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COLLEGE OF  
PHYSICIANS AND SURGEONS

OF CHICAGO.

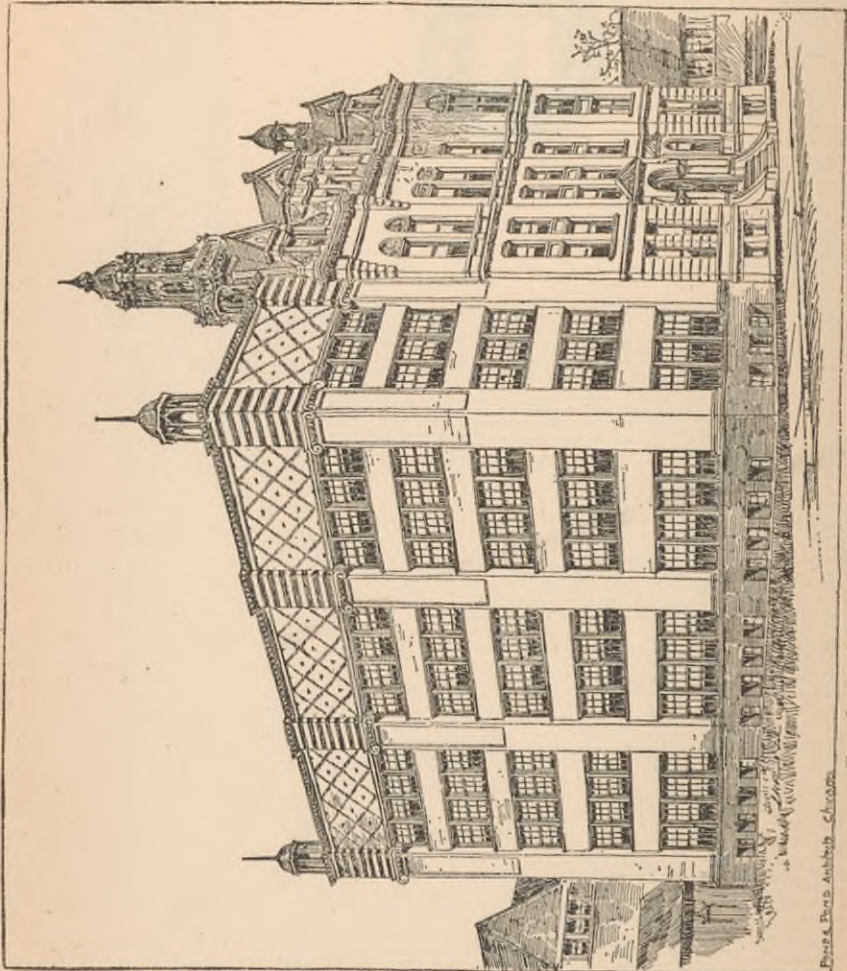
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THE COLLEGE OF PHYSICIANS AND SURGEONS, OF CHICAGO.  
THE NEW LABORATORIES IN THE FOREGROUND.



THE  
COLLEGE OF  
PHYSICIANS AND SURGEONS,  
OF CHICAGO.

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*ABSTRACT FROM THE*  
ANNOUNCEMENT FOR 1892-93.

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CHICAGO:  
PUBLISHED BY THE COLLEGE.  
1892.

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ALBERT E. HOADLEY, M. D.

OSCAR A. KING, M. D.

WILLIAM E. QUINE, M. D.



## REQUIREMENTS FOR ADMISSION.

Every candidate for admission to the College of Physicians and Surgeons is required to present the following credentials :

1. A credible certificate of good moral character.
2. A recommendation from a physician in good standing who is willing to act as the student's preceptor.
3. A diploma from a literary or scientific school granting the degree of B.S. or B.A., or their equivalent ; a diploma from a State Normal School or a diploma from a High School which will admit to the State University of the State in which the High School is located, or other satisfactory certificates.

