry; English Composition,

Rhetoric and English Literature; German or French; Physics, Chemistry, Biology, Zoology, Cryptogamic Botany, Histology of Plants, Geology, Soils; Plane and Higher Surveying; and Economics (see also p. 49).

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.

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 lines 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 can not 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 and there are no fees of any kind; the chief cost of the course being for books and board.

The following subjects are taken up: English, Arithmetic and Bookkeeping; Garden and Orchard; Carpentry; Crops and Crop Production; Animal Industry; Dairying; Economic Entomology; Agricultural Chemistry; Farm Forestry; Farm Botany; Land Surveying; Business Law.

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 Tuesday following the Christmas vacation 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 congressional 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. Thirty credits are required for graduation, with any of these subjects as a major. 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. The college comprises:

The Chemical Course
The Civil Engineering Course
The Mechanical Engineering Course
The Electrical Engineering Course
The Mining Engineering Course

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.

Courses 1, 2, 3, and 4 in Chemistry must be taken in the Freshman year, for which one and two-fifths credits will be given toward the two credits in science required in all courses.

The major must include also the following subjects:

Ch 5 & 6.....Advanced Inorganic Chemistry .....1 credit
Ch 14 & 15.....Laboratory and Recitation work in Qualitative Analysis .....2 credits
Ch 7 & 8.....Elementary Organic Chemistry .....1 credit
Ch 16, 18 & 19.....Quantitative Analysis.....3 credits
Ch 23, 24a & 24b.....Advanced Organic Chemistry, and Industrial Chemistry .....1 credit
Ch 12, 20, 21, 22, 28, & Bl 17..Laboratory work in Agricultural Analysis, Chemical Preparations, Toxicology, Urinalysis, Dyeing, Bacteriology, and Thesis work.....3 credits

Where a subject continues throughout a whole year, credit will not be given for less than a year of work.

The four credits required in language must be chosen in French and German, and these studies must be continued as far as is necessary to obtain a reading knowledge of both.

If French is offered on entrance to college, courses Rm 2a and 2b should be completed in the freshman year. Should no preparatory French have been taken, courses Rm 1 and 2 must be taken the first year. In the sophomore year German should be begun, and continued throughout the junior year, covering courses Gm 1, 2, 3a, 3b.

The students electing this major must also take Ps 1 & 2 in Physics, Bl 1 & 2 in Biology, Bl 13 in Geology, and at least one-half credit in Elementary Drawing. Ch 13, Mineralogy, is advisable. Those who intend to teach or pursue advanced courses are advised to elect Ms 5 and Ms 7, Analytical Geometry and Calculus, as essential to a mastery of the recent progress in some fields of chemistry.

The remainder of the student's work may be selected from any of the courses offered in the University, with the advice and approval of the Professor of Chemistry and the professor in charge of the course selected. In every case such choice should be made with reference to the line of work to be taken up after graduation.

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 object of this course is to give the student a knowledge of mathematics, mechanics, and drawing, experience in the care and use of engineering instruments, and a drill in the application of mathematical principles and rules, with a view to fitting him at graduation to apply himself at once to engineering work. The course is planned to furnish not only technical instruction, but also the basis of a liberal education.

The following subjects, which amount to 17 credits, are the prerequisites for the technical engineering work in all departments, and students are advised to take them in the following order:

First Year

First Term		*Second Term*	
Subject	Credits	Subject	Credits
Ms 2	1	Ms 4, 6	1
Language	1 or 3-5	Language	1 or 3-5
Eh 1, 3	4-5	Eh 1, 4	4-5
Ch 1, 3	3-5	Ch 2, 4	4-5
Dr 1	2-5	Dr 3	2-5

Second Year

Ms 6, 7	1	Ms 8	1
Language	3-5 or 1	Language	3-5 or 1
Eh	1-5	Eh	2-5
Dr 6	2-5	Dr 7	2-5
Ps 1	1	Ps 2, 5	1

Third Year

Ce 6	1	Ce 7	1

The following courses constitute a major in Civil Engineering, amounting to 8½ credits:

SECOND YEAR

First Term		*Second Term*	
Subject	Credits	Subject	Credits
Dr 4	2-5	Ce 1	2-5
		Ce 2	2-5
THIRD YEAR			
Ce 3	3-5	Dr 5, 8 / Ce 9	1
Ce 4	3-5		
FOURTH YEAR			
Ce 12	1	Ce 13	1
Ce 11, 14	1	Ce 15	1 1-2

It is thus seen that the prerequisites and the technical work amount to 25½ credits, leaving the student 4½ credits to elect. It is advised that nearly all elective work be taken during the last two years.

The methods of instruction are recitation, 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 standard engineering literature.

The engineering building contains recitation rooms, designing rooms, testing laboratories, drawing rooms, and instrument rooms, and is well equipped.

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 a training along fundamental lines for those who wish to engage in pursuits involving the application of mechanical principles or power. It is to be considered as a technical preparation for the special professional work to follow, the leading object being to develop systematic methods of work and the power to reason accurately from the true principles of mechanics.

The course begins with a study of the forms and principles of mechanisms considered only in those features relating to motion, and leading to a study of the engine valve motion. This is followed by constructive designing of simple machine parts, and accompanied by practice in wood and metal working in the shops and by study in the Mechanics of Engineering.

After this the more technical work is taken up. This includes a study of the properties of materials of engineering—illustrated by laboratory tests—,of the properties of steam under pressure, and of the theory and forms of steam boilers and engines. A considerable portion of the time is devoted to designing, and in this work the student is free to select the type of machinery on which he is to specialize. Particular attention is given to experimental work. Tests are made for the lubricating properties of oils, bearing qualities of metals, evaporative power of the boilers, and efficiency of the engines in the mechanical laboratory and the power station, while commercial tests are often conducted for outside parties.

Work in Marine Engineering is offered as a special feature. This consists of a study of those types of steam boilers and engines common in marine practice, and of the design of propelling machinery for a ship of given form and dimensions. Estimates of weight and cost are made, the whole constituting the thesis required for graduation.

The courses which must be taken as prerequisites to the technical work in Mechanical Engineering are the same as for Civil Engineering, as given on page 110.

The following courses constitute a major in Mechanical Engineering, and should be taken in the order given.

SECOND YEAR

Fall Term		*Spring Term*	
Me 1.....	2-5 credit	Me 2.....	2-5 credit
Me 3.....	1-5 credit	Me 4.....	3-5 credit

THIRD YEAR

Me 5 and 6...	9-10 credit	Me 5 and 6...	9-10 credit
Me 7.....	2-5 credit	Me 8.....	3-5 credit
		Me 15.....	3-10 credit

FOURTH YEAR

Me 9.....	2-5 credit	Me 15.....	3-10 credit
Me 10.....	2-5 credit	Me 16.....	2-5 credit
Me 11.....	3-5 credit	Me 17.....	3-5 credit
Me 12.....	3-5 credit	Me 20.....	1-5 credit
Me 15.....	3-10 credit	Me 21.....	1-5 credit
Me 21.....	1-5 credit	Me 22.....	3-5 credit

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. For general courses he may elect from the list of subjects offered in the line of general train-

ing, including English, language, logic, psychology, history, political economy, and constitutional law.

The prerequisites for a major in Electrical Engineering include Me 1, 2, 3, 4, 5, 6, in addition to the prerequisites for a major in Civil Engineering. (See p. 110).

A major course in Electrical Engineering should include the following:

Ee 1 and 2.....Electricity and Magnetism and Dynamo Design .....1 credit
Ee 3 and 5.....Electrical Machinery and Design of D. C. Machines .....1 credit
Ee 4 and 13....Alternating Currents and Alternating Current Machinery.....1.1 credits
Ee 7 and 8.....Laboratory Work, Direct and Alternating Currents..... .85 credit
Ee 6 and 14....Design of Alternating Current Machines, Elec. Eng..... .55 credit
Ee 16.....Thesis ..... .75 credit
Me 7 and 11...Valve Gears, Thermodynamics.....1 credit
Ps 11.....Electrical Measurement and Testing... .06 credit

The equipment for laboratory work in electrical engineering is ample and includes most of the standard forms of instruments and machines.

