Sixty-Fourth Annual Announcement of the Jefferson Medical College of Philadelphia: The Session of 1888-89
SIXTY-FOURTH
ANNUAL ANNOUNCEMENT
OF THE
JEFFERSON MEDICAL COLLEGE
OF
PHILADELPHIA.

THE SESSION OF 1888-89.
WILL BEGIN ON MONDAY, OCTOBER 1st.

PRESS OF WM. FELL & CO., 1229-31 BROAD ST., PHILA., PA.
SIXTY-FOURTH

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DERMATOLOGICAL.
J. ABBOTT CANTRELL, M.D. Assistant.

RENAI DISEASES.
J. L. SALINGER, M.D., Assistant.
In issuing the Announcement of the Sixty-Fourth Course of Lectures, the Faculty of the Jefferson Medical College have been encouraged by the success of the changes made last year in the character and methods of instruction to institute others of even greater importance. Full details regarding these advances in the methods of instruction are given in the succeeding pages, to which the careful attention of physicians and students is invited, as well as to all the various means and methods employed in this school to ground students in the principles and train them in the practice of the Medical Sciences.

THE COLLEGE BUILDINGS.

The College buildings are situated on Tenth street and Sansom, between Chestnut and Walnut, and consist of a Medical Hall, a Laboratory Building, and the Jefferson Medical College Hospital.

The Medical Hall, which is the original College building, contains two spacious and well-arranged lecture rooms. In respect to seating capacity, acoustic property, light and ventilation, these rooms are admirably suited to their purpose. The seats are numbered, and are assigned in the order of matriculation, but the most remote seats, notwithstanding the size of these halls, have a perfectly satisfactory view of the demonstrations on the lecture table.

This building contains, also, a very large and well-ventilated Dissecting Room, provided with ample light, water, and all other conveniences for the study of Practical Anatomy; and the laboratories of Pharmacy and Experimental Therapeutics, of Obstetrics and Gynaecology, and of Pathological Histology and Anatomy, which are commodious, brilliantly lighted, and completely equipped with the appliances required for work in these departments of medical science.

The Museum. Founded more than half a century ago, the Museum has grown with the College, and has annually increased in the number and variety of its specimens illustrating the Normal and Morbid Anatomy of every part of the human body.

Owing to recent changes in the College, the Normal Anatomy and Histological portions of the Museum have now been rearranged, and very greatly enlarged.

The Museum contains the extensive and valuable collection of the late Prof. S. D. Gross, M. D., which was formed by him during his long career in surgical practice, and which is especially rich in specimens of urinary calculus, diseases and injuries of the bones and joints, affections of the genito-urinary organs, and morbid growths.

The Museum occupies a distinct and capacious apartment in the College building, and is open daily, throughout the Session, to Matriculated Students.

The Laboratory Building is immediately adjacent the Medical Hall, with which it is connected by a wide hallway. This building contains the laboratories of Chemistry, of Physiology and Normal Histology, and of Operative and Minor Surgery, the Dean's office and Faculty room. The laboratories are capacious, well-lighted and completely arranged for the purposes to which they are applied.
HOSPITALS AND DISPENSARIES.

COLLEGE HOSPITAL.

The Hospital of the Jefferson Medical College is situated immediately west of the College, fronting on Sansom street, and is bounded on three sides by streets, and by a wide private passage way on the fourth side. It is 107 feet square, five stories in height, and is designed for the easy accommodation of 125 patients. In connection with the hospital is the out-patient or dispensary department of the College, which furnishes valuable material for clinical instruction. The amphitheatre for Clinical Lectures is one of the largest and most convenient in the United States. The most approved appliances for heating and ventilating have been provided, and, in architectural construction, and all desirable conveniences, this hospital will be found at least equal to any American clinical hospital.
of the Skin by Dr. A. Van Harlingen. During the last year seventeen thousand new cases were treated at the College Hospital and Clinics, and more than one thousand surgical operations were performed. We have the pleasure to announce that a Maternity Department is in successful operation. It is under the immediate charge of the Professor of Obstetrics, and opportunities for clinical instruction in Obstetrics are afforded to advanced students.

The practical use of the ophthalmoscope is taught to all candidates for graduation, in classes of convenient size, at the College Hospital, by Professor Thomson and Assistants. Instruction in the practical use of the laryngoscope is also given to these classes by Drs. Jurist and Bower, the chief clinical assistants in this department. An electrical room, containing the necessary apparatus for instruction and for clinical purposes, has been fitted up, and will now be regularly utilized by clinical assistants.

The Pennsylvania Hospital, a large and well-equipped institution, is situated in the immediate vicinity of the College. The field for instruction in acute diseases and surgical injuries is very large, and the staff is composed of physicians and surgeons eminent in their respective departments. The students of Jefferson College, by reason of the proximity of the Hospital to the College, and its immense resources for the illustration of all forms of diseases and accidents, have peculiar advantages. Prof. DaCosta and Dr. Longstreth are members of the staff.

Philadelphia Hospital. This extensive Hospital presents a large number and variety of cases for clinical instruction. Professor Parvin and Drs. Wilson, Hearn, Davis and Henry are connected with the Staff of this Hospital. Cases of smallpox and of other contagious diseases are treated at the Municipal Hospital, a separate and distinct institution.

The Presbyterian Hospital. The positions of Drs. Allis and Rex, as members of the Staff of this Hospital, afford special opportunities to the students of the Jefferson Medical College for clinical study.

German Hospital. The staff of this important hospital have now made arrangements for conducting clinical teaching, in which the resources of this excellent institution are utilized to the fullest extent. Dr. Lawrence Wolff, a member of the Staff, is also Demonstrator of Chemistry in Jefferson College, and will use his clinics for the benefit of his classes. A new clinical amphitheatre, with ample seating capacity, has been recently erected.

Wills Ophthalmic Hospital. This old and extensive hospital is within a short distance of the College, and daily Clinics are held there. Students desiring to take private courses have the opportunity afforded them, and can obtain instruction from members of the staff or from the clinical chiefs.

