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University of Vermont, College of Medicine Bulletin

University of Vermont

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Medical Department
of the
University of Vermont
Burlington, Vermont.

FORTY-EIGHTH
ANNUAL ANNOUNCEMENT
1900.
The University of Vermont.

Medical Department.

The Trustees of the University, having resumed entire control of the Medical Department, have reappointed the former occupants of the several chairs of instruction for the ensuing year. They have taken this action in order that the Medical Department may maintain as close a continuity as possible with its honorable past, and that the Alumni and undergraduates may feel assured that no radical or revolutionary measures are contemplated in their dealing with the Department. They can confidently promise to students, both old and new, a continuance of the same endeavors as heretofore made on the part of the instructors to bring the grade of instruction, both didactic and clinical, up to the highest attainable level, and they feel justified in assuring students that they will be permitted to pursue their studies free from the disturbing influences which were so much to be regretted during the past year.

We trust that any former students who in view of these circumstances and of doubts concerning the future of the Institution may have contemplated going elsewhere to complete their medical studies, may return to their classes with full confidence that the session will be a pleasant and profitable one; and that others who are choosing an institution in which to begin or continue their medical studies may not be prejudiced by any recent occurrences or rumors affecting this Institution, but will consider only its permanent and well-established claims upon their respect and confidence.

For the Trustees,

M. H. BUCKHAM, President.

University of Vermont, Burlington, Oct. 20, 1899.
MEDICAL DEPARTMENT
OF THE
UNIVERSITY OF VERMONT,
BURLINGTON, VERMONT.

FORTY-EIGHTH
ANNUAL ANNOUNCEMENT,
1900.
Faculty of Medicine.

MATTHEW HENRY BUCKHAM, D. D.,
Burlington, Vt., President.

JOHN ORDRONAUX, M. D., LL. D.,
New York City,
Emeritus Professor of Medical Jurisprudence.

J. WILLISTON WRIGHT, A. M., M. D.,
New York City,
Emeritus Professor of the Principles and Practice of Surgery.

ALBERT F. A. KING, A. M., M. D.,
Washington, D. C.,
Professor of Obstetrics and Diseases of Women.

ASHBEL PARMELEE GRINNELL, M. D.,
Burlington, Vt.,
Professor of the Theory and Practice of Medicine;
Consulting Physician to Mary Fletcher Hospital,
and to Fanny Allen Hospital.

RUDOLPH AUGUST WITTHAUS, A. B., M. D.,
New York City,
Professor of Chemistry and Toxicology.

J. HENRY JACKSON, A. M., M. D.,
Barre, Vt.,
Professor of Physiology and Microscopic Anatomy.

ABEL MIX PHELPS, M. D.,
New York City,
Professor of Surgery,
Consulting Surgeon to Mary Fletcher Hospital;
Surgeon to Charity Hospital, N. Y.
HENRY CRAIN TINKHAM, M. D.,
Burlington, Vt.,
Professor of General and Special Anatomy;
Attending Surgeon to Mary Fletcher Hospital.

JAMES NATHANIEL JENNE, M. D.,
St. Albans, Vt.,
Professor of Materia Medica and Therapeutics,
and Professor of Clinical Medicine.

JOHN BROOKS WHEELER, A. B., M. D.,
Burlington, Vt.,
Adjunct Professor of Surgery; Professor of Clinical and
Minor Surgery;
Attending Surgeon to Mary Fletcher Hospital.

PATRICK E. McSWEENEY, M. D.,
Burlington, Vt.,
Adjunct Professor of Obstetrics;
Attending Physician to the Mary Fletcher
and Fanny Allen Hospitals.

FREDERICK RUBERT STODDARD, M. D.,
Shelburne, Vt.,
Adjunct Professor of Materia Medica;
Consulting Physician to Mary Fletcher Hospital.

LYMAN ALLEN, A. B., M. D.,
Adjunct Professor of Physiology.

HORACE L. WHITE,
Adjunct Professor of Chemistry.

HARRIS R. WATKINS, A. B., M. D.,
Burlington, Vt.,
Adjunct Professor and Demonstrator of Anatomy;
Attending Physician to Mary Fletcher Hospital.

EVERARD A. WILSON, M. D.,
Belfast, Me.,
Assistant Demonstrator of Anatomy.
Professors of Special Subjects.

MARK C. TWITCHELL, M.D., Burlington, Vt.,
Professor of Diseases of the Eye, Ear and Throat;
Assistant Ophthalmologist to the Mary Fletcher Hospital.