In this category is the medical student's certificate of the Regents of the University of New York, and certificates from institutions in which instruction is given in English covering the following subjects :

1. Language; reading, writing, English grammar and composition.
2. Physics.
3. Arithmetic and algebra.
4. Latin, at least two years' work.

32. Students unable to meet the third requirement are admitted on passing a satisfactory examination in the following subjects :

(a). English : Every candidate will be required to write legibly and correctly an essay of at least two hundred words upon one of several subjects announced at the time of the examination, and also to write an abstract of a selection read aloud by the candidate from some English classic.

(b). Physics : The candidate will be examined on the elements of physics. The range of the examination may be understood when it is said that as complete a knowledge will be expected as can be gained from Balfour Stewart's or Gage's Elements of Physics.

(c). Mathematics : The examination in mathematics will cover compound numbers and percentage in Arithmetic, and fractions and equations of the first degree in Algebra.

(d). Latin : The examination in Latin covers the rudiments of grammar, the translation of easy Latin prose into English, and of English into Latin. The Commentaries of

Cæsar will furnish the basis of both. Students who cannot meet the examination in Latin will be allowed one year to make up this study by private tuition.

The entrance examination will be held in the College Lecture Room, on the Wednesday preceding the opening of each Spring and Winter term, and on two succeeding Wednesdays. Examinations will also be held at various places in the country on application to the Corresponding Secretary in time to make the necessary provision; † but these examinations will be held only on the Wednesday preceding the opening of the Winter term, or at other times for matriculants for the Non-Resident Course. All entrance examinations are *public* examinations, and when they are necessary at other times in the year, they will be made only at the convenience of the Faculty. The entrance examinations are open to those who have not matriculated.

#### COURSE OF STUDY.

The course of study in the College of Physicians and Surgeons covers four years. Each year consists of a Winter term of twenty-six weeks. There is also a Spring term of twelve weeks, beginning at the close of the winter session, at which extra clinical and laboratory work may be done, and the important studies of the Winter course may be reviewed. Attendance on the Spring course is optional. Students are recommended to begin their studies in the spring unless they possess the very best preliminary education.

#### THREE YEAR STUDENTS.

Students who present evidence of having studied under a preceptor for at least one year, and graduates of Universities from a Biological Chemical Course, and graduates in Dentistry and Pharmacy from institutions of the first class, may be admitted to this college to complete the course in three years.

† Applications must be in the hands of the Secretary at least as early as September 10.

Students who wish to shorten their medical course by presenting work done elsewhere, should be able to pass their examinations for advanced standing (see page 17), or present such credentials from their college or university as the professor or demonstrator making the examination will allow.

Candidates have been received during the past year from Cornell University, the University of Illinois, the University of Wisconsin, the University of Michigan, the University of Indiana, the University of Minnesota, the Institute of Technology (Boston), the Northwestern University, the Chicago College of Pharmacy, the College of Pharmacy of the Northwestern University, and the Chicago College of Dental Surgery. The certificates should be accompanied by a detailed account of the work done and the time spent in laboratory work, as well as the general statement of the proficiency of the student. The course of study in the published announcement of most institutions is sufficiently definite. It should cover more than half of the first year work, otherwise there will not be time for the student to make up his deficiencies without too much anxiety and strain. No three-year student may complain of any conflict of hours, or absent himself from the lower conflicting course, but he shall be allowed to make up examinations and laboratory work or clinical work during the spring course in those branches that are represented in that course.

#### FIRST YEAR WORK.

1. *Comparative anatomy, human osteology and myology.*  
 2. *Comparative physiology and histology.* 3. *Pharmacognosy and pharmacy.* 4. *General chemistry.*

1. *Comparative anatomy.* Two hours laboratory work each day in the week. One lecture a week on human osteology and myology. Dissection of one arm or one leg during the latter part of the year.

2. *Comparative physiology.* Two lectures a week, two laboratory hours a week, and four laboratory hours a week on histology.

3. *Pharmacognosy and pharmacy.* A study of the physical properties of medicines and the art of prescribing them. Practical pharmacognosy. One lecture a week and two laboratory hours a week.