In all, Philadelphia has twenty hospitals, nine dispensaries and thirty eight other charitable institutions with which infirmaries are connected. Almost every special branch of medicine and surgery has its distinct institution, as the Orthopedic Hospital and Hospital for Nervous Diseases, Dispensary for Diseases of the Skin, Children's Hospital and others. Graduates and advanced students desiring to pursue any special branch of medical science, or any of the recognized specialties, have, therefore, admirable opportunities afforded them in these various hospitals and other public medical institutions.

The clinical instruction and admission to the wards in all the hospitals of Philadelphia are free to the Matriculates of the Jefferson Medical College, except the Pennsylvania Hospital.
THE DIDACTIC AND CLINICAL LECTURES.
WINTER SESSION.

The next Session will begin with the General Introductory Lecture by Professor Bartholow, on Monday evening, October 1st, 1888, and will end on the last of March, 1889. During this period instruction in the following branches of Medicine will be given by the Faculty:

Practice of Medicine and Clinical Medicine.
Materia Medica, General Therapeutics and Hygiene.
Institutes of Medicine (or Physiology) and Medical Jurisprudence.
Principles of Surgery and Clinical Surgery.
Practice of Surgery and Clinical Surgery.
Obstetrics and Diseases of Women and Children.
Medical Chemistry and Toxicology.
General, Descriptive, and Surgical Anatomy.

In addition there will be given Clinical Instruction on the following special branches:

Renal Diseases.
Orthopaedic Surgery.
Dermatology.
Laryngology and Rhinology.
Diseases of Children.

ORDER OF LECTURES.

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In these Didactic Lectures the rich cabinets of the school and of the individual Professors are freely used for the purpose of illustration. As is well known, the lectures of the Faculty have always been eminently demonstrative, and this character will continue prominent and distinctive.

SPRING AND FALL LECTURES.

Supplementing the regular Winter Didactic and Clinical Lectures there are a Fall or Preliminary Session and a Spring Session.

The Fall or Preliminary Session begins on Monday, the 17th of September, and continues until the opening of the Winter Term, and embraces special instruction on the subjects appended to their names by members of the Faculty and Hospital Staff:

Clinical Medicine, . . . . By Prof. Da Costa.
Hygiene, . . . . . . . . . . . Prof. Bartholow.
Physiology, . . . . . . . . . Prof. Chapman.
Clinical Surgery, . . . . . . Prof. Gross.
Operative Surgery, . . . . . . Prof. Brinton.
Diseases of Women, . . . . . . Prof. Parvin.
Chemical Physics, By Prof. HOLLAND.
Surgical Anatomy, Prof. FORBES.
Ophthalmology, both didactically and clinically, " Prof. THOMSON.
Pathological Anatomy,
Renal Diseases, clinically, " Dr. LONGSTRETH.
Orthopaedic Surgery, " Dr. WILSON.
Diseases of Children, " Dr. ALLIS.
Laryngology, " Dr. REX.
Dermatology, " Dr. SAJOUSS.

The Lectures during this Course are given in the mornings, leaving the after-
noons for dissections. The clinics at the hospitals are given daily throughout the
year.
The Spring Session begins early in April and closes on the last day of May.
The Lectures in this Course during the Spring of 1888 were as follows:

Electro-Therapeutics, Prof. BARTHOLOW.
Experimental Physiology, Prof. CHAPMAN.
Toxicology, Prof. HOLLAND.
Surgical Anatomy, Prof. FORBES.
Insanity, Dr. J. B. CHAPIN.
Physical Diagnosis, with Practical Demonstrations, Dr. J. C. WILSON.
Practical Surgery, D. J. E. MEARS.
Blood Diseases, Dr. F. P. HENRY.
Special Therapeutics, Dr. S. SOLIS-COHEN.
Changes in the Puerperal State, Dr. E. P. DAVIS.

CLINICS AT THE COLLEGE HOSPITAL.

Venereal and Genito-Urinary Diseases, Prof. GROSS.
Anal and Rectal Diseases, Prof. Brinton.
Ophthalmic Surgery, Prof. THOMSON.
Orthopedic Surgery, Dr. O. H. ALLIS.
Diseases of Children, Dr. O. P. REX.
Skin Diseases, Dr. A. VAN HARLINGEN.
General Medicine, Dr. WIRGMAN.
General Surgery, { Dr. HEARN,
Gynæcology, { Dr. ALLIS,
{ Dr. MEARS,
{ Dr. J. C. DA COSTA.

In addition to the Clinics mentioned in the above list of Lectures, Medical
Clinics were held in the Pennsylvania Hospital, by Dr. Longstreth, and at the
Philadelphia Hospital, by Dr. Henry.

PRACTICAL AND LABORATORY INSTRUCTION.

Laryngology. Clinical Obstetrics.
Urinalysis. Pharmacy and Materia Medica.
Pathological Anatomy and Histology. Physiology and Experimental Thera-

PRACTICAL ANATOMY.

Students who would be required to take these laboratory courses during the next
Winter term, are advised to attend them, instead, at this Spring term.
There is no additional charge for the Spring Course of Lectures to Matriculates
of the College, except a registration fee of $5. Non-Matriculates pay the regis-
tration fee, and also $55, which latter sum is, however, credited on the amount of
fees paid for the ensuing Winter Course.
THE DIDACTIC LECTURES.

It will be perceived, from the above, that the course of instruction continues through eight months of the year. The important part of the period of study is, of course, the Winter Session of six months, and this alone is obligatory. As the fees paid for the Spring Session are remitted to those taking the ensuing winter course, except the registration fee of five dollars, and as the preliminary or fall term is free, the fees paid for the regular term cover almost the whole cost of instruction for nine months.

THE CLINICAL LECTURES.