A. PALMER DUDLEY, M. D., New York City,
Professor of Surgical Diseases of Women.
Professor of Histology and Pathology.

EUGENE FULLER, M. D., New York City.
Professor of Genito-Urinary and Venereal Diseases.

FOLLEN CABOT, JR., M. D., New York City,
Assistant to the Chair of Genito-Urinary and Venereal Diseases.

FRANK W. PAGE, A. M., M. D., Boston, Mass.,
Professor of Diseases of the Mind.

DILLON BROWN, A. M., M. D., New York City,
Professor of Diseases of Children.

J. E. CUSHMAN, Esq., Burlington, Vt.,
Professor of Medical Jurisprudence.

GEORGE T. JACKSON, A. M., M. D., New York City,
Professor of Dermatology.

Instructors.

HARRIS R. WATKINS, A. B., M. D.,
Instructor in Anatomy.

LYMAN ALLEN, A. B., M. D.,
Instructor in Physiology.

HORACE L. WHITE,
Instructor in Chemistry.

FREDERICK RUBERT STODDARD, M. D.,
Instructor in Materia Medica.

H. NELSON JACKSON, M. D.,
Instructor in Surgery.

SAMUEL E. MAYNARD, M. D.,
Instructor in Theory and Practice of Medicine and Physical Diagnosis.

FREDERICK E. CLARK, M. D.,
Instructor in Obstetrics and Gynæcology.
Consulting Physician to Fanny Allen Hospital.
The Medical Department of the University, which was organized in 1822, but whose relation to the University has been chiefly nominal, has just been reorganized as a co-ordinate department of the University under the full control of the Board of Trustees.

This school, becoming as it has a Department of the University, has increased its possibilities for usefulness by now being able to take advantage of all that the University can give in the way of better facilities for teaching and thereby assuring an increasing prosperity.

The Medical Department of the University having already established a four years' course of study with the graded system and having added the necessary recitation rooms, laboratories and apparatus to carry out this plan of teaching, with the increased faculties now possible offers advantages to medical students second to few institutions of the kind.

As the four years' course was adopted Jan. 1st, 1898, this is the last year that it will be possible for students to graduate in three years. Students presenting satisfactory evidence of having matriculated prior to January 1st, 1898, and of having attended two full courses of study in any accredited medical college or colleges will be admitted to the graduating class this year.

The forty-eighth annual course of instruction will begin Thursday, January 4th, 1900, and continue until June 28th.

The College Building, given to the University by the late John P. Howard, is a substantial brick edifice, situated on Pearl street, in the city of Burlington, on the north side of and immediately overlooking the College Park. The lecture room amphitheatre will seat comfortably three hundred and fifty students.

The laboratories for Practical Chemistry, Physiology, Histology and Bacteriology, and the Dissecting Room for Practical Anatomy, are ample in size, and supplied with the modern conveniences and apparatus required for chemical experiments and physiological and anatomical demonstrations.

The College Museum is spacious, well lighted, and contains a large and carefully arranged collection of specimens and preparations—many of them rare—illustrating both normal and abnormal structures. The Museum is always open to students.

During his four years study the student will receive instruction in the following branches: Anatomy, Physiology, Chemistry, Materia
Medica and Therapeutics, Practice, Obstetrics, Surgery, Diseases of Children, Ophthalmology and Otology, Pathology and Bacteriology, Neurology, Diseases of the Mind, Hygiene, Medical Jurisprudence, Venereal Diseases, Dermatology, Laryngology, and Gynæcology. This instruction is given by scholastic and clinical lectures, recitations and laboratory work. The curriculum includes laboratory courses in Urinary Analysis, Histology, Pathology and Bacteriology, and practical work in Physical Diagnosis, Surgery and Demonstrative Obstetrics, each student being required to take all of these courses, unless he present evidence of having taken the same in some other recognized institution. (See requirements for graduation, page 16.)

Outline of the Course of Lectures.

Obstetrics and Diseases of Women.

PROF. A. F. A. KING.

ADJUNCT, PROF. P. E. M'SWEENY.

This Course will comprise a series of lectures on the Science and Practice of Midwifery, together with additional Lectures on Gynæcology. The main purpose of the lecturer will be to explain, impress and simplify the matters required to be studied in the books, so as to render them more easily intelligible and hence more pleasing and satisfactory to the student. The lectures will be illustrated by diagrams, models, natural preparations, manikins and instruments.

In the course upon Demonstrative Obstetrics, each student will be taught to do obstetrical operations himself, by practice upon the manikin, under direction of a demonstrator.