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.

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 instruction 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.

For the general requirements common to all curricula see pag 49. In addition the following courses are required:

Pharmacy: Pm 5, 6, Pharmacognosy; Pm 2, 4, Pharmacy; Pm 3, 10, Lab. Pharmacy; Pm 7, Materia Medica; Pm 9, Pharmacy Readings; Pm 11, Prescriptions.....7 credits

Chemistry: Ch 1, 2, Gen. Chemistry; Ch 3, 4, Lab. Chemistry; Ch 5, 6, Inorg. Chemistry; Ch. 14, 15, Qual. Analysis; Ch 7, 8, Organic Chemistry; Ch 16, 19; Quant. Analysis; Ch 21, Toxicology.....7 credits

Botany: Ht 1, Gen. Botany; Ht 2, Hist. Plants.....0.8 credit

Biology: Ch 30, Biolog. Chemistry; Bl 17, 19, Bacteriology and Lab. Bacteriology.....2 credits

Physics: Ps 12, Gen. Physics; Ps 5, Lab. Physics, 1.4 credits

Civics, Philosophy, or History.....2 credits

From other courses enough must be elected to make a total of 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.

The required courses are:

Pharmacy: Pm 1, 2, 4, Pharmacy; Pm 5, 6, Pharmacognosy; Pm 7, Materia Medica; Pm 9, Pharmacy Readings; Pm 3, 10, Lab. Pharmacy; Pm 11, Prescriptions.

Chemistry: Ch 1, 2, Gen. Chemistry; Ch 14, 15; Qual. Analysis; Ch 19, Vol. Analysis; Ch 7, 8, Organic Chemistry; Ch 21, Toxicology.
Physics: Ps 3, 6, Elementary Physics.
Botany: Ht 1, Gen. Botany; Ht 2, Histology of Plants.
Biology: Ch 30, Biolog. Chemistry; Bl 17, Bacteriology.

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.

ERNEST GUSTAVUS LORENZEN, PH. B., LL. B., J. U. D.,
Professor of Law.

EDGAR MYRICK SIMPSON, B. A.,
Instructor in Real Property and Corporations.

EUGENE CLEMENT DONWORTH, LL. B.,
Instructor in Contracts.

BERTRAM LEIGH FLETCHER, LL. B.,
Instructor in Agency.

GEORGE HENRY WORSTER,
Instructor in Insurance.

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 ALONZO EMERY, LL. D.,
Lecturer on Roman Law and Probate Law.

ANDREW PETERS WISWELL, LL. D.,
Lecturer on Evidence.

LOUIS CARVER SOUTHARD, M. S.,
Lecturer on Medico-Legal Relations.

CHARLES VEY HOLMAN, LL. B.,
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 law schools, also 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 LORENZEN.

LW 5. CARRIERS.—A continuation of course 4. *Two hours a week.* Winter term. PROFESSOR LORENZEN.

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 LORENZEN.

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. DONWORTH.

LW 11. CONTRACTS.—A continuation of course 10. *Three hours a week.* Winter term. MR. DONWORTH.

Lw 12. CONTRACTS.—A continuation of course 11. *Two hours a week.* Spring term. MR. DONWORTH.

Lw 13. CRIMINAL LAW.—Beale's Cases on Criminal Law. *Two hours a week.* Winter term. MR. SIMPSON.

Lw 14. CRIMINAL LAW.—A continuation of course 13. *Two hours a week.* Spring term. MR. 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. MR. 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. PROFESSOR LORENZEN.

Lw 21. EVIDENCE.—A continuation of course 20. *Three hours a week.* Winter term. PROFESSOR LORENZEN.

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. MR. SIMPSON.

Lw 24. FEDERAL COURTS.—Lectures. *One hour a week.* Spring term. PROFESSOR LORENZEN.

Lw 25. GENERAL REVIEW.—Gardner's Review. *Two hours a week.* Spring term. PROFESSOR WALZ.

Lw 26. HISTORY OF LAW.—Lectures. *One hour a week.* Fall term. PROFESSOR ROGERS.

Lw 27. INSURANCE.—Woodruff's Cases. *Three hours a week.* Spring term. MR. WORSTER.

Lw 28. INTERNATIONAL LAW.—Lectures. *One hour a week.* Fall term. PROFESSOR ROGERS.

Lw 29. MAINE PRACTICE.—Lectures. *One hour a week.* Spring term. MR. MARTIN.

Lw 30. MEDICO-LEGAL RELATIONS.—Lectures. *About six hours.* Spring term. MR. SOUTHARD.

Lw 31. MINING LAW.—Lectures. *About four hours.* Winter term. MR. HOLMAN.

Lw 32. MUNICIPAL CORPORATIONS.—Smith's Cases. *Three hours a week.* Winter term. PROFESSOR WALZ.

Lw 33. NEGOTIABLE PAPER.—Huffcut's Cases. *Two hours a week.* Winter term. PROFESSOR LORENZEN.

Lw 34. NEGOTIABLE PAPER.—A continuation of course 32. *Two hours a week.* Spring term. PROFESSOR LORENZEN.

Lw 35. PARTNERSHIP.—Ames's Cases. *Four hours a week.* Spring term. PROFESSOR WALZ.

Lw 36. PRIVATE CORPORATIONS.—Smith's Cases. *Four hours a week.* Fall term. PROFESSOR LORENZEN.

Lw 37. PRIVATE CORPORATIONS.—A continuation of course 36. *Three hours a week.* Winter term. PROFESSOR LORENZEN.

Lw 38. PROBATE LAW AND PRACTICE.—Lect res. *About ten hours.* Spring term. MR. JUSTICE EMERY.

Lw 39. REAL PROPERTY.—Tiedeman on Real Property. *Four hours a week.* Fall term. MR. SIMPSON.

Lw 40. REAL PROPERTY.—A continuation of course 39. *Three hours a week.* Winter term. MR. SIMPSON.

Lw 41. REAL PROPERTY.—Finch's Cases on the Law of Property in Land. *Four hours a week.* Spring term. MR. ———

Lw 42. ROMAN LAW.—Lectures. *About ten hours.* Spring term. MR. JUSTICE EMERY.

Lw 43. SALES.—Burdick's Cases. *Two hours a week.* Fall term. PROFESSOR WALZ.

Lw 44. SALES.—A continuation of course 43. *Two hours a week.* Winter term. PROFESSOR WALZ.

Lw 45. SURETYSHIP.—Ames's Cases. *Two hours a week.* Fall term. PROFESSOR LORENZEN.

Lw 46. SURETYSHIP.—A continuation of course 45. *Two hours a week.* Winter term. PROFESSOR LORENZEN.

Lw 47. TORTS.—Ames and Smith's Cases. *Four hours a week.* Fall term. PROFESSOR WALZ.

Lw 48. TORTS.—A continuation of course 47. *Three hours a week.* Winter term. PROFESSOR WALZ.

Lw 49. TORTS.—A continuation of course 48. *Two hours a week.* Spring term. PROFESSOR WALZ.

Lw 50. WILLS.—Chaplin's Cases. *Three hours a week.* Spring term. MR. HOLMAN.

COMMENCEMENT

The Commencement exercises of 1903 were as follows:—

Saturday, June 6: Junior Exhibition.

Sunday, June 7. Baccalaureate Address, by Professor Nathaniel Butler, D. D., of the University of Chicago.

Monday, June 8: College Convocation, including reports of departments and student enterprises, and the awarding of prizes; Class Day Exercises; President's Reception.

Tuesday, June 9: Phi Kappa Phi Initiation; Receptions by the Fraternities.

Wednesday, June 10: Commencement Exercises; Commencement Dinner; Meeting of the Alumni Association; Commencement Concert.

CERTIFICATES AND DEGREES

The Degree of Pharmaceutical Chemist was conferred upon:

Ernest Lester Cowan, West Hampden.
Harry Davis Cowles, Athol, Mass.
Andy Laurin Hoyt, Dover.
James Leroy Race, Boothbay.