4. *General chemistry.* Two lectures a week and four laboratory hours a week.

In all thirty hours a week during the year, and six extra hours a week during the time required for the dissections.

Final examination at the end of the year.

This course occupies the morning hours.

#### SECOND YEAR WORK.

1. *Human anatomy.* 2. *Physiology.* 3. *Histology.* 4. *Medical chemistry and toxicology.* 5. *The action of medicines.*

1. *Human anatomy.* The arteries, veins, lymphatics and nerves; the organs of sense; the viscera. Three recitations a week and two hours a day dissection during four months.

2. *Human physiology.* Three lectures a week, with demonstrations.

3. *Histology.* Six hours a week laboratory work, and four hours a week for embryology. A few lectures during laboratory hours.

4. *Medical chemistry and toxicology.* Six hours a week for laboratory work, and two hours a week for lectures and quizzes.

5. *The action of medicines and the art of prescribing.* Lectures two hours a week, laboratory work two hours a week.

In all twenty-eight hours a week, not including dissections. Final examinations at the end of the year.

This course occupies the afternoon hours.

#### THIRD YEAR WORK.

1. *Pathology.* 2. *The principles of surgery.* 3. *Obstetrics.* 4. *Diseases of children.* 5. *Diseases of the spinal cord.* 6. *Physical diagnosis.* 7. *Therapeutics.* 8. *Surgical anatomy.* 9. *Dental surgery.*



1. *Pathology.* Pathological anatomy, autopsies two hours a week, lectures two hours a week. General histological pathology, laboratory work, drawing and descriptions four hours a week. Surgical pathology, laboratory work, drawings and descriptions four hours a week, and one lecture a week. Bacteriology, one lecture a week and two laboratory hours a week. In all, eighteen hours a week. One dissection.

2. *The principles of surgery.* General surgical technique. General surgical pathology and therapy. Principles of surgical dressings. Two lectures a week; clinics.

3. *Obstetrics.* The anatomy and physiology of pregnancy, symptoms of pregnancy and development of the foetus, normal labor. Two lectures a week. Out patient clinics.

4. *Diseases of children.* One lecture a week; one clinic a week.

5. *Diseases of the spinal cord.* One lecture a week; one clinic a week.

6. *Physical diagnosis.* One lecture a week and two hours a week in small classes for the study of healthy models.

7. *Therapeutics.* Two lectures or quizzes a week.

In all, thirty hours a week, not including college and dispensary clinics.

Final examinations at the end of the year.

Groups 1, 2 and 7 occupy morning hours; the remainder of the course is afternoon work.

#### FOURTH YEAR WORK.

1. *Medicine.* 2. *Surgery.* 3. *Gynecology.* 4. *Diseases of the male genito-urinary organs.* 5. *Ophthalmology and otology.* 6. *Laryngology.* 7. *Diseases of the brain.* 8. *Operative surgery.* 9. *Obstetrics.* 10. *Medical jurisprudence and hygiene.* 11. *Dermatology.*

1. *Practice of medicine.* Clinics four hours a week. Lectures six hours a week.

2. *Practice of surgery.* Clinics eight hours a week. Lectures on practice of surgery four hours a week.

3. *Gynecology.* Clinics two hours a week. Lectures one hour a week.

4. *Diseases of the male genito-urinary organs.* Clinics one hour a week. Lectures one hour a week.

5. *Ophthalmology and otology.* Clinics one hour a week. Lectures one hour each week.

6. *Laryngology.* Clinics one hour a week. Lectures one hour each week.

7. *Diseases of the brain and mind.* One hour a week for lectures and one hour a week for clinics, with six clinics at the Hospital for the Insane and the Detention Hospital.

8. *Operative surgery.* One hour each week, beside laboratory work upon the cadaver and living animals.

9. *Obstetrics.* Pathology of pregnancy, abnormal labor, obstetric operations and the puerperal diseases, one hour each week.

10. *Medical jurisprudence and hygiene.* Each twelve lectures.

11. *Dermatology.* One lecture or clinic each week.