In the Department of Gynæcology the various instruments and appliances required in treating the Diseases of Women will be exhibited, and their uses fully explained. The pathological conditions of the female organs will be illustrated by specimens and colored diagrams; and the various surgical operations belonging to Gynæcological practice will be shown both clinically and upon the cadaver, by Prof. A. Palmer Dudley, Special Professor of Surgical Gynæcology.
Practice of Medicine.
PROF. A. P. GRINNELL.

In this department every effort will be made to associate scholastic and clinical teaching, enabling the student to become thoroughly acquainted with the methods of investigating disease, and with the practical application of remedies at the bedside.

The Scholastic Lectures will be illustrated by pathological specimens, charts, casts, diagrams and micro-photographs.

Clinics will be held at the Mary Fletcher Hospital, where the student will be brought in direct contact with the subject under discussion.

Special instruction will be given in Physical Diagnosis, thus affording to every student a knowledge of diseases of the chest, and of the most approved methods of diagnosis, and each student will have the opportunity of educating his own ear and touch by the practice of Auscultation and Percussion upon living subjects, under direction of a competent instructor.

Chemistry and Toxicology.
PROF. RUDOLPH A. WITTHAUS.
ADJUNCT, PROF. HORACE L. WHITE.

The instruction in this department during the first year will be by recitations, lectures and laboratory work, covering the principles of chemistry, mineral chemistry, qualitative analysis and urinalysis. The object of the instruction during this year will be to establish a firm groundwork for the rational study of the more advanced subjects taught later in the course, and to impart familiarity with the technique of chemical operations in the laboratory.

The teaching in the second year will be by lectures upon organic chemistry, including the application of that science to Physiology, Pathology and Therapeutics, upon the chemical branches of Hygiene and upon Toxicology, both medical and forensic.

Physiology.
PROF. J. HENRY JACKSON.
ADJUNCT, PROF. LYMAN ALLEN.

This subject will be taught to first and second year students by recitations, lectures and demonstrations, extending through the entire session.
The first year course will consist of lectures and recitations in Stewart's Manual of Physiology twice each week, covering the subjects of circulation, respiration, digestion and absorption, animal heat and the muscular system.

The lectures will comprise a study of the functions of each organ as an independent mechanism, the united and harmonious working of all organs through the influence of a complete nervous system, and the practical application of physiological principles to medicine and surgery.

Lecture room microscopes, charts, models and fresh dissections will help to make clear the more difficult branches of this department.

**Principles and Practice of Surgery.**

**PROF. A. M. PHELPS.**

**ADJUNCT, PROF. J. B. WHEELER.**

The course in Surgery will consist of scholastic and clinical lectures, illustrated by plates, diagrams and surgical apparatus in general. All of the more important surgical operations will be performed on the cadaver before the class. On Wednesday and Saturday of each week during the Surgical Course, a clinic will be held in the large amphitheatre of the Mary Fletcher Hospital, where the abundant supply of material, coming as heretofore from all parts of the State, will enable the student to witness a large number of the capital operations of surgery.

A course of practical instruction will be given by Prof. Wheeler, in surgery. The application of splints, bandages, and other surgical appliances, by the students, will constitute one of the important practical features of the course.

**Descriptive and Surgical Anatomy.**

**PROF. H. C. TINKHAM.**

**ADJUNCT. PROF. H. R. WATKINS.**

First and second year students will receive instruction in General Anatomy, consisting of dissecting, demonstrations, recitations and lectures.

Third year students will receive instruction in Surgical and Applied Anatomy. The object of this course will be to clearly present the appli-
cation of anatomy in the recognition of abnormal conditions and surgical operations.

The lectures will be fully illustrated by preparations and recent dissections on the cadaver.

**Materia Medica and Therapeutics.**

**PROF. J. N. JENNE.**

**ADJUNCT, PROF. F. R. STODDARD.**

The scope of instruction in this department will embrace a thorough and practical study of those drugs which have a real therapeutic value. The medicinal and the toxic effects, and the therapeutic uses of each, will be discussed systematically, in such a manner that the student will receive a practical knowledge of the subject, founded on a scientific basis. The methods of medication, the principles and the practice of prescription-writing, and the therapeutic uses of heat, cold and electricity, will receive special attention.

**Lectures on Special Subjects.**

**Diseases of the Eye, Ear and Throat.**

Prof. Mark C. Twitchell, of Burlington, Vt., will give a course of clinical lectures on Diseases of the Eye, Ear and Throat. During this course the student will be able to study a large variety of diseases of the eye and ear, and to witness most of the important operations in this department of surgery.

**Diseases of the Nervous System.**

Dr. E. W. Taylor, of Boston, will give a course of didactic and clinical lectures on Diseases of the Nervous system.