The Bathelor's degree was conferred upon:

Ernest Linwood Baker, B. S. in Chemistry, Portland.
Archie Ray Benner, B. S. in Electrical Engineering, Waldoboro.
Waldo Horace Bennett, LL. B., Newport.
William Wallace Buckley, LL. B., Winchendon, Mass.
Cleora May Carr, Ph. B., Oldtown.
Robert Flint Chandler, B. S. in Civil Engineering, New Gloucester.
Nathan Ajalon Chase, B. S. in Chemistry, South Paris.
Leroy Milton Coffin, B. S., Freeport.

Fred Collins, B. S. in Civil Engineering, Bar Harbor.
Ralph Melvin Conner, B. S. in Civil Engineering, East Wilton.
Leroy Brown Crabtree, B. S., Hancock.
Henry Kennedy Crocker, B. S. in Chemistry, Rockland.
Rodney Clinton Davis, B. S. in Civil Engineering, Lewiston.
Sanford Crosby Dinsmore, B. S. in Chemistry, Dover.
Carlos Dorticos, B. S., Woodford's.
Frank Libby Douglass, B. S. in Civil Engineering, West Gorham.
William Norman Dyer, B. S. in Civil Engineering, Harrington.
Samuel Joshua Foster, B. S. in Pharmacy, Bingham.
George Leonard Freeman, B. S. in Civil Engineering, West Gray.
Arthur Willard Gage, B. S. in Civil Engineering, Dennisport, Mass.
Thomas Reardon Geary, LL. B., Whitneyville.
Oren Leslie Goodridge, B. S. in Civil Engineering, Orono.
Burton Woodbury Goodwin, B. S. in Civil Engineering, Berry Mills.
Shirley Preston Graves, B. S., Northeast Harbor.
Philip Howard Harris, B. S. in Electrical Engineering, Portland.
Edward Goodnow Hartford, B. S. in Civil Engineering, Calais.
John Heddle Hilliard, B. A., Oldtown.
Henry John Hinchliffe, B. S., Worcester, Mass.
Frances Augusta Hinckley, Ph. B., Oldtown.
Claude Abbott Kittredge, B. S. in Electrical Engineering, Farmington.
Arthur Stephen Libby, B. A., Dexter.
Warren Cornelius Loud, B. S. in Civil Engineering, Caribou.
John Hollis McCready, B. S. in Electrical Engineering, Houlton.
Amy Ines Maxfield, B. S., Sandy Point.
James Herbert Morson, LL. B., Marshfield, P. E. I.
Ulysses Grant Mudgett, LL. B., Hampden.
Roderick Edward Mullaney, B. S. in Civil Engineering, Bangor.
Edward Patrick Murray, LL. B., Bangor.

Ernest Eugene Noble, LL. B., Blaine.
Stephen Edward Patrick, B. S. in Mechanical Engineering, Gorham.
Ernest Albee Porter, B. S. in Civil Engineering, Eustis.
Paul Potter, LL. B., Worcester, Mass.
Charles Hickson Reid, LL. B., Bangor.
Harold Vose Sheahan, B. S. in Civil Engineering, Dennysville.
Paul Dyer Simpson, B. S. in Civil Engineering, Sullivan.
Silas Gilman Small, B. S. in Pharmacy, Lubec.
Howard Ausburn Smith, B. S., in Electrical Engineering, North Truro, Mass.
Donald Francis Snow, LL. B., Bangor.
Henry Melville Soper, B. S. in Chemistry, Oldtown.
Charles Wesley Stone, Jr., B. S. in Chemistry, Milo.
George Warren Thombs, LL. B., Monson.
Arthur Roy Towse, B. S. in Civil Engineering, North Lubec.
Isaac Emery Treworgy, B. S., Surry.
Nil Louis Violette, LL. B., Van Buren.
Ralph Henry White, B. S. in Mechanical Engineering, East Machias.
Harvey David Whitney, B. S. in Chemistry, Auburn.
Mellen Cleaveland Wiley, B. S. in Civil Engineering, Bethel.
George Hayes Winn, LL. B., Lewiston.

The degree of Master of Science, upon the presentation of satisfactory theses, and examination on prescribed courses of advanced study, was conferred upon:

Walter Rautenstrauch, (B. S., University of Missouri, 1902), Sedalia, Mo.
Marie Cecilia Rice, (B. S., 1902), Bangor.

The degree of Civil Engineer, upon presentation of a satisfactory thesis, and proof of professional work extending over a period of not less than three years, was conferred upon:

Frank Lathrop Batchelder, B. C. E. (1899), Houghton, Mich.

The degree of Electrical Engineer, upon presentation of satisfactory theses and proof of professional work extending over a period of not less than three years, was conferred upon:

Alfred Howard Buck, B. M. E. (1895), New York, N. Y.

Harold Hayward Clark, B. M. E. (1899), West Lynn, Mass.

The honorary degree of Mechanical Engineer was conferred upon Clarence Everett Watts, of the class of 1898, Windber, Pa.

The various prizes were awarded last year as follows:

The Kidder Scholarship, to George Kemp Huntington, Lynn, Mass.

The Junior Exhibition Prize, to Lennie Phoebe Copeland, Bangor.

The Sophomore Exhibition Prize, to George Kemp Huntington. Lynn, Mass.

The Walter Balentine Prize, to Harry Ansel Sawyer, Portland.

APPOINTMENTS

Speakers at Commencement, June, 1903

Archie Ray Benner, Waldoboro; Ralph Melvin Conner, East Wilton; Philip Howard Harris, Portland; John Heddle Hilliard, Oldtown; James Herbert Morson, Marshfield, P. E. I.; Ernest Albee Porter, Eustis; Paul Dyer Simpson, Sullivan; George Warren Thombs, Monson.

Speakers at the Junior Exhibition, June, 1903

Ira Mellen Bearce, Hebron; Lennie Phoebe Copeland, Bangor; John Emanuel Olivenbaum, Jemtland; John Herman Quimby, Goodale's Corner; Alvah Randall Small, Portland; Thomas Francis Taylor, Bangor.

Speakers at the Sophomore Prize Declamation Contest, December, 1902

Howard Lincoln Churchill, North Buckfield; Henry Kingman Dow, Oldtown; Frank Leroy Flanders, Howard, R. I.; Andrew Jenkins Hayes, Oxford; Thomas Victor Hodges, Boston, Mass.; George Kemp Huntington, Lynn, Mass.; Carl David Smith, Skowhegan; Marion Barry Wentworth, Kennebunk Beach.

Members of the Phi Kappa Phi

Nathan Ajalon Chase, South Paris; Leroy Melville Coffin, Freeport; Ralph Melvin Conner, East Wilton; George Leonard Freeman, West Gray; Frances Augusta Hinckley, Oldtown; John Hollis McCready, Houlton; James Herbert Morson, Marshfield, P. E. I.; Roderick Edward Mullaney, Bangor; Ernest Albee Porter, Eustis; Paul Dyer Simpson, Sullivan; George Warren Thombs, Monson; Ralph Henry White, East Machias.

Seniors Receiving General Honors

Nathan Ajalon Chase, South Paris; Leroy Melville Coffin, Freeport; George Leonard Freeman, West Gray; Frances Augusta Hinckley, Oldtown; John Hollis McCready, Houlton; Roderick Edward Mullaney, Bangor; Ernest Albee Porter, Eustis; Paul Dyer Simpson, Sullivan.

Seniors Receiving Special Honors

Leroy Melville Coffin, Freeport, in Mathematics (twice).
Ernest Albee Porter, Eustis, in Mathematics.

Juniors Receiving Special Honors

Lennie Phoebe Copeland, Bangor, in Mathematics.
Ralph Waldo Emerson Kingsbury, South Brewer, in Physics.

CATALOGUE OF STUDENTS

GRADUATE STUDENTS

Adams, Charles Everett, B. A., M. D., *Bangor*, Bangor.
Bowdoin College, B. A., 1884, M. D., 1890.

Bowen, Everett Harlow, B. A., *Lowville, N. Y.*, 2 Bennoch St.
Colgate University, 1903.

Cummings, Marshall Baxter, B. S., *North Thetford, Vt.*, Mrs. [A. M. Graves.
University of Vermont, 1901.