In all, thirty-five hours a week.

Final examination and graduation at the end of the year.

Groups 1, 2, 3 and 9, and nearly all clinics occupy the afternoon hours; the remainder of the course is morning work.

Students are able to do a larger amount of laboratory and clinical work by leaving some of the branches for the spring course each year, and by attending a larger number of clinics in the special departments during both the summer winter courses.

In this outline the time spent in dispensary clinics is not counted, because it is not applicable to the whole class. Dispensary classes of four or six from the third and fourth year classes rotate through the various dispensary clinics and receive a large amount of instruction, both in diagnosis and treatment from the able Dispensary Staff.

During the spring and summer students from any class may attend the clinics, as they may prefer. They may thus give the whole time to clinics of a chosen branch.

#### ADVANCED STANDING.

Students who present evidence of having attended one or more years at other medical institutions, recognized by the Illinois State Board of Health, will be admitted to advanced standing upon passing the December examinations on at least two-thirds of the branches of each of the preceding courses.

Graduates of medical colleges whose diplomas are recognized by the Illinois State Board of Health may enter the third year course for a degree without examination on the studies of the two preceding courses by complying with all the other requirements of undergraduates. However, graduates of a few of the best equipped medical colleges who have taken not less than four years of exclusive medical study, may be admitted to the graduating class by paying the fees of one year, and passing all the examinations of the third and fourth year, and complying with the other requirements for graduation.

Examinations for advanced standing are held during the second week in December. These examinations are of the most comprehensive and general character. The interest of the student who has thoroughly prepared himself on the subjects will not be prejudiced by failing entirely in a portion of the work, provided the quality of the remainder indicates a mastery of the principles of the subject.

Students are admitted to the examinations for advanced standing only on the presentation to the Corresponding Secre-

tary of evidence that they have taken the requisite class or laboratory work, and that the fees for the coming year have been paid.

An idea of the examination may be obtained from the detailed course of study and the specimen questions in the appendix, and the extended outline of the first year's work.

### EXAMINATIONS.

All examinations in this college are public and formal. They are regularly held at the end of each term on the work of the term. Students are expected to take all the examinations, and if they fail in any branch they are required to present themselves for examination in that branch at the next examination. Students who fail in more than one-third of their studies cannot be admitted to advanced standing.

The regular examinations are the following :

1. The December examination for advanced standing.
2. The final examination at the end of the winter term.
3. The examination at the end of the spring term.

A certificate will be issued to each successful candidate, and he should promptly present it to the Recording Secretary, to be posted in the books of the college.

### REQUIREMENTS FOR THE DEGREE OF DOCTOR OF MEDICINE.

1. Satisfactory evidence of good moral character.
2. Satisfactory evidence that the candidate is at least twenty-one years of age.
3. Four full years of study of medicine under the direction of a physician or medical college recognized by the Illinois State Board of Health as such.
4. Attendance upon at least three full winter courses of lectures in a medical college, the last of which shall have been in this institution.
5. He must have pursued the study of practical anatomy



during three sessions, and to the extent of having dissected, at least, the lateral half of the body, and he must present the demonstrators' certificates for the same.

6. Attendance on two full winter courses of dispensary clinics and two full courses of hospital clinics.

7. Certificates of having passed all the branches of the first, second, third and fourth year courses.

8. Payment in full of all fees.

### THE FACILITIES FOR INSTRUCTION.

The college building is a fine, large structure, on the corner of two wide streets, and bounded on the north by an alley and lot, on which the West Division High School is located. On the west and remaining side there is an open space owned by the college, so that light and air are insured. The building is heated by steam. It contains two amphitheatres, both light and well ventilated. The smaller seats three hundred students.

The Chemical Laboratory accommodates a class of seventy-five, and it is well equipped. Each student has abundant room, and a secure locker, of which he carries the key.

The Pathological and Surgical Pathological Laboratories each seat seventy-five students. They are well provided with microtomes, microscopes, and the necessities of pathological investigation. These laboratories will be enlarged during the coming year.