Clinical instruction has always been an important feature of this College, in which, indeed, systematic clinical methods were first inaugurated in this country. While the amphitheatre of the Hospital is one of the most commodious in this country, the material of the Clinic is most abundant, and represents almost every possible condition of disease or injury. According to the last annual report of the Hospital, the number of patients treated in the wards and private rooms was 1455; the total number of patients treated in out-patient departments was 17,078; the total number of visits in out-patient departments was 69,225. Besides the College Clinics, students can attend at the various hospitals and dispensaries mentioned before, the lectures being so arranged as to afford them the opportunity to do so.

PRACTICAL AND LABORATORY INSTRUCTION.

The courses of Practical and Laboratory instruction are designed chiefly for, and are obligatory upon, all candidates for the degree who have not taken these courses in other schools, and are free of charge to them, except in the case of Practical Anatomy. Candidates for partial examination will be required to attend those branches on which they desire to be examined at the end of the session. Graduates of other schools who do not purpose to take the degree, are permitted to attend these courses, if they so desire. Those purposing and qualified to come forward for the degree will, at the beginning of the session, be divided into sections, for practical and laboratory work.

A system of practical instruction of an elementary and introductory character has been prepared for the students of the first class. Divided into sections, first-course students will, hereafter, receive special instruction in anatomy, histology, chemistry, materia medica and physiology adapted to the requirements of that stage in their studies. In the paragraphs devoted to these departments, further on, the details of these courses will be given.

It may be said that this extensive system of laboratory instruction does not add to the expenses of the student.

Attention is also called to the fact that those who desire to pursue such practical studies privately, can always obtain the services of competent instructors, for a moderate fee.

THE LABORATORY OF PRACTICAL AND MANIPULATIVE OBSTETRICS.

The Demonstrator of Obstetrics, etc., under the supervision of the Professor, will train the students in each section in the various manipulations, by hand and instrument, necessary for the investigation and local treatment of the disorders of the reproductive system which obtain chiefly in the non-pregnant state. He will
further instruct them in the diagnosis of the presentations and positions of pregnancy, with the modes of rectifying errors and accomplishing delivery by manual and instrumental means. The cadaver, principally, will be used in these teachings, and, in addition, models, diagrams, and the manikin will be resorted to, as they may be required for subsidiary use.

**CLINICAL OBSTETRICS.**

In the Maternity Ward of the Hospital classes are instructed in the signs of pregnancy, diagnosis of presentations and positions, and the management of the pregnant and the puerperal states. In the out-patient department, patients are attended at their homes by students of the graduating class under the direct supervision of the Demonstrator. During the Winter Session of 1887–88, 102 pregnant women were registered, and every graduate had the opportunity of attending cases of labor.

**CLINICAL MEDICINE.**

The special instruction in clinical medicine, heretofore conducted under the supervision of the Professor at the Hospital, will be continued. The course will be exemplified by the ample material of the daily clinic. Each student will thus be made familiar with practical medicine. Facilities will also be afforded for practical instruction in Physical Diagnosis at the College Hospital. Sections of the class will, at hours set apart for the purpose, be taught by special instructors, under the general supervision of the Professor of Practice, on patients, on whom the physical signs of disease will be demonstrated. The success attending this method of instruction at previous sessions encourages the hope of the best results from its continuance.

The Professor of Practice will also, during his clinical term, devote a number of hours to Clinical Conferences. During these, the advanced student will have a case assigned him, which he will be required, with the aid of the Chief Clinical Assistant, to examine beforehand, and which, then, with remarks on the diagnosis, prognosis and treatment, he will present to the class.

**THE LABORATORY OF PRACTICAL CHEMISTRY.**

The working laboratory for Medical Chemistry and Toxicology is under the supervision of the Professor of Chemistry, aided by the Demonstrator and his assistant. Each student during his course has assigned him a table, with full reagent sets and a lock-drawer containing all needed appliances.

The instructions here given will be in harmony with the chemical lectures of the Winter Session, and will be conducted in such a manner as to secure to the student a practical familiarity with the apparatus, materials, processes and reactions which are the subjects of his professional study, and which are to be availed of in his subsequent practice.

The course for first-year students will begin after the Christmas holidays; will deal especially with Toxicology, and will consist of—

I. **MANIPULATIONS,** in which each student will himself perform various experiments, shown and explained by the Professor of Chemistry in his regular lectures previous to the holidays. These will include Acidimetry and Alkalimetry.

II. **TOXICOLOGY,** especially adapted to the wants of the medical practitioner. This will include an extensive range of testing for the various poisons, mineral and organic, commonly met with in practice, and conclude with a practical examination of samples of vomited matters of unknown composition.
The course for second-year students will begin the first week in October and continue till Christmas. It will embrace—

The Examination of Normal and Abnormal Products of the human body, as aiding in the diagnosis of disease. The Practical Morbid Chemistry of the Bile and the Blood, and the most approved methods of examining Urine, Analytical and Microscopic, will be performed by each student according to the principles taught by the Professor of Chemistry in the latter half of the lecture term. At the close of this course, each student will make a diagnostic examination of a sample of urine of an unknown composition.

Advanced students who desire to pursue special chemical investigations will be given the opportunity under suitable regulations.

THE LABORATORY OF MATERIA MEDICA AND EXPERIMENTAL THERAPEUTICS.

The laboratory of Materia Medica and Therapeutics contains a complete cabinet of materia medica preparations and active principles, for study by each pupil, as the articles are taken up by the Professor during the regular term. The room has been also equipped for pharmaceutical instruction, and a systematic course in pharmacy is given. The laboratory is provided with the following instruments and appliances for special researches in the physiological action of remedies: a kymographion with recording cylinders and Foucault's regulator; a Fick's spring kymographion; a mercurial pump run by a water-motor, for artificial respiration, a double myograph; Marey's sphygmograph; Coat's apparatus; a recording stethometer; mercurial manometer; Rhumkorff's coil; metronome; dissecting and other microscopes; Czermack's holder, and other apparatus necessary for this purpose. Members of the class who have been instructed in the methods of experimental therapeutics, will be assigned remedies for study under the direction of the Professor and his assistants. A number of valuable special researches have been made by members of the class, and these are published from time to time as original contributions to knowledge.