Davis, Grant Train, B. A., *Clinton, Mich.*, 61 Main St.
University of Michigan, 1903.

Dinsmore, Sanford Crosby, B. S., *Dover*, Oak Hall Annex.
University of Maine, 1903.

Edson, Newell Walter, B. A., *Portland*, Mrs. A. M. Graves.
Harvard University, 1903.

Hanson, Herman Herbert, B. S., *Orono*, 61 Main St.
Penn. State College, 1902.

Hofstead, Harry O., B. A., *New Haven, Conn.*, Bangor.
Yale University, 1903.

Soper, Henry Melville, B. S., *Oldtown*, Oak Hall Annex.
University of Maine, 1903.

SENIORS

Averill, Roy Samuel,	*Milltown*,	201 Oak Hall.
Bassett, Hubert Merle,	*Taunton, Mass.*,	Pine St.
Bassett, Ralph Smith,	*Oldtown*,	Oldtown.
Bean, Paul Leonard,	*Saco*,	A. T. Ω. House.
Bearce, Ira Mellen,	*Hebron*,	207 Oak Hall.
Berry, Edward Robie,	*Lynn, Mass.*,	B. Θ. Π. House.
Bradford, Luther Cary,	*Turner*,	B. Θ. Π. House.
Brann, George Samuel,	*Dover*,	304 Oak Hall.
Breed, Everett Mark,	*Skowhegan*,	Φ. K. Σ. House.

Broadwell, Edwin Sherman,	*Cleveland, Ohio*,	K. Σ. House.
Brown, Ernest Carroll,	*Gorham*,	201 Oak Hall.
Brown, Horace Arthur,	*Bradley*,	Bradley.
Buck, Florence Emily,	*Bucksport*,	Mt. Vernon House.
Buker, Edson Bayard,	*Brownville*,	305 Oak Hall.
Case, Albert Deering,	*Lynn, Mass.*,	A. T. Ω. House.
Chaplin, Carroll Sherman,	*Portland*,	Φ. Γ. Δ. House.
Chase, Clifford Gray,	*Baring*,	302 Oak Hall.
Clifford, Edward Clinton,	*Woodfords*,	Φ. Γ. Δ. House.
Copeland, Lennie Phoebe,	*Bangor*,	Mt. Vernon House.
Crowley, Elmer Bishop,	*Indian River*,	209 Oak Hall.
Davenport, Arthur Edward,	*E. Brimfield, Mass.*,	310 Oak [Hall.
Day, Eugene Garfield,	*Madison*,	Φ. Γ. Δ. House.
Dorticos, Philip,	*Woodfords*,	K. Σ. House.
Fifield, Fred Victor,	*East Eddington*,	310 Oak Hall.
Flynt, Roy Horton,	*Augusta*,	B. Θ. Π. House.
French, Harold Francis,	*Glenburn*,	53 Main St.
Giles, Clyde Irving,	*Skowhegan*,	Σ. X. House.
Haley, Harry Dennett,	*Gardiner*,	K. Σ. House.
Haskell, Roger,	*Westbrook*,	3 Peters St.
Herbert, Thomas Carroll,	*Richmond*,	105 Oak Hall.
Holmes, Ernest Randall,	*Eastport*,	A. T. Ω. House.
Hopkins, Ralph Thomas,	*Bangor*,	B. Θ. Π. House.
Jordan, Alfred Carroll,	*Casco*,	Φ. K. Σ. House.
Kimball, Charles Benjamin, B. A., Colby College, 1896.	*N. New Portland*,	Rev. W. B. [Dukeshire.
Kingsbury, Ralph Waldo Emerson,	*So. Brewer*,	Φ. K. Σ. House.
Kingsland, Earle Brush,	*Vergennes, Vt.*,	K. Σ. House.
Knowles, Allen Mark,	*Corinna*,	A. T. Ω. House.
Larrabee, Benjamin True,	*Cumberland Mills*,	K. Σ. House.
Lawrence, Leonard Alexander,	*Eastport*,	Φ. K. Σ. House.
Leighton, Clifford Henry,	*Addison*,	6 Main St.
Little, Leslie Eugene,	*Bucksport*,	Φ. Γ. Δ. House.
Lord, Cecil Arthur,	*Bar Harbor*,	K. Σ. House.
McCullough, Frank,	*Lynn, Mass.*,	B. Θ. Π. House.
McIntire, Walter Draper,	*Orange, Mass.*,	Σ. X. House.
Monk, Holman Waldron,	*North Buckfield*,	110 Oak Hall.
Olivenbaum, John Emmanuel,	*Jemtland*,	Φ. Γ. Δ. House.

Paine, Allen Thatcher,	*Brewster, Mass.*,	109 Oak Hall.
Parker, Edward Alton,	*Skowhegan*,	K. Σ. House.
Pearson, Ralph Howard,	*Guilford*,	Φ. K. Σ. House.
Perkins, Connor Arthur,	*Bucksport*,	K. Σ. House.
Phinney, Alverdo Linwood,	*South Portland*,	Σ. X. House.
Porter, Karl Byron,	*Oldtown*,	A. T. Ω. House.
Quimby, John Herman,	*Goodale's Corner*,	109 Oak Hall.
Sampson, Charles Henry,	*Gorham*,	204 Oak Hall.
Sawyer, Harry Ansel,	*Portland*,	102 Oak Hall.
Sawyer, James Herbert,	*Saco*,	A. T. Ω. House.
Scott, Walter Erwin,	*Dexter*,	Φ. Γ. Δ. House.
Sinclair, Karl Augustus,	*Malden, Mass.*,	Σ. X. House.
Small, Alvah Randall,	*South Portland*,	312 Oak Hall.
Small, Lottie Luella,	*Auburn*,	Mt. Vernon House.
Smith, Leroy Clifton,	*East Exeter*,	53 Main St.
Soderstrom, Godfrey Leonard,	*Brooklyn, N. Y.*,	Φ. Γ. Δ. House.
Stewart, George Thomas,	*Auburn*,	105 Oak Hall.
Strickland, Roy Elgin,	*South Paris*,	Φ. K. Σ. House.
Taylor, Alec Gladstone,	*North Sullivan*,	B. Θ. Π. House.
Taylor, Elliott Williams,	*Wollaston, Mass.*,	Σ. X. House.
Taylor, Howard Smith,	*Bangor*,	K. Σ. House.
Taylor, Thomas Francis,	*Bangor*,	Bangor,
Tucker, John Voden,	*Rumford Falls*,	Oldtown.
Turner, Roland Lee,	*West Boothbay Harbor*,	A. T. Ω. [House.
Webber, Mary Frances,	*Bangor*,	Bangor.
Webster, Francis Howe,	*Orono*,	Penobscot St.
Whipple, Albert Lawrence,	*Solon*,	A. T. Ω. House.

JUNIORS

Abbott, Curtis Eames,	*Locke's Mills*,	Φ. K. Σ. House.
Alton, Ralph Henry,	*Lynn, Mass.*,	2 Pine St.
Ames, Bertram Eugene,	*Lynn, Mass.*,	A. T. Ω. House.
Anthony, Gould Roydon,	*Scotland, Conn.*,	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*,	202 Oak Hall.
Balentine, Florence,	*Orono*,	Mt. Vernon House.