**Surgical Diseases of Women.**

Prof. A. Palmer Dudley, of New York City, will give a course of lectures on the Surgical Diseases of Women. The lectures will be illustrated by clinical cases, plates and manikin.
Pathology and Bacteriology.

A course of lectures on these subjects will be delivered during the session. The lectures will be abundantly illustrated by fresh pathological material and microscopical demonstrations of the more important varieties of micro-organisms.

Practical Anatomy.

H. R. Watkins, M. D., Demonstrator.

E. A. Wilson, M. D., Assistant Demonstrator.

As a thorough knowledge of Anatomy is only to be obtained by dissection, students are urged by the Faculty to dissect as much as possible during the first two years. The dissecting room is large, commodious, well ventilated and lighted. Material is furnished free. The Demonstrator will be in daily attendance during the time dissections are being made.

During the last session we were able to provide all the dissecting material the class required, and we have an abundant supply guaranteed for the season of 1900.

Insanity.

Prof. Frank W. Page of Boston, formerly Superintendent of the Vermont State Asylum, Waterbury, Vt., will deliver a course of lectures on Insanity. The examination of the insane and treatment in the early and curable stages, will have particular attention. Material for clinical instruction, so far as possible, will be received from institutions near at hand.

Genito-Urinary and Venereal Diseases.

Prof. Eugene Fuller, New York City, will give a course of lectures upon this subject.

Medical Jurisprudence.

By J. E. Cushman, Esq., Burlington, Vt.

This course of lectures, designed to instruct only in such matters as are essential to the medical practitioner, will treat of the right to practice medicine and surgery; the right to compensation; the degree of
skill the practitioner must possess; his amenability to the criminal law; the return of births, deaths and contagious diseases; confidential communications from patients; medico-legal autopsies and reports thereon; whether death is the result of natural or violent causes; identification of mutilated remains; the right to certain dead bodies for anatomical purposes; medical and expert testimony; insanity, mental capacity, and judicial toxicological investigations.

**Diseases of Children.**

Prof. Dillon Brown of New York, editor of the Journal of Pediatrics, will deliver a course of lectures on diseases of Infancy and Childhood, a department of study generally very superficially treated, although of the utmost importance to the practicing physician. Prof. Brown will hold a clinic every day during his course.

**Dermatology.**

Prof. George T. Jackson of New York, whose labors in this department of medicine are well known to the profession, will deliver a course of lectures on dermatology, illustrated by plates, diagrams and microscopic specimens. He will also hold a clinic every day during his course.

**Clinical Advantages.**

The Mary Fletcher Hospital, erected and endowed solely by the generosity of the lady whose honored name it bears, was opened in 1876 for the treatment of patients. Additions and improvements have been made from year to year, until now it is unrivalled in its appointments for the care of medical and surgical cases.

The Hospital consists of a large and elegant administrative building, with many rooms for private patients, and two ample pavilion wards. In a separate building connected with the wards and administrative building by a corridor, is a large amphitheatre, capable of seating two hundred persons. There are also an anaesthetizing and a recovery room opening into the amphitheatre. Rooms for out-patients are also attached to the building. In fact, every arrangement for Clinical Instruction is provided.
In the amphitheatre, Medical and Surgical Clinics will be held during the entire session.

The following are members of the Medical and Surgical Board of the Mary Fletcher Hospital, who are connected with the Medical College:

Consulting Surgeon: PROF. A. M. Phelps.
Attending Surgeon: PROF. JOHN B. Wheeler.
Attending Surgeon: PROF. H. C. Tinkham.
Attending Physician: DR. P. E. McSweeney.
Attending Physician: DR. S. E. Maynard.
Ophthalmic Surgeon: PROF. M. C. Twitchell.

College Clinics.

Patients presenting themselves at these Clinics for advice and treatment are examined, the peculiarities of each case are explained, the appropriate treatment is prescribed, and the requisite surgical operations are performed before the class.

On Wednesday mornings, during the early part of the term, Medical Clinics will be held at the Hospital by Prof. Grinnell and Prof. Jenne.

On Saturday mornings, during the early part of the term, Surgical Clinics will be held at the Hospital by Prof. Wheeler.

On Saturday mornings, and also on Wednesday afternoons, during the latter part of the term, Surgical Clinics will be held at the Hospital by Prof. Phelps.

Additional clinics, by special professors, (for the dates of which see schedule cards) will be given as follows:

On Diseases of the Eye, Ear and Throat, by Prof. Twitchell.
On Genito Urinary Surgery, Prof. Fuller.
On Venereal Diseases, by Prof. Cabot.
On Diseases of the Skin, by Prof. G. T. Jackson.
On Diseases of Women, by Prof. Dudley.
On Diseases of the Nervous System, by Prof. Taylor.
On Insanity, by Prof. F. W. Page.
Requirements for Entrance.