In the course on Pharmacy each student performs the necessary manipulations, and makes in turn the various preparations. Cases containing representative specimens of the materia medica have been procured for personal examination and study by each student. First-year students will receive these in turn, so as to obtain a practical acquaintance with the appearance and physical qualities of all the really important remedies. Original work done there by the undergraduates will appear in a volume now in preparation.

The laboratory is always open to members of the medical Profession desiring to pursue any special investigation. The tanks for frogs and the cages for warm-blooded animals have ample capacity for all purposes, and the apparatus is sufficient for the most elaborate investigations.

THE LABORATORY OF PHYSIOLOGY.

Experimental Physiology.—The physiological teaching will embrace the demonstration of the essential phenomena of digestion, absorption, circulation, respiration, excretion, the functions of the nervous system, including the special senses, the reproductive apparatus and development of the embryo. For these demonstrations, as well as for original research, the laboratory is equipped with the following apparatus: For the study of—

Digestion and Absorption.—Chemical appliances for the investigation of the properties of the albuminous bodies, the chemistry of the tissues, the composition
of the digestive fluids, blood, etc., instruments for making gastric and intestinal fistulae, water-bath and dialysers, and apparatus for recording rate of secretion.

Circulation.—Czermack’s holders; kymographion clockwork motor; Foucault’s regulator and three recording cylinders, including those for continuous traces; mercurial manometers; Bernard’s differential manometers; Brindley’s and Sanderson’s cardiographs, cardiophone with telephonic attachment, Haldat’s and other apparatus for demonstrating hydrostatic phenomena; Marey’s simple cardiograph and sphygmograph with Sanderson’s modification; Marey’s apparatus of rigid, elastic and vertical tube; arterial schema; Hawksley’s vascular schema; Magendie’s cardiometer; Fick’s spring kymograph; Marey’s cardiac clamp; Coat’s apparatus with Brubaker’s modification; Franck double myograph; Marey’s cardiac sounds for horse, apparatus for retardation of pulse, cardiograph for small animals, Ludwig’s strobmuhr, and apparatus for studying capillary circulation, the warm and electrical stages, gas chambers, Gower’s apparatus for counting blood corpuscles, also a hemoglobinometer.

Respiration.—The Pettenkofer-Voit respiration apparatus; Regnault and Reiset’s respiration apparatus; Ludwig’s respiration apparatus; Valentin’s respiration apparatus; Hutchinson’s spirometer; recording stethometer; Marey’s pneumograph; Bamberger’s apparatus; Rosenthal’s apparatus with Brubaker’s modification; aerotonometer; Grébaut-Alverguiat gas-pump; apparatus for artificial respiration, with water motor; anemometer scales turning the beam at the $\frac{1}{25}$ of a grain, and standard barometer; Calliburce’s instrument for vibratile cilia.

Calorimetry.—Thomson’s and D’Arsonval’s calorimeters; thermometers, etc.

Secretion.—Roy’s kidney onkometer and onkograph. Apparatus for determining rate and amount of area.

Nervous System.—Du Bois Reymond’s induction apparatus with Helmholtz’s modification; spring myograph; muscle telegraph, non-polarizable electrodes, diverting chambers, key, rheocord, round compensator, resistance box, whippe; commutator; moist chambers; Wiedemann’s galvanometer, including telescope and scale; Thomson’s Elliott galvanometer, including shunt, scale, lamp, etc.; Bunsen and Daniell batteries; Page’s vibrator; metronome; chronograph; tuning forks, marking keys; Bernstein’s differential herotome; Helmholtz’s electro-magnetic rotator and myophone with telephonic attachments and pendulum myograph; Pflüger’s myograph; Grébaut’s chariot with clock-work motor; Brubaker’s apparatus for electrotonus; apparatus for reflex movements, and Ludwig’s section cutter for spinal cord.

Vision, Voice and Hearing.—Models of eye; Kuhn’s artificial eye; Helmholtz’s ophthalmometer; models of larynx and ear; acoustical apparatus, including air-pump and bell; Helmholtz’s siren; acoustic bellows; sonometer; rods, membranes, plates, pipes, resonators, oboe vox humana; Koenig’s manometric apparatus.

Embryology.—An incubator, capable of holding one hundred eggs for the study of development and numerous microscopic sections.

Comparative Physiology.—This collection, embracing several hundred specimens, many of which are extremely rare, illustrates the comparative physiology of the teeth, stomach, etc., of the circulatory, respiratory and genito-urinary organs, of the nervous system, and of the successive stages in the development of the human embryo. The collection is used in supplementing the experimental demonstrations.

Arrangements have been made through which the laboratory can be also supplied from time to time, as required, with living fresh water and marine objects for biological study, as well as ample material for dissection.
The physiological and histological department has been especially arranged with reference to the wants of the members of the graduating class, the laboratory demonstrations constituting a part of the regular instruction during the winter session. We take the opportunity of announcing, however, that the laboratory is also open daily from September 1st to July 1st, to all students wishing to devote special attention to physiology and histology. Instructions will be given in the use of the physiological and histological apparatus, ample material will be furnished for the purposes of study, and facilities will be afforded for original research and the publication of the results of same. Arrangements can be made for such special courses extending over a period of one year or of less duration.

THE LABORATORY OF OPERATIVE AND MINOR SURGERY AND BANDAGING.

As heretofore, in this department, the Demonstrator, under the direction of the Professors of Surgery, will instruct the class in the various manipulations of operative and minor surgery. For this purpose, those preparing for graduation will be divided into two classes, which will be admitted in rotation into the surgical rooms. At these successive meetings the various bandages and fracture dressings will be exhibited and explained, when each member of the class will be required to apply them.