Barton, Murray Fernald,	*Bradley*,	Bradley.
Beale, Harry Orlando,	*Orono*,	47 Main St.
Bearce, Edwin Freeman,	*Auburn*,	B. Θ. Π. House.
Blaisdell, Harry George,	*Bangor*,	Bangor.
Bowles, Clayton Wass,	*Columbia Falls*,	6 Main St.
Brown, Archer Norwood,	*Stillwater*,	Stillwater.
Carle, George Wilmot,	*Portland*,	107 Oak Hall.
Chatto, Byron Herbert,	*East Surry*,	E. E. Webster.
Collins, Arthur Winfield,	*Caribou*,	Φ. Γ. Δ. House.
Cotton, Ernest Linwood,	*Cumberland Mills*,	12 Main St.
Cowan, Benjamin Mosher,	*Biddeford*,	A T. Ω. House.
Cowles, Harry Davis,	*Athol, Mass.*,	J. P. Spearen.
Crowe, Francis Trenholm,	*Mateawan, N. Y.*,	205 Oak Hall.
Crowe, Joseph Wilkinson,	*Mateawan, N. Y.*,	202 Oak Hall.
Dinsmore, Ernest LeRoy,	*Whiting*,	312 Oak Hall.
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.*,	305 Oak Hall [Annex.
French, Prentiss Edwin,	*Turner*,	205 Oak Hall.
Gulliver, Edward Charles,	*Portland*,	53 Main St.
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.
Huntington, George Kemp,	*Lynn, Mass.*,	Φ. K. Σ. House.
Huston, Milton,	*West Falmouth*,	43 No. Main St.
Johnstone, Leslie Ingalls,	*Milford*,	Milford.
Kay, Frank Wilbur,	*Fiskdale, Mass.*,	308 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*,	Mrs. A. M. Graves.
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*,	309 Oak Hall.
Rogers, Elmer George,	*Bowdoinham*,	303 Oak Hall.
Rogers, Robert Fisher,	*Bowdoinham*,	303 Oak Hall.
Sampson, Freeman Marston,	*Gorham*,	204 Oak Hall.
Sands, Roy Granville,	*Foxcroft*,	47 Main St.
Seabury, Ralph Lowe,	*Yarmouth*,	103 Oak Hall.
Shaw, Walter Jefferson,	*Orono*,	36 Mill St.
Smith, Carl David,	*Skowhegan*,	Φ. Γ. Δ. House.
Smith, Dwight Freeman,	*Skowhegan*,	Φ. Γ. Δ. House.
Sprague, Adelbert Wells,	*Bangor*,	K. Σ. House.
Stanley, Howard Arthur,	*Beverly, Mass.*,	Φ. Γ. Δ. House.
Sweet, Calvin Arthur,	*South Atkinson*,	210 Oak Hall.
Sweetser, Ernest Osgood,	*Cumberland Center*,	Σ. X. House.
Talbot, Fred William,	*Andover*,	306 Oak Hall.
Taylor, Roy Edmund,	*Springvale*,	3 Peters St.
Thatcher, Henry David Thoreau,	*Dexter*,	B. Θ. Π. House.
Thomas, Burton Merrill,	*Portland*,	B. Θ. Π. House.
Thomas, Herbert Thomas,	*Andover*,	202 Oak Hall.
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.
Weld, Moses Waldo,	*Oldtown*,	Oldtown.
Wentworth, Marion Barry,	*Kennebunk Beach*,	Mt. Vernon [House.
White, Alphonso,	*North Sebago*,	Mr. W. Reed.
White, Frank Osmond,	*Orono*,	28 Mill St.
Whittier, Arthur Craig,	*Farmington*,	108 Oak Hall.
Wood, Alphonso,	*Belfast*,	B. Θ. Π. House.

SOPHOMORES

Abbott, Herbert Lester,	*Bucksport*,	202 Oak Hall Annex.
Aborn, Edward Burton,	*Lynn, Mass.*,	Φ. Γ. Δ. House.
Alexander, Jefferson Leavitt,	*Eastport*,	301 Oak Hall.
Austin, Alton Arthur,	*Ridlonville*,	University Hall.
Bacon, Roy Sawtelle,	*Sidney*,	University Hall.
Banks, Frank Arthur,	*Biddeford*,	A. T. Ω. House.
Bean, Ernest Daniel,	*Haverhill, Mass.*,	University Hall.
Bearce, Henry Walter,	*Hebron*,	207 Oak Hall.
Bearce, Winfield Dexter,	*Auburn*,	B. Θ. Π. House.
Bennett, Arthur Guy,	*Paris*,	Φ. K. Σ. House.
Bradley, Elmer Percy,	*Pemaquid*,	A. T. Ω. House.
Brawn, Elwin Dresser,	*Dexter*,	B. Θ. Π. House.
Brown, Everett Dana,	*South Paris*,	University Hall.
Burke, Walter Horace,	*West Kennebunk*,	311 Oak Hall.
Butterworth, Albert Jared,	*Southbridge, Mass.*,	Σ. X. House.
Campbell, Charles William,	*Ellsworth*,	K. Σ. House.
Carlson, Gotthard Wilhelm,	*Bethel*,	Φ. K. Σ. House.
Carver, Wilbur Joshua,	*Searsport*,	K. Σ. House.
Cassey, Sidney,	*Lynn, Mass.*,	36 Main St.
Caswell, Claude Edgar,	*Gray*,	Σ. X. House.
Colby, Edward Kelly,	*Lynn, Mass.*,	36 Main St.
Coligny, Guerric Gaspard de,	*Springfield, Mass.*,	A.T.Ω. House.
Crowell, Lincoln,	*Dorchester, Mass.*,	206 Oak Hall.
Currier, Charles Ellsworth,	*Brewer*,	Φ. K. Σ. House.
Danforth, Franklin Wendell,	*Skowhegan*,	University Hall.
Devereux, Rosmar Styer,	*Castine*,	53 Main St.
Dickinson, Raymond Nettleton,	*Hartford, Conn.*,	206 Oak Hall.
Dolbier, William Ray,	*Salem*,	Pres. G. E. Fellows.
Edwards, Dayton James,	*Oaks*,	Φ. K. Σ. House.
Elliot, Samuel Gault,	*Rumford Point*,	305 Oak Hall.
Elliott, Hallet Carroll,	*Patten*,	12 Main St.
Elms, James William,	*Foxcroft*,	A. T. Ω. House.
Emery, Harry Alvah,	*North Anson*,	47 Main St.
Floyd, Charles Wallace,	*Wytopitlock*,	104 Oak Hall.
Forbes, Clinton Fairfield,	*Buckfield*,	Oldtown.
Frost, Walter Oscar,	*Rockland*,	Φ. Γ. Δ. House.

Glover, Philip Holden,	*Harrington*,	B. 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. K. Σ. House.
Harding, Brydone Ellsworth,	*Danforth*,	210 Oak Hall.
Harlow, Frederic Hall,	*Gorham*,	Φ. K. Σ. House.
Hendricks, Frank Sherman,	*South Turner*,	12 Main St.
Hews, Wellington Prescott,	*Ashland*,	A. T. Ω. House.
Hill, George Herbert,	*Saco*,	311 Oak Hall.
Hodgdon, Carolyn Adelle,	*Hampden Corner*,	Mt. Vernon [House.
Howard, Lester Boynton,	*Dover*,	Mr. E. E. Webster.
Hoxie, Harold Shepherd,	*Fairfield Center*,	University Hall.
Hoxie, Harvey Hamlin,	*Waterville*,	307 Oak Hall.
Hunnewell, Carl,	*Madison*,	47 Main St.
Johnson, Caleb Hartwell,	*Nahant, Mass.*,	Mr. W. Reed.
Jones, Gertrude May,	*Corinna*,	Mt. Vernon House.
Karl, Harold Louis,	*Rockland*,	Σ. X. House.
Kittredge, Raymond Brown,	*Beverly, Mass.*,	101 Oak Hall.
Lord, Ralph Edwin,	*Bangor*,	B. Θ. Π. House.
Lovett, Merton Rooks,	*Beverly, Mass.*,	101 Oak Hall.
McDermott, William Laurence,	*Biddeford*,	A. T. Ω. House.
McDonald, Karl,	*Belfast*,	B. Θ. Π. House.
Newman, Max Gibson,	*Fryeburg*,	K. Σ. House.
Nichols, Leroy Cleveland,	*Saco*,	Bangor.
Norwood, Henry Eugene,	*Bangor*,	Bangor.
Olds, Robert Franklin,	*Lewiston*,	University Hall.
Owen, George Stuart,	*Portland*,	Φ. Γ. Δ. House.
Plummer, Arthur Bartlett,	*N. New Portland*,	Φ. Γ. Δ. House.
Porter, Roy Hiram,	*South Paris*,	301 Oak Hall.
Prince, Charles Edward,	*Kittery*,	307 Oak Hall.
Reed, Frank Radford, Jr.,	*Rumford Falls*,	311 Oak Hall.
Reynolds, Thomas Harold,	*Eastport*,	Φ. Γ. Δ. House.
Richards, Earle Revere,	*New Gloucester*,	Φ. K. Σ. House.
Richardson, Alton Willard,	*Bethel*,	University Hall.
Rogers, David Nathan,	*Patten*,	K. Σ. House.
Ross, Harold Dockum,	*Skowhegan*,	2 Forest St.
Sawyer, Edgar John,	*Millbridge*,	University Hall.
Sherman, Raphael Simmons,	*Camden*,	Σ. X. House.