The Dispensary occupies the whole of the first floor of the building. It is large, airy and clean. It is surrounded by ten clinic rooms, each of which is provided with hot and cold water, and the necessary furniture and instruments for its purposes. During the past three years there have been treated in this dispensary an average of 23,000 patients each year.

This dispensary furnishes material for the college clinics. These clinics are used to demonstrate methods of diagnosis and diagnostic logic, pathological conditions and medical and surgical treatment.

## HOSPITALS.

Directly opposite the College is the Cook County Hospital. This institution is the only free hospital in Chicago. It contains accommodations for six hundred patients. It has actually had over seven hundred patients during the greater part of the past year. It is for acute cases only. All chronic cases are sent to the Cook County Poor House. The hospital buildings are in four large pavilions, connected by two-story corridors with the Amphitheatre and the Administration building. The Detention Hospital and a Hospital for Contagious Diseases are located in the same enclosure. The morgue of the hospital and of the Coroner is situated on the hospital grounds. It is a modern structure, and seats two hundred students. Post mortems are made at definite hours daily, and pathological lectures are given by the pathologist twice a week, and at other times as often as material offers itself.

Medical appointments in this hospital are made by the County Commissioners each year. The internes, ten in number, are selected each spring, about March 20, by a competitive examination, which usually lasts two days. The examination is wholly written. Only graduates of medical colleges in Cook County are eligible to come into the examination, and those who present a certificate from the Secretary of a medical college in Cook County, declaring that the candidate will be graduated within thirty days from the date of examination.

The internes serve eighteen months and receive their board, laundry and fine rooms in the hospital. They do a great amount of surgical, medical and obstetrical work. The position is justly looked upon as the greatest medical prize the city affords to a young physician.

The students of the College are required to have County Hospital tickets during the third and fourth years of their course. The tickets cost five dollars a year, and they are on sale on the first day of October at the office of the Warden. The tickets admit the students to the clinics and the autopsies

and all public operations and lectures in the amphitheatre.

### THE COLLEGE HOSPITAL.

The College has bought the corner of Congress and Lincoln streets, 135×100 feet, and has made a contract with the Railway Benevolent Hospital Association for a building which will cover the lot. While this hospital may not be ready for occupancy October 1, it will be completed during the coming year. The dispensary clinics will then be transferred to the hospital to give more room in the present building for the didactic teaching. Internes for this hospital will be appointed each year from the graduates of this college. See also page 78 in regard to the Marquette Hospital.

### LABORATORIES.

While the laboratories used during the past year are the largest and best equipped in the city, they will be enlarged during the summer by the addition of a six-story building, 27×100 feet. The architects' sketch is reproduced elsewhere. A large supply of equipment and material has been ordered from Europe, and the furniture will be adapted to the needs of each demonstrator.

### METHODS OF INSTRUCTION.

Instruction is given in this institution by means of lectures and quizzes, by means of demonstrations and laboratory investigations, and by means of ambulatory and hospital clinics. The time of the student is about equally divided between laboratory work and clinics, on the one hand, and lectures and recitations on the other. The work of each year is complete in itself, and final examinations and credits are given as the work is accomplished. The work of each year is arranged to conflict in point of time as little as possible with the work of the preceding and succeeding year, so that students who have taken work that entitles them to a year of time may complete their studies in three years. The examinations at the end of

the Spring term are also final examinations, so that some studies may be gotten off at that time when necessary.

In the lectures the subject of the preceding lecture is reviewed by a quiz of a few minutes, and defects in the understanding of the subject are thus quickly detected. The students are expected to take notes, and also do collateral reading. Many of the lectures are preparatory to laboratory or clinical work.

The laboratory work is done from the beginning by the student from carefully prepared syllabi. The materials are furnished the student at cost, and he retains his preparations and drawings as types. The laboratory work is so arranged as to maintain what is thought to be the best relation to the lectures and clinical studies.