Applicants will be required to pass an Entrance Examination in Arithmetic, Grammar, Geography, Orthography, American History, English Composition and Elementary Physics before they can be regularly enrolled as students in good standing in this Department; those who fail in one or more branches at these examinations, may be enrolled as conditioned students; they must make up the deficiency, however, during the first year, before they can be enrolled as students in regular standing.

EXCEPTIONS:—Such entrance examination will not be required of applicants of the following classes:

1. Those who declare themselves in writing not to be candidates for the Degree in Medicine in this College.
2. Those who have received the Degree of A. B., A. M., B. S., M. S., Ph. B., or Ph. D., from a College or University which maintains a satisfactory Academic standard.
3. Those who have successfully completed a full year's course of study in any College or University which maintains a satisfactory Academic standard.
4. Those who have passed satisfactorily the entrance examination to the Literary or Scientific Department of the University of Vermont, or to any other College or University which maintains a satisfactory Academic standard.
5. Those who have passed an entrance examination to a Medical School having requirements for entrance equivalent to those adopted by this Faculty.
6. Those who have received a "Medical Student's Certificate" from the Regents of the State of New York, or from any similarly constituted authority in other States.
7. Those who have received a Diploma or Certificate for any ten studies from the Regents of the State of New York, or from any similarly constituted authority in other States.
8. Those who have satisfactorily completed a three years' course in a High School, Normal School, or Academy.
Entrance Examinations.

Entrance examinations will be held in January, March, June, 1900.

Admission to the Second Year.

Students desiring to enter the second year must present evidence of having attended one regular term of not less than twenty weeks' duration in an accredited medical college, and also certificates of attendance in laboratory courses in histology and chemistry corresponding in extent to those given in this college during the first year. In the absence of such certificates the student will be required to take that laboratory course which he has not had, during his second year. Evidence of dissection work during one regular term is also required.

Admission to the Third Year.

Students desiring to enter the third year must present evidence of having attended two regular terms of not less than twenty weeks' duration each, at some other accredited medical college or colleges, and must furnish certificates of attendance in laboratory courses in histology, chemistry and pathology corresponding in extent to those given in this college, and of dissection during two terms. In the absence of such certificates the student will be required to take such laboratory course or courses or dissection as he has not had elsewhere, during his third year.

Students entering the third year must pass satisfactory examinations in the subjects of anatomy, physiology, chemistry, pathology and materia medica either at the beginning or at the close of the third year as they may elect.

Students coming from other colleges must present evidence of having passed an entering examination equivalent to that demanded for entrance in this school or otherwise comply with the requirements for entrance to the first year. (See page 14.)

Requirements for Advancements in Course.

Attendance upon all the exercises of each year is obligatory, and unexcused absences will count as failures in computing the standing of students.
The work of each year is considered final of itself, and students are advanced from one year to the next upon the evidence that the work of the lower grade has been satisfactorily performed, obtained by examination and by class rating.

Students of the first year are passed to the second when their performances in the recitations, dissections, and laboratory exercises of the first year have been satisfactory, and when they have passed satisfactory examinations in the subjects taught during that year.

Second year students are advanced to the third year when their performances in the recitation, laboratory and dissection exercises of the second year have been satisfactory and when they have passed satisfactory examinations in anatomy, chemistry, pathology and materia medica.

Students are advanced to the fourth year when they have satisfactorily completed the recitations, laboratory and other exercises required for the third year.

Students who have failed to fulfil the requirements for passage from one grade to the next above in not more than two branches will be advanced conditionally. If the failure has been in laboratory or dissection work, the work must be repeated satisfactorily during the following session. In other departments the condition may be removed at an examination which will be held for that purpose during the first month of the session. Students failing to remove conditions at this re-examination will be required to repeat the work in which they have failed, and will be again examined at the close of the session.

Students who fail in more than two branches of the work of any year will be required to repeat the work of that year.

Requirements for Graduation.

Four full courses of lectures, of at least twenty weeks each, the last at this college, will be required of all students who matriculated for the first time in this or another accredited medical college subsequent to January 1st, 1898, or who may matriculate for the first time in the future. Those who matriculated previous to that date will be required to attend three full courses, according to the regulations in force before the four-year system was adopted.

No period of practice will be taken as the equivalent of any lecture course.
No candidate indebted to the College will be admitted to an examination.