The class will then be subdivided into sections for the practice of ligations, amputations and special operations upon the cadaver. To each section the Demonstrator will give instructions in surgical anatomy, the management of instruments and the proper methods of operating; and the operations will then be performed by the students in the presence of the Demonstrator and his assistants.

THE LABORATORY OF NORMAL HISTOLOGY.

The instruction in Normal Histology embraces the manner of using the microscope, the cutting, staining and mounting of sections, and the demonstration of the minute or microscopical anatomy of the various tissues and organs. This department is furnished with numerous microscopes and apparatus for imbedding, freezing and section cutting.

Within the year a cabinet of 1000 specimens, carefully mounted by an expert, has been purchased for the use of this department.

First-course students will be required to take part in these exercises.

THE LABORATORY OF PATHOLOGICAL ANATOMY AND HISTOLOGY.

During the winter term opportunities are afforded to the students of being present, in sections, at autopsies by Dr. Morris Longstreth, Lecturer on and Demonstrator of Pathological Anatomy, and Pathologist to the Jefferson Medical College Hospital and to the Pennsylvania Hospital. Instruction is given in pathological anatomy and pathological histology, to the class in sections, by Dr. Longstreth, during the winter term, in the laboratory. Abundant materials for this work are derived from the autopsies and surgical operations at the Jefferson Medical College and the Pennsylvania Hospitals, and the classes in the laboratory are supplied with specimens, to be examined microscopically, and explained to them by the Demonstrator. Lectures on Pathological Anatomy, by Dr. Longstreth, will form a part of the regular course.

The preparation of sections of morbid specimens, and the application of the microscope to pathological work in practical medicine, will constitute a part of the instruction in this department.
THE PRACTICAL COURSES.

The several practical courses above described will be under the direct personal superintendence of the Professors, assisted by their Demonstrators, as follows:—

ORDER OF LABORATORY EXERCISES.

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<tr>
<th>Subject</th>
<th>Monday</th>
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<td>Obstet’s &amp;c</td>
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<td>12 m.</td>
<td>11 A. M.</td>
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<td>for students who have passed in Institutes.</td>
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<td>Chemistry</td>
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<td>Mat. Med.</td>
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<tr>
<td>Physiology</td>
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<td>Surgery...........</td>
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<td>Path. Anat.</td>
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<td>Histology........</td>
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The Practical Courses in Ophthalmoscopy, Otoscopy, Laryngoscopy and Electro-Therapeutics, at such times as the Instructors find opportunity.

The lessons of these practical courses are, as their name indicates, entirely demonstrative. During the hours devoted to the practical work no lecturing is done, and only so much conversation with individuals is permitted as may be necessary for the unavoidable explanations.

Graduates and advanced students desiring special private courses in any of the departments of instruction, can arrange to obtain them of qualified instructors.

PRACTICAL ANATOMY.

The Dissecting Ticket ($10) is good for the Scholastic year, that is, from the 1st of September to the end of the following Spring Session; or from the 1st of April to the end of the following Winter Session, the usual summer recess being observed. This is obligatory for one session only, and is not required of any student producing evidence that he has dissected for one course in an accredited Medical or Dental College empowered to confer the degree of M.D. or D.D.S.

The rooms are spacious and provided with every convenience. They are open during the Winter Session, daily, from 8 A.M. to 10 P.M.; and during September, April, May, and to the middle of June, daily, from 8 A.M. to 6 P.M.; during the evenings in the Winter Session, and during the afternoons in the Spring and Preliminary Sessions.

The material is furnished at the small charge of $1 per part, and no extra or incidental charges are made.

Under the operation of the Anatomical Act, the supply of material has much increased and is ample.

Changes in the methods afford the opportunity to render the teaching of Anatomy more efficient. To this end three Demonstrators and three Assistant Demonstrators
carry on the work of the Anatomical Rooms. No lectures are given by the Demonstrators, but their duties are confined to directing the work of the students, and their instruction will have two special features:—

1. The demonstration of the bones, ligaments and joints to the students beginning anatomical study.

2. The demonstration of the cadaver, as the students proceed in their dissections.

With the view to introduce students properly to the study of Practical Anatomy, before beginning dissections, each student, with the material in his hands, will, under the direction of the Demonstrators, acquire the necessary elementary knowledge of the skeleton and its articulations.

The bones and joints will be demonstrated, and loose bones will be issued to each student, which he may, also, take to his room, for more deliberate study.

The demonstrations on the cadaver will be made systematically, to render the dissections of the student more intelligent, and to facilitate his acquisition of anatomical details. Careful supervision will constantly be had of the work of the students as they proceed in their dissections, to insure thorough acquisition of anatomical knowledge, which must ever constitute the groundwork of a medical education.

THE GRADED COURSE.

The whole period of study, to become a candidate for the Doctorate, is three years; and attendance on two full courses of lectures is also necessary. Fees are required for two full courses, and all subsequent attendance on lectures is free. Students may, therefore, during the three years of study, distribute their attendance on the required lectures over three courses, taking what is known as the "Graded Course," the first year being occupied with Anatomy (didactic and practical), Physiology, Chemistry and Materia Medica; the second year, with a review of the same subjects and Surgery, Medicine and Obstetrics, both clinical and didactic; the third year with a review of the last-mentioned subjects, and with work in the various laboratories and practical courses in connection with each Chair. An examination is held on the first-mentioned subjects at the end of the second term. Students failing on any subject at this examination are required to resume studies in that department.

The Faculty advise students to enter the College as early in their studies as may be, and attend three courses of lectures, whenever practicable. The same standard of acquirement is exacted from students pursuing any of the plans of study above mentioned.

With the winter session of 1890 a three years systematic obligatory curriculum will begin.

Of these three courses the last must be attended at this College, but either or both of the other two may be attended at some other accredited College whose courses are equivalent in the work done.

SPECIAL INSTRUCTION FOR PRACTITIONERS.