The clinical work is less orderly, but methods both of clinical examination and of reasoning are carefully and systematically taught. The diagnosis, prognosis and indications for treatment receive no less a share of attention than the methods of treatment and the technique of operative procedures. The clinics as well as the post mortem room furnish material for pathological, chemical or bacteriological investigation, and thus bring all departments of instruction in close relation in the mind of the student.

Each teacher has the greatest liberty in his own department, and, as a natural consequence, students receive instruction on important subjects from many points of view, and thus gain not only vivid but well rounded notions of the status of principles of vital interest.

**ANATOMY.**—The study of anatomy is this institution is carried on in some form during each of the four years. In the first year the general anatomy of the vertebrates is studied largely by dissections and drawings. At the same time the special anatomy of man is studied in the departments of osteology, by means of skeletons and bones, which are obtained from a bone room, with recitations, and in the department of myology by means of a single dissection and quizzes. The



comparative anatomy in the first year course consists of a large amount of laboratory work, with a few lectures during laboratory hours. The study of invertebrates, as well as vertebrates, is undertaken. The more accessible animals are studied by means of dissections. The student uses his notes from the lectures and a selected text-book. He makes drawings and demonstrations from his individual dissection.

During the second year the anatomy of man is the principal study, and dissections occupy the whole class for four months two hours a day. This work is done in the day time, both because the student is then in better condition to learn and to resist the unpleasant influences of the dissecting room, and because daylight affords better opportunity for study.

In the third year pathological anatomy and visceral anatomy are studied in the morgue and in post-mortem work outside in the service of the coroner. Topographical anatomy is studied in connection with lessons in physical diagnosis.

In the fourth year the anatomy of special organs and systems is studied in preparation for the lectures of the specialists, and surgical anatomy is studied under a special teacher.

**HISTOLOGY**, as a department of Anatomy, is studied during the first and second years. The student acquires the technique of simple histological study during the first year, and at the same time the use and care of the microscope. The free-hand drawing of histological objects as a means of insuring accurate observation is taught, and more ambitious drawings are encouraged when the time permits.

Each student is advised to provide himself with a good compound microscope. The college furnishes instruments to those who have none.

**EMBRYOLOGY**.—The work in embryology is designed to be a practical laboratory course, wherein the student may become familiar with the fundamental features of the subject by actual contact with the objects for study.

The embryo chick is chosen as the type for study, since the material is easily obtainable for the illustration of the different stages of development, and since all the essential points in mammalian embryology are represented by it. The work begins by a study of the characteristic stages in the whole embryo. By the aid of the simple magnifying and dissecting instruments the student works through the embryo of thirty hours, forty-eight hours, three days, and four days. Notes and drawings are made of these typical whole embryos in their various relations. After becoming thoroughly familiar with the embryo as a whole, a study of serial sections of typical parts of the hardened embryo is begun. The student now becomes familiar with the primitive germinal layers, and the part taken by each of these layers in the formation of the body and its various organs. One lesson will be devoted to the development of the blood vessels and blood corpuscles.

The histology of the various tissues will be illustrated in suitable preparations, and by proper fixing and standing, the karyokinitic changes in the nucleus during the formation of the different tissues of the embryo will be demonstrated. Special prominence will be given to the relation of the various embryological processes concerned in the production of malformations and anomalies of development.

Advanced work in mammalian embryology will be encouraged. The instruments and material for the course are provided by the college, each student being held responsible for the care of the outfit assigned to him. Several mechanical microtomes are provided, and members of the class will be given the opportunity of becoming personally familiar with the method of cutting ribbon or serial sections, and with the various technical methods employed in preparing and mounting serial embryo sections. The slides which are studied by the student become his personal property, together with the drawings and notes taken during the course.

PHYSIOLOGY.—This important subject is taught during two years; in the first year by means of laboratory work on the

smaller animals, readings and recitations, with occasional lectures; in the second year by means of lectures and class demonstrations.

**PATHOLOGICAL ANATOMY AND PATHOLOGY.**—In the third year pathology is the principal study. Pathological anatomy is taught by means of systematic lectures, by means of *post-mortem* demonstrations in the morgue, and by means of the careful study of the removed pathological organs.