Candidates for the Degree of Doctor of Medicine must have attained the age of twenty-one years, and must present full certificates of the time of study, of age, and of moral character. Each candidate is required to deposit his examination fee with the Secretary of the Faculty one month before the close of the session.

Before presenting himself for examination, and in addition to attendance upon the regular lectures, both scholastic and clinical, it is further required that he shall have pursued the study of Practical Anatomy, by dissection under the guidance of a demonstrator; that he shall have taken at least one course of laboratory instruction in Urinary Analysis, in Histology, in Pathology and Bacteriology; and one course of practical work in Physical Diagnosis, Practical Surgery, and Demonstrative Obstetrics, either in this or in some other regular Medical College.

He must also pass satisfactory written or oral examinations in Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Practice of Medicine, Surgery, Obstetrics and Pathology before the Medical Faculty and Board of Medical Examiners appointed by the State Medical Society. But if he has previously passed finally in Anatomy, Physiology, Chemistry or Materia Medica before this Faculty he will not be re-examined in the branch or branches in which he has passed. But the Faculty reserves the right to re-examine students at the end of the fourth year of the four years course upon all of the subjects taught during the four years, it being the intention of the Faculty to establish a final quiz at the end of the fourth year in order that graduates may be better prepared for the examinations by State Licensing Boards.

Certificates of having passed in any branch or branches in other colleges will not be accepted by this College.

The tickets and Diplomas of Eclectic and Homœopathic, or Botanic Colleges, or the Colleges devoted to any special system of medicine, are considered irregular, and will not be recognized under any circumstances. Certificates from preceptors who practice any particular system of medicine, or who violate in any way the Code of Ethics adopted by the profession, will not be accepted under any circumstances, even if the preceptors be regular graduates in medicine.
Graduates of other regular Medical Colleges who desire a degree from this University, must pass a satisfactory examination in Anatomy, Physiology, Chemistry, Materia Medica and Therapeutics, Practice of Medicine, Surgery, Obstetrics and Gross Pathology.

No credit in time or in lectures shall be given any student, by virtue of his Degree in Pharmacy or Veterinary Surgery.

Degrees in absentia are not conferred by this University under any circumstances whatever.

**Faculty Prizes.**

The Faculty have established two Prizes for general proficiency in examination—a First Prize of Fifty Dollars and a Second Prize of Twenty-five Dollars. The prizes will be awarded as follows:

The ten students who pass the best examinations for their degree will be allowed to compete in a written examination for the prizes; of this number, the five who rank highest shall be called Honor Men, and will each receive a *Special Diploma of Honor*, and of these last, those who attain the first and second rank shall receive respectively the first and second prizes.

The Honor Men of 1899 were: Geo. H. Sanborn, W. E. Denning, L. P. Adams, P. Lodge and E. W. Markham.

First Prize was awarded to George Henry Sanborn. Second Prize to Wm. Edward Denning.

**Full Fees of the College.**

Matriculation Fee, payable each term .................................. $  5 00
Full Course of Lectures, each year ..................................... 110 00
Single Ticket, for those who wish to take one or more subjects and not the whole course .............................................. 20 00
Fee for graduation, payable once and not returnable ................. 25 00

Graduates of other regular Medical Schools are admitted on payment of the matriculation fee and $25.00.

Graduates of this school are admitted without fee.

Theological students are admitted on payment of the matriculation fee only, unless intending to graduate in medicine, in which case they will be required to conform to the above conditions.

Students will be required to deposit with the Treasurer $5.00, from which will be deducted the value of any bones taken from the museum.
which may fail to be returned, and any charges for breakage in the laboratories. The remainder of such deposit, or the whole, if there be no charge against it, will be returned to the student at the close of the term.

All fees must be paid to the Secretary, and are payable in advance. As the seats for the term are assigned when the matriculation fee is paid early matriculation is desirable.

For further particulars address the Secretary,

B. J. ANDREWS, M. D.,
Mary Fletcher Hospital,
BURLINGTON, VT.

Board.

Board may be obtained for from $3.50 to $5.00 per week. Good accommodations can be found for students who wish to board themselves. Many adopt this method at a great reduction in expense. Students who intend to board themselves will find such bedding and culinary articles as they may require, furnished with the rooms.

After registering, every student is furnished with a certificate entitling him to reduced rates on railroad and steamboat lines running into Burlington.

Text Books and Books of Reference.


On Materia Medica and Therapeutics.—Hare's System, (3 vols.) Biddle, Shoemaker, Butler, White, National Dispensatory, Hare, (1 vol.); (Therapeutics,) Thoreton; (Prescription writing,) U. S. Pharmacopœa.