Hereafter, medical practitioners desiring to engage in special studies, or pursue some one of the recognized specialties, will have every opportunity afforded them. They can attend such lectures of the regular session as may be most suitable to their purpose, and can obtain from the Dean or members of the Faculty advice as to any special course by competent Instructors they may desire.
THE CLASS OF 1887-1888.

The class of the past winter session numbered 521, made up of representatives of the following States, Territories, Countries and Kingdoms:—

UNITED STATES.

Alabama, Indiana, Mississippi, Tennessee,
Arkansas, Iowa, Missouri, Texas,
California, Kansas, New Jersey, Virginia,
Connecticut, Kentucky, New York, Washington Ter.,
Delaware, Louisiana, North Carolina, West Virginia,
Dist. of Columbia, Maine, Ohio, Wisconsin,
Georgia, Maryland, Pennsylvania, U. S. Navy,
Idaho, Massachusetts, Rhode Island, U. S. Army,
Illinois, Minnesota, South Carolina.

FOREIGN COUNTRIES.

Australia, Cuba, Nova Scotia, Spain,
Canada, Germany, Nicaragua, U. S. of Colombia,
Central America, Mexico, Scotland, West Indies,
China, New Brunswick, Siam.

The class of the Spring Session just passed, numbered 93.
The graduating class numbered 188, making the total number of graduates to date 9132.

STATE EXAMINATION.

Some of the States have recently enacted laws, by the requirements of which students not provided with literary degrees, or other certificates of scholarship necessary to the study of medicine, must undergo an examination before a State Board, in the subjects of such preliminary study, as a prerequisite for a license to practice medicine within their borders. That the graduates of this College may be spared the trouble incident to compliance with these regulations, all students intending to engage in practice in those States will have the opportunity of undergoing such an examination before a Committee of the Faculty, and will receive a certificate therefor. The examination will include all branches requisite to a good English education, comprising mathematics, composition, and elementary physics.

EXAMINATION FOR THE DOCTORATE.

REQUIREMENTS FOR GRADUATION.

The examination for the degree of M. D. is held immediately at the close of the winter term of lectures. The examination, conducted by the Faculty—each Professor in his own branch—will hereafter be a written one. Students failing to reach the standard exacted for the degree of Doctor of Medicine may be credited as having passed on such branches as they have shown proficiency in, and will not be required to stand examination on those branches should they apply again. The presentation of a Thesis will not be required, unless in competition for a prize. The candidates are examined in turn upon all the subjects of the curriculum, except those who have taken the graded course, and have been previously examined and passed under regulations now existing. Certificates from other medical
schools, testifying to a successful examination in one or more branches, are not accepted in lieu of the final examination by the Faculty of this College.

The candidate for the degree of M. D. must present a certificate of good moral character, and be at least twenty-one years of age. He must have attended at least two full Winter sessions of lectures, of which the last shall have been in this College, and the previous one—or more—either here, or in some regular* college, authorized to confer the degree of M. D., and in which Anatomy, Chemistry, Materia Medica and Therapeutics, Physiology, Surgery, Practice of Medicine, and Obstetrics are embraced in the Curriculum. He must have studied medicine for not less than three years, including private tuition, under a regular* graduate of medicine, or some regular* institution, and have attended at least one course of Clinical Instruction, and of Practical Anatomy. Candidates for graduation will be required to show certificate of at least one course of Practical Anatomy or Dissections either at the Jefferson Medical College or some other accredited medical or dental college empowered to confer the degree of M. D. or D. D. S.

He must exhibit his tickets, or other adequate evidence of attendance on the required courses of lectures, as well as a satisfactory certificate of his entire period of study, to the Dean of the Faculty, and give to the Faculty, at his examination, evidence of his professional attainments. A grade based upon the work performed by him in the laboratories, noted and entered in registers, will be considered by the Faculty in determining his final graduating average.

Students who have attended one complete course in a recognized Medical School, where attendance on two complete courses is necessary for a degree, and where the same branches are taught as in this, are permitted to become candidates by an attendance here on one full course; the rules of graduation being in other respects observed. They are also exempted from the payment of fees upon attending a second term.

Students of Dental Colleges in which a five-months winter session is held, and where full courses are given on Anatomy, Materia Medica, Physiology, and Chemistry, may become candidates, after attendance on two courses at such Colleges, and one full course at the Jefferson Medical College, with another on Surgery, Practice of Medicine, and Obstetrics.

Students of Colleges of Pharmacy where full courses are given on Materia Medica and Chemistry, may become candidates, after attendance on two courses at such Colleges, and one full course at the Jefferson Medical College, with another on Anatomy, Surgery, Practice of Medicine, Physiology and Obstetrics.

Students who have attended two full course on Anatomy, Chemistry, Materia Medica, or Institutes, may be examined on any of these branches, at the end of their second course. They are thus enabled to devote their last course to the didactic lectures on the remaining branches, and to clinical study.

The attendance upon the Spring Course of Lectures continues to be large, and the Faculty earnestly recommends all who have it in their power to use the facilities thus offered. But this course, as well as any kindred or intermediate Course elsewhere, is not ranked as one of the two which are requisite for graduation.

Attendance on the Spring Course, and also on a previous or succeeding Winter Course, is considered a year of study, as it occupies the whole scholastic year, and students who have thus attended will not require a preceptor’s certificate.

Students who have attended two full courses of lectures in other accredited medical colleges, are entitled to the tickets of a full course in the Jefferson Medical College for $70.

*The word regular is here used in the sense commonly understood in the medical profession.
Graduates of other accredited medical colleges will pay the matriculation fee, and $50 for a general ticket.

To graduates of approved Dental Colleges the fees for a general ticket are for the first session $60, and for the second session $100; and of Colleges of Pharmacy the fee for a general ticket is $100 for each session.

No honorary degrees in Medicine are granted; and graduates of other schools who offer as candidates for graduation in the Jefferson Medical College are required to attend the lectures, and to pass an examination before the Faculty.