The study of general histological pathology is conducted in the laboratory two days each week during the whole year. The technique of fixing, hardening and staining, which is necessary to accurate pathological study, is carefully taught, and yet when once acquired the student is not forced to spend an unnecessary amount of time in routine work.

The study of surgical pathology begins with the study of the problems of experimental surgery on small animals. The methods of growth and repair necessarily consume a great amount of study. The study of the reaction of tissues to infection and to thermal and chemical reagents requires exact technique and training. Each student is called upon to solve for himself all but the most difficult problems. This work is accomplished by means of one lecture and four laboratory hours each week. As a part of the pathological study a systematic course of lectures is given on bacteriology, and there are two hours laboratory work each week.

**CHEMISTRY** is taught by means of recitations and laboratory work during two years. The first year course includes inorganic chemistry and qualitative analysis, with a small amount of work in organic chemistry. The second year work includes toxicology, urinalysis and the examination of the secretions and other excretions of the body.

**PHARMACOGNOSY** is taught by means of lectures and laboratory work during the first year, and it includes a course in materia medica in the limited sense.

**PHARMACOLOGY** is taught by means of lectures and demon-

strations before the class. The outline of some of the work done in the first year can be seen in the appendix to this catalogue.

**SURGERY** is taught by means of lectures, clinics and laboratory work in surgical pathology, surgical anatomy and experimental surgery. The course is sufficiently defined in the syllabus in the appendix.

**GYNECOLOGY.**—This important branch of practical medicine and surgery will be taught by means of didactic and clinical lectures, manikins, drawings, and the exhibition of instruments and appliances. Modern methods of diagnosis and treatment in relation to the diseases of the pelvic organs of women will be fully elucidated. Selected cases from the abundant material furnished by the West Side Free Dispensary (situated in the college building) are presented to members of the Senior Class, sections of which in rotation are privileged to come into the arena and personally assist in the various surgical operations.

#### FEEES AND EXPENSES.

The fees at this institution are payable invariably in advance. The Faculty reserves the right to change them at any time, through publication in the annual announcement.

Matriculation fee, each year of attendance,	- - -	\$5 00
General ticket, each year of attendance,	- - -	60 00
Each Laboratory ticket, not returnable,	- - -	5 00
General Laboratory expense and breakage ticket, returnable at the end of each year,*	- - -	10 00
Each Dissection ticket, including material, not ret'ble,		10 00
Each Operative Surgery ticket, including material,	-	10 00

\*This money is for the material consumed or destroyed in the laboratories. The amount may be more or less, according to the carelessness or economy of the student.



It will be seen from the above fees and the requirements in the preceding pages, that the fees for students taking the full four year regular course is about as follows :

FIRST YEAR.	
Matriculation, - - - - -	\$5 00
General ticket - - - - -	60 00
Four Laboratory tickets, - - - - -	20 00
One Dissection ticket, - - - - -	5 00
Total, - - - - -	<u>\$90 00</u>
SECOND YEAR.	
Matriculation ticket, - - - - -	\$5 00
General ticket, - - - - -	60 00
Three Laboratory tickets, - - - - -	15 00
One Dissection ticket, - - - - -	10 00
Total. - - - - -	<u>\$90 00</u>
THIRD YEAR.	
Matriculation ticket, - - - - -	\$5 00
General ticket, - - - - -	60 00
Three Laboratory tickets, - - - - -	15 00
One Dissection ticket, - - - - -	10 00
Hospital ticket,* - - - - -	5 00
Dispensary ticket, - - - - -	5 00
Total, - - - - -	<u>\$100 00</u>
FOURTH YEAR.	
Matriculation ticket, - - - - -	\$5 00
General ticket, - - - - -	60 00
Hospital ticket,* - - - - -	5 00
Dispensary ticket, - - - - -	5 00
Operative Surgery ticket, - - - - -	10 00
Total, - - - - -	<u>\$85 00</u>

\* This fee is paid to the Clerk of the County Hospital, but it is placed here in the expenses of the year.