On Diseases of the Urinary Organs.—White & Martin; Van Buren & Keys; Genito Urinary Surgery, Eugene Fuller.

Disorders of the Male Sexual Organs, Eugene Fuller.


On Diseases of the Skin.—Taylor, Jackson, Crocker, Fox, Duhring.

On Diseases of the Nervous System.—Hammond, Dana, Gray, Mills.

Dictionary of Medicine.—Duane, Keating, Dunglison, Gould.

Bacteriology.—Abbott, Sternburg, McFarland.

Histology.—Piersol, Klein, Schaffer, Stöhr.

Hygiene.—Rohe.

Pathology.—DelafIELD & PrUedler, Green, Ziegler, Woodhead.

Clinical Microscopy.—Von Jaksch (Clinical Diagnosis), Simon (Clinical Diagnosis), Cabot (Clinical Examination of the Blood), Peyer's Atlas of Clinical Microscopy.
Graduates of 1899.

Lemuel Payson Adams, A. B. ........................................ Vermont
Albert Kurwin Aldinger ........................................ Pennsylvania
Leon Bernard Allen .................................................. Vermont
Ernest Jason Alley .................................................. Massachusetts
Harold Levi-Baldwin ................................................. New York
Lester Rupert Brown ............................................... New Hampshire
Dexter James Clough ................................................ Maine
James Hervey Conklin ............................................ Connecticut
Francis Phillip Conway ........................................... New Hampshire
William Edward Denning ........................................ Vermont
Thomas Harry Dixon ................................................ New Brunswick
Joseph Abner Dow .................................................. Maine
Frank Emerson Farmer ............................................ Vermont
Harry Roswell Farris ............................................... Maine
Fred Abram Fowler ................................................ New Hampshire
Claude Adelbert Freligh .......................................... New Hampshire
Edward Francis Gleason .......................................... Massachusetts
Dana Bailey Goddard ................................................ Vermont
Horace Joseph Gibbons ........................................... Pennsylvania
Herbert Bill Hanson, Ph. B ....................................... Vermont
William Edward Thomas Hamill .................................. Rhode Island
Morgan Brewster Hodskins ........................................ New York
Chester James Hurlburt ........................................... Vermont
Fred Kinney Jackson, A. B .......................................... Vermont
Joseph Addison Jackson .......................................... Vermont
Charles Kimball Johnson .......................................... Vermont
James Fotheringham Kendrick ..................................... Vermont
James Thomas Kerrigan .......................................... Massachusetts
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George Edward Norton, Massachusetts
Williams Thomas Owens, Connecticut
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Elmer Walter Powers, New York
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George Henry Sanborn, New Hampshire
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Walter Chadwick Sears, Vermont
Lester Everett Smith, New York
Ned Carroll Stiles, Vermont
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Charles Rufus Skinner, B. S, New York
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Thomas Jefferson Strong, Vermont
Charles Porter Sylvester, Massachusetts
Thomas Sumner Tapley, Maine
Albert J. Thomas, New York
William Burton Thorning, New Hampshire
Mark Aurele Trudeau, Canada
Walter James White, Vermont
Row Obed Woodruff, New York
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## CLASS OF 1899.

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Copies of questions used in the examinations of 1898 will follow from which candidates can get an idea of the character and scope of the preparatory work required.

**Geography.**

100 credits, necessary to pass, 75.

Answer ten questions but no more. Each complete answer will receive 10 credits.

I. Show by a drawing or otherwise the meaning of each of the following terms: bay, promontory, confluence of rivers, peninsula, island.

2. Mention the five zones into which the earth's surface is divided and the circles that bound each zone. Give in degrees the width of each zone.

3. What season is it now in Australia? Explain.

4. Describe New York state, touching on (a) its position on the earth, (b) its extent, (c) its principal mountains, (d) its level portions, (e) its principal river basins.

5. Trace the course of the waters from two of the following to the ocean: Chautauqua lake, Seneca lake, Otsego lake.

6. Mention a point of interest connected with each of the following: Ithaca, Oswego, Saratoga, Gloversville, Albany, Poughkeepsie, Buffalo, Ticonderoga, White Plains, West Point.

7. Show by an outline sketch the location with reference to the United States of the Bermuda islands, the Bahama islands, Key West, Cuba, Hayti. Give the name in each case.

8. Mention (a) three states that lie in the corn belt of the United States, (b) two states that lie in the wheat belt, (c) three states that export large quantities of timber, (d) two important fruit producing states.

9. Mention and describe one railway route between the Atlantic and the Pacific.

10. Give the source and the general direction of each of the following rivers: Yukon, Connecticut, Tennessee, Platte, Columbia.