Simmons, John Percy,	*Belfast*,	University Hall.
Smith, Ralph Seldon,	*Orono*,	44 Main St.
Southard, Frederick Dean,	*Dorchester, Mass.*,	Φ. Γ. Δ. House.
Sparrow, Arthur Leonard,	*South Orleans, Mass.*,	Miss [A. T. Emery.
Stanford, Edward Arthur,	*Lovell Center*,	304 Oak Hall.
Stevens, Fred Oramel,	*Nashua, N. H.*,	Φ. K. Σ. House.
Stewart, Frank Carroll,	*Farmington*,	108 Oak Hall.
Tarbox, George Roger,	*Calais*,	302 Oak Hall.
Wallace, James Gordon,	*Portland*,	B. O. Π. House.
Weick, Frank Bridge,	*Springfield*,	Bangor.
Weymouth, Arthur Pettengill,	*Dexter*,	Φ. Γ. Δ. House.
Worcester, Herbert Wheeler,	*Portland*,	104 Oak Hall.

FRESHMEN

Aiken, Edith Nora,	*Brewer*,	Brewer.
Alexander, William Wesley Banister,	*Everett, Mass.*,	[University Hall.
Allen, Frank Samuel, Jr.,	*Brewster, Mass.*,	109 Oak Hall.
Alton, Francis Osgood,	*Lynn, Mass.*,	2 Pine St.
Ames, John Atwood,	*Lewiston*,	University Hall.
Balentine, Marion,	*Orono*,	Mt. Vernon House.
Barrows, Lucius Dwelley,	*Foxcroft*,	Mr. E. E. Webster.
Bates, John Thaxter,	*Calais*,	39 North Main St.
Beale, Florence Gladys,	*Orono*,	47 Main St.
Bean, Chester Howe,	*Bethel*,	27 Main St.
Bean, Perry Ashley,	*Albany*,	University Hall.
Beedle, Arthur Lawrence,	*South Gardiner*,	Orono House.
Bird, Sidney Morse, 2nd,	*Rockland*,	B. Θ. Π. House.
Black, Walter Wright,	*Beverly, Mass.*,	101 Oak Hall.
Blaisdell, Minot Sumner,	*Fort Fairfield*,	102 Oak Hall [Annex.
Brooks, Joseph Henry,	*Milltown*,	1 Peters St.
Brown, Amon Benjamin,	*Center Lincolnville*,	University [Hall.
Bucknam, Ralph Emerson,	*Eastport*,	3 Peters St.
Burleigh, John Holmes,	*South Berwick*,	A. T. Ω. House.
Burns, Caleb Edgar Slocomb,	*Fort Fairfield*,	Φ. Γ. Δ. House.
Carney, Richard Irving,	*Sheepscot*,	Pine St.

Cayting, Arno Burr,	*Brewer*,	5 Main St.
Claflin, Francis Marsh Albee,	*Upton, Mass.*,	5 Main St.
Clayton, Robert Edmund,	*Bangor*,	K. Σ. House.
Cobb, Fred Leslie,	*Marion, Mass.*,	Mr. E. E. Webster.
Coffin, Roy Selwin,	*Bangor*,	103 Oak Hall.
Connell, Bennett Robert,	*Houlton*,	Mrs. Hayes.
Cummings, Elmer Wallace,	*Paris*,	University Hall.
Davidson, Edward Burleigh,	*York Village*,	A. T. Ω. House.
Davis, Charles Eugene,	*Bridgton*,	Orono House.
Druery, Edward James,	*Augusta*,	10 Myrtle St.
Emmons, John Walton,	*Biddeford*,	A. T. Ω. House.
Erskine, Fred Stoddard Neville,	*East Boston*,	University Hall.
Eveleth, Harry Pope,	*Greenville Junction*,	2 Pine St.
Flanigan, James Aloysius,	*Bangor*,	Bangor.
Fogg, Charles Matthew,	*Cornish*,	Orono House.
Foster, Roberto Mower,	*Lisbon*,	Φ. K. Σ. House.
Galland, Joseph,	*Biddeford*,	A. T. Ω. House.
Gay, Thomas Edward,	*Auburn*,	10 Pine St.
Gellerson, Rex,	*Fort Fairfield*,	3 Peters St.
Gilmore, Alvin Leroy,	*Bath*,	Φ. Γ. Δ. House.
Goodrich, Joe Kinsman,	*Skowhegan*,	K. Σ. House.
Haines, Willis Nathan,	*Dexter*,	B. Θ. Π. House.
Hardy, Louis Mason,	*York Harbor*,	Σ. X. House.
Harlow, Edward Thomas,	*South Brewer*,	5 Main St.
Harvell, John Perham,	*Red Beach*,	43 North Main St.
Hatch, Roy Otis,	*West Groton, Mass.*,	Oak Hall Annex.
Hayter, George Henry,	*Clinton, Mass.*,	Oak Hall Annex.
Hayward, Guy Edwin,	*Winthrop*,	Φ. Γ. Δ. House.
Hilliard, Stanley Tyng,	*Oldtown*,	Φ. Γ. Δ. House.
Hodgkins, Alden E.	*Damariscotta Mills*,	Pine St.
Hodgkins, Lincoln Hall,	*Bunker Hill*,	Mr. Warren Reed.
Holbrook, Franklin Pratt,	*Brooks*,	Oak Hall Annex.
Hooper, Elmer Guy,	*Lynn, Mass.*,	University Hall.
Hosmer, Fred Pote,	*Rockland*,	A. T. Ω. House.
Hussey, Erwin Howard,	*Guilford*,	University Hall.
Hutchins, Wilbury Owen,	*Orland*,	32 North Main St.
Illingworth, Miles William,	*Northboro, Mass.*,	Φ. Γ. Δ. House.

Iversen, Arthur,	*Portage Lake*, Σ. X. House.
Jordan, Victor Burns,	*Hartland*, Mr. J. P. Spearen.
Judkins, Ernest Laroy,	*Skowhegan*, University Hall.
Keene, Leroy David,	*Norway*, Φ. K. Σ. House.
Keirstead, Horton Wilmot,	*Oakland*, 104 Oak Hall.
Knowlton, Herbert Austin,	*West Pembroke*, Prof. Bartlett.
Lambe, Emerson Peavy,	*Calais*, 43 North Main St.
Lambe, Reginald Robert,	*Calais*, 1 Pine St.
Lekberg, Carl Henry,	*Worcester, Mass.*, Σ. X. House.
Lisherness, Ernest,	*E. New Portland*, Φ. Γ. Δ. House.
Lord, Arthur Russell,	*Ipswich, Mass.*, University Hall.
Lowell, Jabez Stubbs,	*Bangor*, B. Θ. Π. House.
Lunt, Harvey Melville,	*Lewiston*, K. Σ. House.
McKenzie, Herman Ellis,	*West Jonesport*, Oak Hall Annex.
Maddocks, Frank Everett,	*Bluehill*, University Hall.
Malloy, Thomas Angelo,	*Lewiston*, 103 Oak Hall Annex.
Mansfield, Mildred Charlotte,	*Orono*, 16 Bennoch St.
Marr, Leon Herbert,	*Farmington*, University Hall.
Matheas, Fred Walter,	*Bangor*, 103 Oak Hall.
Matthieu, Joseph Clarence,	*Farmington*, University Hall.
Merrill, Joseph Farrington,	*Auburn*, University Hall.
Nickles, Herbert Lewis,	*Cherryfield*, 5 Main St.
Orne, Sidney Baxter,	*Boothbay Harbor*, 10 Pine St.
Packard, Harry Ellsworth,	*East Winthrop*, 4 Forest St.
Pennell, Alcot Johnson,	*Melrose Highlands, Mass.*, University Hall.
Perry, Donald Cushman,	*Island Falls*, 2 Bennoch St.
Perry, Theodore Bigelow,	*Island Falls*, 2 Bennoch St.
Philbrook, Earle Walter,	*Milan, N. H.*, B. Θ. Π. House.
Philbrook, Howard Grenville,	*Shelburne, N. H.*, B. Θ. Π. House.
Pierce, Stephen Franklin,	*Coopers Mills*, 10 Myrtle St.
Potter, Melville Randolph,	*White Plains, N. Y.*, University [Hall.
Purington, Heber Penn,	*Jay*, Oak St.
Putnam, Edward Payson,	*Waterville*, 5 Main St.
Quint, Raymond Alton,	*North Berwick*, Orono House,
Read, Carroll Arthur,	*Stillwater*, Stillwater.
Reed, Lowell Jacob,	*Berlin, N. H.*, Φ. K. Σ. House.
Reynolds, James Allen,	*Port Deposit, Md.*, Mt. Vernon [House.