All college dues, and also the Diploma Fee, must be paid before the examination for the degree. But the Diploma Fee is returnable to any one who may withdraw from, or fail at, the examination.

All fees are payable in advance; promissory notes are under no circumstances accepted as payment; and no ticket is issued until full payment for the same has been made.

**EXPENSES.**

*First Session.*

Matriculation, once paid, ........................... $  5
Full Course of Lectures, including Laboratory Courses, 140
Dissection, ........................................ 10

$155

*Second Session.*

Full Course of lectures, including Laboratory Courses, 140
Graduation Fee, .................................... 30

170

$325

**PRIZES.**

The following Prizes are offered to the graduates of the Jefferson Medical College, at the Annual Commencement, in 1888:—

No. 1. A prize of $100, by The Medical News, for the best Thesis founded upon original experiments, clinical observation, or superior excellence in scholarship.

No. 2. Practice Prize. A Gold Medal, or a case of Instruments, for the best essay on a subject pertaining to the Practice of Medicine.

No. 3. Experimental Therapeutics Prize. A case of Clinical Instruments, for the best original research in the Materia Medica Laboratory.

No. 4. Physiology Prize. A Gold Medal, or a case of Instruments, for the best essay on a subject pertaining to Physiology.

No. 5. Surgery Prize. A Gold Medal, or a case of Instruments, for the best essay on a subject pertaining to Surgery.

No. 6. Obstetrical Prize. A Gold Medal, or a case of Instruments, for the best essay on a subject pertaining to Obstetrics, or for a specimen illustrating some point in relation thereto.

No. 7. Chemical Prize. A Gold Medal, or a case of Instruments, for the best original work in the Chemical Laboratory.

No. 8. Anatomy Prize. A Gold Medal, or a case of Instruments, for the best Anatomical Preparation.

No. 9. Pathology Prize. A Gold Medal, or a case of Instruments, for the best essay on some subject connected with Pathology, or for a Pathological preparation.
BOOKS OF REFERENCE.

Practice of Medicine.—Da Costa on Diagnosis; Bartholow’s Practice of Medicine; Flint’s Practice of Medicine.

Materia Medica and General Therapeutics.—Bartholow’s Materia Medica and Therapeutics; Bartholow’s Treatise on Electricity.

Institutes of Medicine.—Chapman’s Physiology; Taylor’s Medical Jurisprudence.

Principles and Practice of Surgery.—Gross’ System of Surgery.

Obstetrics, and Diseases of Women and Children.—Parvin’s Treatise on Obstetrics; Winckel on Diseases of Women; Smith on Diseases of Children.

Chemistry.—Attfield’s Chemistry; Cranston Charles’ Physiological and Pathological Chemistry; Taylor’s Toxicology; Holland on the Urine.

General, Descriptive, and Surgical Anatomy.—Gray’s Anatomy, or Leidy’s Anatomy; Klein’s Histology.

INFORMATION FOR STUDENTS.

The personal expenses of the student are at least as low in Philadelphia as in any other large city. Students can board comfortably for from four to five dollars per week, fire and light included; and those who are willing to live at some distance from the College, or to club together in lodging-rooms, at even less rates. Board during the summer is lower than in winter.

Students will save time and expense by going directly to the College, Tenth Street above Walnut, on their arrival in the city. The Clerk will at once see them provided with board. The Dean will, if desired, attend to the collection of the drafts and checks of the student, and the safe deposit of his money.

Students are advised to matriculate and procure their tickets without delay. The Dean issues a general ticket, which confers the right of attendance according to its terms.

Mail matter can be directed to the College, and be obtained from the Clerk. The Dean can be seen at his office, in the College building, every day, from 11 A. M. to 1 P. M., or at such times as he may hereafter announce.

All business connected with the College is transacted at the office of the Dean. Letters on business of exclusive interest to the writer must inclose a return stamp to secure attention.

By the Faculty:

J. W. HOLLAND, M. D.,
DEAN.
GRADUATES
OF
THE JEFFERSON MEDICAL COLLEGE
OF PHILADELPHIA.
APRIL, 1888.

At a Public Commencement, held at the American Academy of Music on the 4th of April, 1888, the Degree of Doctor of Medicine was conferred on the following gentlemen, by E. B. Gardette, M.D., President of the College, after which the Valedictory Address to the Graduates was delivered by Professor Roberts Bartholow, M.D., LL.D.

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATE OR COUNTRY</th>
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<td>Becker, Phares N.</td>
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NAME.
Elden, William McKee, Pennsylvania.
Ellis, J. Cannon, Pennsylvania.
Emrick, M. Luther, Pennsylvania.
Eshner, Augustus A., Pennsylvania.
Ewing, Charles Wesley, Pennsylvania.
Felder, Lawrence A., Pennsylvania.
Fisher, Charles W., Pennsylvania.
Franz, Charles H., Pennsylvania.
Frick, J. Howard, Pennsylvania.

Gaddis, Jacob Ernest, Georgia.
Gibbon, Robert Lardner, Pennsylvania.
Gifford, Ulysses Grant, Pennsylvania.
Gillars, Alexander Liddell, Pennsylvania.
Goudy, Rollin Andrew, Pennsylvania.
Gould, George Milbury, Pennsylvania.
Green, Clarence Creesy, Pennsylvania.
Grellith, William Clark, Pennsylvania.
Groff, John W., Pennsylvania.

Haines, William Fisher, Delaware.
Harris, Albert Beecher, Pennsylvania.
Hawkins, John Thomas, Pennsylvania.
Hershey, Edgar Parker, Pennsylvania.
Hickey, Stefano Joseph, Pennsylvania.
Hierholzer, John Charles, Pennsylvania.
Hilliard, Charles Eugene, Pennsylvania.
Hillsman, George Albert, Pennsylvania.
Hine, Marks Priestly, Pennsylvania.
Hoopingarner, George B., Pennsylvania.
Hoover, Daniel Henry, Pennsylvania.
Householder, Merchant C., Pennsylvania.
Hubbard, Charles Calvin, Pennsylvania.
Hudson, Elmer Alexander, Pennsylvania.