11. Describe the common route across the isthmus of Panama. To whom does this isthmus belong?

12. Give the location of each of the following and one important fact concerning each: London, Edinburgh, Manchester, Dublin, Liverpool.

13. Where and what is each of the following: Sardinia, Vesuvius, Lapland, Caucasus, Moscow?
14–15. Write a description of two of the following countries, touching on (a) position on the earth, (b) two important cities, (c) chief mountains and rivers, (d) vegetable and mineral productions, (e) commerce: China, Congo Free State, Spain.

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Physics, Part 1.

100 credits, necessary to pass, 75.

Answer ten questions but no more. Each complete answer will receive 10 credits.

1. Distinguish between (a) simple and compound substances, (b) physical and chemical changes. Give an example of each.
2. Describe an experiment illustrating crystalization.
3. Explain by aid of a diagram the distinction between centrifugal force and centripetal force.
4. Describe an experiment illustrating the absorption of gases by solids.
5. Two weights, one of 25 kilograms, the other of 15 kilograms, are suspended from opposite ends of a rod 1 meter long; neglecting weight of rod, find the magnitude and point of application of a single force that will maintain the rod in equilibrium.
6. An arrow shot vertically upward returns to the earth in 12 seconds; compute the height to which the arrow ascends and its final velocity.
7. A weight of 4000 kilograms is to be raised by a jack screw whose threads are 5 centimeters apart; neglecting friction find what power must be applied to the end of a lever 1 meter long to turn the screw.
8. State the relation between center of gravity and point of support in each of the three conditions of equilibrium, illustrating each.
9. Explain the operation of a condensing pump. Use diagram.
10. Find in grams the total pressure on the inside of an open box 10 centimeters square and 8 centimeters deep, filled with mercury. [Sp. gr. mercury=13.6.]
11. A Fahrenheit hydrometer weighing 12 grams requires 6 grams in the pan to sink it to a certain depth in water; to sink it to the same
depth in nitric acid 13.56 grams must be placed in the pan. Find the specific gravity of the acid.

12. Describe the construction and explain the use of some kind of barometer.

13. Describe a method of testing the accuracy of the freezing point and the boiling point of a centigrade thermometer.

14. If a liter of air at 20° C. is cooled to −10° C, what will be its volume, the pressure remaining constant?

15. If 100 grams of copper at 10° C. are mixed with 40 grams of water at 20° C., the temperature of the mixture is 26.16° C., determine the specific heat of copper.

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**United States History.**

*100 credits, necessary to pass, 75.*

*Answer 10 questions but no more. Each complete answer will receive 10 credits.*

1. Give a brief account of the Cabots and of their explorations. What claim was founded on these explorations?

2. Sketch the circumstances that led to the first permanent European settlement on what is now United States territory. What was the extent of European colonization in North America at the end of the 16th century?

3. Show how each of five of the following was identified with the exploration or settlement of the new world: Cartier, De Soto, Ribault, Frobisher, Espejo, Gosnold, Champlain, Hudson.

4. What two countries made early settlements on the belt lying between the lands granted to the London company and those granted to the Plymouth company? Outline the history of the two settlements.

5. Give an account of the following connected with the intercolonial wars: (a) causes, (b) banishment of the Acadians, (c) the decisive battle and its results.

7. Give an account of the work of the second continental congress.

8. Give an account of two of the following and mention the administration in which they occurred: (a) the Whiskey Rebellion, (b) Wayne's campaign against the Indians, (c) the Jay treaty.

9. Give an account of two of the following: (a) origin and significance of Mason and Dixon's line, (b) the development of the national flag, (c) the Missouri compromise, (d) how California became a state of the Union.

10. Write on two of the following topics: (a) the Kansas-Nebraska bill, (b) the contests between the friends and opponents of slavery in Kansas and in Congress, (c) the appearance of a new political party in 1856, (d) the political campaign of 1860, (e) secession of South Carolina.

11. Mention three important battles of the civil war and give an account of one of them.

12. Give an account of two of the following: (a) the war with the Sioux Indians and the death of Custer, (b) the presidential succession law, (c) one important event in the administration of Benjamin Harrison.

13. State the three principal grievances set forth in Madison's message as sufficient reasons for declaring war against England. Mention two statesmen who urged the administration to recommend war.

14. Give an account of the battle of New Orleans and state its result. What was the moral effect of this battle?

15. Show how the United States was affected by the war of 1812, as to (a) standing among nations, (b) domestic relations, (c) new industries, (d) commerce, (e) improvement of internal communications.

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