Ridge, Reginald,	*Portland*,	K. Σ. House.
Robinson, Reginald Elton,	*Oxford*,	101 Oak Hall Annex.
Rockwood, Noel Mumford,	*Calais*,	1 Peters St.
Rogers, Walter Emerson,	*Springvale*,	36 Main St.
Rounds, Albert Prentiss,	*Bridgton*,	Orono House.
Russell, William Henry,	*East Boston, Mass.*,	35 Mill St.
Ryan, Charles Lorin,	*Dexter*,	University Hall.
St. Onge, Walter James,	*Dover*,	Mr. E E. Webster.
Sampson, Arthur Haskell,	*Gorham*,	204 Oak Hall.
Scamman, William Francis,	*Berlin Mills, N. H.*,	5 Main St.
Schoppe, William Freeman,	*West Auburn*,	Oak Hall Annex.
Seamon, Percy Ralph,	*Roxbury, Mass.*,	35 Mill St.
Sherman, Waldo Alfred,	*Island Falls*,	2 Bennoch St.
Simmons, Frederick Johnson,	*Morrill*,	University Hall.
Smith, Herbert Henry,	*East Corinth*,	27 Main St.
Smith, Oscar Samuel,	*Alton*,	32 North Main St.
Stetson, Everett Halliday,	*Auburn*,	209 Oak Hall.
Stetson, Howard Carlton,	*Auburn*,	Φ. K. Σ. House.
Stevens, Albert William,	*Belfast*,	Mr. J. M. Craig.
Stevens, Otis Black,	*Presque Isle*,	Mr. J. M. Craig.
Stone, William Elmer,	*South Brewer*,	Φ. K. Σ. House.
Sturtevant, Walter Linwood,	*Bangor*,	B. Θ. II. House.
Swift, Porter LaForest,	*Norway*,	Φ. K. Σ. House.
Talbot, Richard Foster,	*Andover*,	306 Oak Hall.
Tate, Edith Mabel,	*South Corinth*,	Mt. Vernon [House.
Tebbets, Charles Bucknam,	*Auburn*,	10 Pine St.
Toner, Ernest Leroy,	*Auburn*,	Σ. X. House.
Totman Arnold Washington,	*Fairfield*,	K. Σ. House.
Twombly, Frank Wesley,	*Belfast*,	Φ K. Σ. House.
Wadsworth, Charles Sabin,	*Canton Point*,	Σ. X. House.
Washburn, Willis Flye,	*China*,	Mrs. Hayes.
Webb, Hazel Kirke,	*Bridgton*,	Mt. Vernon House.
Wildes, Gordon Lunt,	*Skowhegan*,	K. Σ. House.
Williams, Benjamin Franklin,	*North Islesboro*,	Mrs. Hayes.
Wilson, Elmer Josiah,	*Lynn, Mass.*,	Σ. X. House.
Witham, Lester Clyde,	*North Anson*,	47 Main St.
Wyman, Abel Percival,	*Skowhegan*,	University Hall.
York, Verne Jerome,	*Bangor*,	Bangor.

SHORT PHARMACY COURSE

SOPHOMORES

Bailey, Frank Linwood,	*South Harpswell*,	A. T. Ω. House.
Chandler, Mary Ruggles,	*Columbia Falls*,	Mt. Vernon [House.
Derby, Frank Albert,	*Temple*,	Oak St.
Huen, Charles John,	*Sabattus*,	University Hall.
Kittredge, John Raymond,	*Rockland*,	19 Myrtle St.
Sikes, Walter Scott,	*Three Rivers, Mass.*,	19 Myrtle St.
Talbot, James Rich,	*East Machias*,	309 Oak Hall.

FRESHMEN

Bean, Ralph Downing,	*Bangor*,	Bangor.
Black, Everett Taylor,	*Dedham*,	Mrs. Stevens.
Hurd, William Bromley,	*North Berwick*,	University Hall.
Knight, Mary Louise,	*North Bridgton*,	Mt. Vernon [House.
Maxwell, John Willard,	*Winthrop*,	University Hall.
Reemie, Edgar Warren,	*East Machias*,	21 Pine St.
White, Edgar Albert,	*Orono*,	Bennoch St.

SPECIAL STUDENTS

Barrows, Arad Thompson,	*Burleigh*,	12 Main St.
Bird, Ralph Butler,	*Rockland*,	B. Θ. II. House.
Bye, Terschek Franzoir,	*Kennebunk*,	Φ. Γ. Δ. House.
Clark, Elizabeth L.,	*Bangor*,	Bangor.
Clarke, George Bryant,	*Newport*,	36 Main St.
Colcord, Maude Brown,	*Searsport*,	Mt. Vernon House.
Comerford, Michael Joseph,	*Worcester, Mass.*,	University [Hall.
Downing, Herbert Plummer,	*Ripley*,	Miss A. T. Emery.
Fagan, James Patrick Vincent,	*Oldtown*,	Oldtown.
Farnham, Walter Elwood,	*Canaan*,	K. Σ. House.
Farnsworth, James Pitt,	*Millbridge*,	Mr. G. L. Spaulding.

Fifield, Ralph Herbert,	*Dexter*,	Φ. Γ. Δ. House.
Hall, William Dickson,	*Rockland*,	Φ. Γ. Δ. House.
Hammann, Alfred Hugo,	*East Blackstone, Mass.*,	301 Oak [Hall Annex.
Kiley, Fred James,	*Norwood, Mass.*,	35 Mill St.
Larrabee, Bertrand Cushing,	*Dover*,	Mr. O. T. Goodridge.
Lemassena, Clement French,	*Newark, N. J.*,	Mr. G. L. [Spaulding.
Lincoln, Samuel Bicknell,	*East Blackstone, Mass.*,	304 Oak [Hall Annex.
McLain, William Alvin,	*Rockland*,	Alec Latno.
Macomber, Carlton Hambly,	*Portsmouth, R. I.*,	35 Mill St.
Morton, John Langford,	*Plymouth, Mass.*,	Miss A. T. [Emery.
Paige, James Lonsdale,	*Southbridge, Mass.*,	Σ. X. House.
Palmer, Harold Stevens,	*Bangor*,	Σ. X. House.
Robertson, Bernard Ernest,	*Detroit*,	Mr. G. L. Spaulding.
Siegel, Benjamin Ulman,	*Salt Lake City, Utah*,	B. Θ. H. [House.
Stone, Mabel Annette,	*East Winthrop*,	Mt. Vernon [House.
Whitmore, Albert Ames,	*Fryeburg*,	Miss A. T. Emery.
Wilson, Edgar Kennard,	*Portland*,	Σ. X. House.
Wilson, Robert Potter,	*Portland*,	102 Oak Hall.

SCHOOL OF AGRICULTURE

Bailey, Herbert Barton,	*Biddeford*,	55 Main St.
Black, Hedley Chapman,	*Winthrop*,	Campus.
Dinsmore, Azor Baker,	*Charlotte*,	University Hall.
Dove, John,	*Andover, Mass.*	
Garland, Clarence Leroy,	*Bangor*,	Φ. Γ. Δ. House.
Wakefield, Mark Harlan,	*Biddeford*,	102 Oak Hall Annex.