Ike, Edgar Milton, Delaware.
Irwin, James Kennedy, Delaware.

Jacob, Albert Nicholas, Pennsylvania.
Jennings, William Browning, Pennsylvania.
Johnston, Frank Elmer, Pennsylvania.
Johnston, John Waddell, Pennsylvania.
Jones, Benjamin Franklin, Pennsylvania.
Kantner, Franklin Jacob, Pennsylvania.
Kelly, James William, Pennsylvania.
Kelsey, Arthur Louis, Pennsylvania.

NAME.
Keim, Charles, Pennsylvania.
Kieffer, Charles Clifford, Pennsylvania.
Kirk, Edward, Pennsylvania.
Kline, David Frank, Pennsylvania.
Kring, Sylvester S., Pennsylvania.
Kunkle, Wesley Franklin, Pennsylvania.

Lane, J. Lewis, New Jersey.
Lashell, Ralph Maclay, Pennsylvania.
Lenker, David Edward, Pennsylvania.
Lewis, Benjamin Sykes, Pennsylvania.
Loos, Isaac B., Pennsylvania.
Lovett, Henry, Pennsylvania.

McC Chesney, Franklin Sayre, Pennsylvania.
McClellan, Robert Price, Jr., Pennsylvania.
McCleland, Joseph W., Pennsylvania.
McColgan, Robert, Pennsylvania.
McCoy, Ambrose, Pennsylvania.
McDonald, William Stephen, Pennsylvania.
McFadden, John Joseph, Pennsylvania.
McKnight, Adam Stephenson, Pennsylvania.

Macfarland, Burr W., New Jersey.
Magnus, E. R. Max, Pennsylvania.
Marbourg, Edgar Marcella, Pennsylvania.
Marbourg, Frank Bower, Pennsylvania.
Marbourg, Jeremiah L., Pennsylvania.
Maxwell, James Rea, Pennsylvania.
Meredith, Samuel Carlisle, Pennsylvania.
Merrick, Frederick T., Pennsylvania.
Merrick, Thomas Dudley, Pennsylvania.
Miles, William Thomas, Pennsylvania.
Miller, William Adam, Pennsylvania.
Mohr, Jacob Eugene, Pennsylvania.
Money, Philip Monroe, Pennsylvania.
Morrow, John Riddle, Pennsylvania.
Müller, Carl Louis, California.

Neel, George Pressley, South Carolina.
Neff, James Woodbury, Pennsylvania.
Newcomer, Frank Sherick, Pennsylvania.
Noble, Harvey Read, Pennsylvania.
Nusbaum, David Hamilton, Pennsylvania.

O'Connor, John Hugh, New Jersey.
Oliver, David H., New Jersey.
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Total: 188
The following prizes were awarded:—


4. A Gold Medal, for the best work in the Chemical Laboratory, to John Charles Hierholzer, of Pennsylvania.

5. A Case of Instruments, for the best Original Research in the Materia Medica Laboratory, to Jacob S. Pragheimer, of Pennsylvania, with honorable mention of the Essay of Samuel Tevis, of California.


7. A Case of Instruments, for the best Essay on a subject pertaining to Surgery, to Edward L. Beal, of Missouri.


9. A Case of Instruments, for the best Essay on a Pathological Subject, to Edgar Parker Hershey, of Pennsylvania.

10. A Gold Medal to William Stephen McDonald, of Maine, for the best report of Dr. Thomas G. Morton's Surgical Clinic at the Pennsylvania Hospital.
ALUMNI ASSOCIATION
OF
THE JEFFERSON MEDICAL COLLEGE
OF PHILADELPHIA.

The objects of this Association are the promotion of the prosperity of the Jefferson Medical College, offering of prizes, publishing of meritorious theses, endowment of scholarships for free medical education at the College of sons of Alumni whose means are limited, collection of anatomical and pathological specimens for the College museum, maintenance and cultivation of good feeling among the Alumni, and, above all, advancement of the interests of medical education, and diffusion of sound medical knowledge.

The members of the Association are the graduates and professors of the Jefferson Medical College. The trustees of the College and the Alumni of other recognized institutions are eligible to honorary membership. The annual contribution is one dollar, and when first paid constitutes the entrance fee to the Association. Any member who has paid his annual subscription for five years, or who has paid the sum of five dollars, becomes a life member, and receives a diploma of life membership, and is exempt from further dues. The latter is the preferable plan of payment.

Every graduate of the school, in good standing in the profession, is cordially invited to join the Association, and thus contribute to the advancement of its important interests.

At the last annual meeting, held April 2d, 1888, the following officers were elected for the ensuing year:

President.—S. W. Gross, M.D.
Vice-Presidents.—Roberts Bartholow, M.D., F. H. Gross, M.D., J. M. Barton, M.D., J. C. Wilson, M.D.
Corresponding Secretary.—Richard J. Dunglison, M.D.
Recording Secretary.—Orville Horwitz, M.D.
Treasurer.—H. Augustus Wilson, M.D.

EXECUTIVE COMMITTEE.


Orator for 1889.—Chas. B. Nancrede, M.D., of Philadelphia.

Graduates are requested to forward to the Corresponding Secretary their present addresses.

**Members of the Association who have already paid annual subscriptions are respectfully reminded that the amount is due for five years from date of membership, and that it is desirable that they shall, at their earliest convenience, by completing the full amount specified for such purpose, become enrolled in the list of life-members of the Association.

Remittances for dues should be forwarded to Dr. H. Augustus Wilson, Treasurer, 1611 Spruce Street, Philadelphia.

All other communications relating to the Alumni Association should be addressed as below.

RICHARD J. DUNGLISON, M.D., Corresponding Secretary,
P. O. Box 1274, Philadelphia, Pa.