SUMMER SCHOOL

Allen, Lucy E.,	*East Bernard, Vt.*,	Mt. Vernon [House.
Beale, Florence Gladys,	*Orono*,	47 Main St.
Blake, Etta S.,	*Presque Isle*,	Mt. Vernon House.
Burgess, J. Fred,	*Bangor*,	Bangor.

Burnham, Agnes Rowena,	*Oldtown*,	Oldtown.
Burrill, Fred Wilson,	*Houlton*,	Mt. Vernon House.
Cheney, Myrtice D,	*Woodfords*,	Bangor.
Cleland, Galen Snow,	*Calais*,	Mt. Vernon House.
Heyhoe, Albert George,	*Bangor*,	Bangor.
Jordan, Roy Faunce,	*Norway*,	Mt. Vernon House.
Holmes, Ernest Randall,	*Eastport*,	A. T. Ω. House.
Mitchell, Fred Carlton,	*West Newfield*,	Φ. Γ. Δ. House.
Newcomb, Charles Howard,	*South Newburg*,	Bangor.
Smith, Edward Henry,	*East Sullivan*,	Mt. Vernon [House.
Stone, Mabel Annette,	*East Winthrop*,	Mt. Vernon [House.
Tower, Eva L.,	*Montague, Mass.*,	Mt. Vernon [House.
Waldron, William Linscott,	*Skowhegan*,	Mt. Vernon House.
Wass, Clifton Ennis,	*Sangerville*,	Bangor.
Webster, Robert Adelbert,	*Orono*,	Penobscot St.

SHORT COURSES IN AGRICULTURE, 1903

[The list of students in these courses has been already printed in the Annual Catalogue for 1902–1903, which was published subsequent to their registration.]

THE COLLEGE OF LAW

GRADUATE STUDENTS

Cook, Harold Elijah, LL. B., University of Maine, 1900.	*Waterville.*	
Dunn, Patrick Henry, LL. B., University of Maine, 1902.	*Bangor*,	Bass Building.
Folsom, LeRoy Rowell, B. S., University of Maine, 1895.	*So. Norridgewock.*	
Geary, Thomas Reardon, LL. B., University of Maine, 1903.	*Bangor*,	20 State St.
Greeley, Harold Dudley, LL. B., New York University, 1903.	*Cambridge, Mass.*	
Lord, Harry, LL. B., University of Maine, 1902.	*Bangor*,	82 Cumberland St.

Mackay, John Daniel, LL. B., *Quincy, Mass.*
University of Maine, 1900.
Merrill, John Bryant, *Bangor*, 26 Jefferson St.
Mudgett, Ulysses Grant, LL. B., *Hampden.*
University of Maine, 1903.
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.
Snow, Donald Francis, B. A., *Bangor*, 134 Ohio St.
Bowdoin College, 1900. LL. B., University of Maine, 1903.
Violette, Nil Louis, B. A., *Bangor*, 105 Third St.
St. Mary's College. LL. B., University of Maine, 1903.
Waterhouse, William Henry, LL. B., *Oldtown.*
University of Maine, 1900.

SENIORS

Bartlett, Mark Jonathan, Ph. B., *Montville*, 25 State St.
University of Maine, 1901.
Blanchard, Benjamin Willis, *Bangor*, 118 Congress St.
Bryant, Glidden, *Newcastle*, 151 Ohio St.
Clarke, Edward Everett, *New Bedford, Mass.*, 50 Charles St.
Clough, George Edwin, *Monson, Mass.*, 16 Everett St.
Haley, John Howard, *Cornville*, 250 Hammond St.
Ham, John Chellis, M. D., *Belfast*, 25 State St.
Dartmouth College, 1889.
Hight, Clarence Bertram, *Athens*, 197 Warren St.
Lang, Alfred Alexander, *Vieques, P. R.*, 17 Garland St.
Lougee, George, *Bangor*, 16 Everett St.
Putnam, Edgar Burnham, B. A., *Danforth*, 250 Hammond St.
Colby College, 1901.
Sipprelle, Judson Emery, *Bangor*, 197 Warren St.

JUNIORS

Bridges, Ansel Harrison,	*Easton*,	Oldtown.
Brown, Leon Gilman Carleton,	*Milo*,	16 Everett St.
Brown, Royal Weaver,	*Boyd Lake*,	151 Ohio St.
Crawford, Adolphus Stanley,	*Oldtown*,	Oldtown.
Doyle, Joseph Henry,	*Franklin*,	458 Hammond St.
Foster, Walter Herbert,	*Bangor*,	38 Mt. Hope Ave.
Head, Frank Samuel,	*Jackman*,	25 State St.
Keyes, Orman Leroy,	*Stetson*,	16 Everett St.
Lancaster, Arthur Blaine,	*Gardiner*,	239 Union St.
Linehan, Daniel Joseph,	*Bradford, Mass.*,	100 Ohio St.
Littlefield, Eben Frank,	*Brooks*,	458 Hammond St.
Locke, Adelbert Yaton,	*Farmington*,	124 Essex St.
Robinson, Curville Charles,	*East Machias*,	123 Essex St.
Smalley, Charles Tobias,	*Rockland*,	151 Ohio St.
Wall, Erastus Lewis, B. A., Bates College, 1902.	*Bangor*,	25 State St.
Winslow, Joseph Towne,	*New Bedford, Mass.*,	250 Hammond St.

FIRST YEAR

Brooks, Gerry Lynn,	*Upton*,	185 Pine St.
Burgess, J. Fred,	*Bangor*,	77 James St.
Burnham, Elmer John,	*Kittery*,	75 Hammond St.
Colby, James Adams,	*Lynn, Mass.*,	191 Union St.
Conners, Charles Patrick, B. A., Bowdoin College, 1903.	*Bangor*,	354 State St.
Cowan, George Albert,	*Hampden*,	Hampden.
Davis, Waldo Fevor, B. A., Dartmouth College, 1901.	*Clinton, Mass.*,	50 Charles St.
Fox, Lewis Edwin,	*Lovell*,	91 Fifth St.
Gardner, Herbert Nelson, B. A., Bowdoin College, 1898.	*Patten*,	17 Somerset St.
Harris, Moses Harry,	*Auburn*,	290 Main St.
Hasty, Percy Albert,	*Brooks*,	191 Union St.
Leary, Thomas Edward,	*East Hampden*,	East Hampden.
Lord, Harrard Harlow,	*Ellsworth*,	151 Ohio St.
Pike, George William,	*Lisbon, N. H.*,	91 Fifth St.
Roix, William Richard,	*Bangor*,	124 Essex St.

Ross, Harry Francis, B. A., Harvard University, 1897.	*Bangor*,	88 Broadway.
Sullivan, John Edward,	*Trescott*,	25 State St.
Sweet, Lucius Black,	*West Hollis*,	89 Fifth St.
Warren, William Moncena, B. A., Bowdoin College, 1901.	*Bangor*,	285 Center St.

SPECIAL STUDENTS

Andrews, Percy Melville, B. A., Colby College, 1901.	*West Sumner*,	50 Charles St.
Clark, Dana L.,	*Belgrade Lakes*,	25 State St.
Dunn, Brion Joseph,	*Bangor*,	49 Hammond St.
Johnson, William Asbury,	*Milo*,	46 Jefferson St.
Junkins, Samuel Howard,	*York Corner*,	458 Hammond St.
Nelson, John Edward, B. A., Colby College, 1898.	*Waterville*,	19 Grant St.

SUMMARY

Graduate Students		9
Seniors		73
Juniors		83
Sophomores		86
Freshmen		133
Short Pharmacy, Sophomores	7	
Freshmen	7	14
Special Students		29
School of Agriculture		6
Summer School		19
Short Courses in Agriculture, 1903		18
School of Law, Graduate Students	18	
Seniors	12	
Juniors	16	
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Special Students	6	71
Total		541
Names counted twice,		2
		539

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