## FEES FOR THE SPRING COURSE.

Matriculation ticket,*	-	-	-	-	-	\$5 00
General ticket,*	-	-	-	-	-	20 00

Laboratory, Dissection, and material and breakage tickets, the same as for the Winter term.

There are no fees for special courses or quizzes at this institution. No instructor, dispensary physician or professor will receive any fee from students under any circumstances.

Students who entered the college under the old fee-table will be governed by that table.

The expense of living in Chicago is rather less than in other cities of its size. Much will depend on the tastes and habits of the student. Most students live on less than twenty dollars a month. There are a number of clubs each year, by means of which the student may still further reduce his expenses.

## LIBRARIES.

The Chicago Public Library is accessible to students, and they are able to get books from this large collection on complying with the simple requirements of the Librarian. The Newberry Library has established a medical department, in which all the current literature, amounting to more than two hundred and fifty serials, may be consulted. It is not a loan library. It contains about three thousand volumes on general medicine and pathology from the Jewell Library, and it is making additions from time to time. It is now the fourth medical library in the United States.

## ENTRANCE EXAMINATION, OCTOBER 15, 1891.

## ENGLISH.

1. Write a letter of two hundred words or more to the examiner. Give him an account of your education, and any occupation you have followed which, in your opinion, has prepared you for the study of medicine.

2. Write an essay of about two hundred words on *one* of the following subjects :

- |                |                      |                     |
|----------------|----------------------|---------------------|
| 1. Lincoln.    | 6. The liquor trade. | 11. Portia.         |
| 2. Webster.    | 7. Rain-making.      | 12. Romola.         |
| 3. De Soto.    | 8. City government.  | 13. Cossette.       |
| 4. Humboldt.   | 9. Land laws.        | 14. The Diatoms.    |
| 5. Longfellow. | 10. Socialism.       | 15. The earth-worm. |

## PHYSICS.

1. What is meant by the impenetrability of matter.
2. What do you understand by specific gravity ?
3. What are the three states of matter, and what is the condition of each ?
3. How would you find the specific gravity of a body about as heavy as iron ?
5. What do you understand by cohesion ? By adhesion ?

## MATHEMATICS.

*Put all the work on the paper.*

1. Four men bought a piece of land containing 640 acres, and divided it so that the first had  $\frac{3}{8}$ , the second had  $\frac{1}{3}$ , and the third had  $40\frac{2}{3}$  acres. How much did the fourth receive ?

2. If  $\frac{3}{8}$  of a barrel of pork is sold for what the whole barrel cost, what per cent. is gained on the part ?

3. What is the weight of  $\frac{1}{2}$  dozen spoons, if each spoon weighs 3 oz. 12 pwt. ?

4. Reduce to simple form :  $\frac{4x^2 + 8xy + y^2}{3x^2 - 3y^2}$

5. What is the value of  $x$  in the equation :  $x - \frac{x}{2} - \frac{x}{6} = 30$  ?

## LATIN.

## 1. Translate into good English :

Eodem die legati ab hostibus missi ad Caesarem de pace venerunt. His Caesar numerum obsidum, quem antea imperaverat, duplicavit eosque in continentem adduci jussit, quod propinqua die aequinoctii infirmis navibus hiemi navigationem subjiciendam non existimabat. Ispe idoneam tempestem nactus paulo post mediam noctem naves solvit, quae omnes incolumes ad continentem pervenerunt; sed ex iis onerariae duae eosdem, quos reliquae, portus capere non potuerunt et paulo infra delatae sunt.

## 2. Translate into Latin :

After the death of Romulus there was an interregnum of one year. When this had passed, Numa Pompilius was created King.

They say that Caesar waged war against the Gauls. Meantime Brutus and Cassius, the slayers of Caesar, instituted a great war. Many despise those things which they are unable to obtain.



## SYLLABUS OF FIRST YEAR'S WORK.

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1. *Comparative anatomy and human osteology and myology.* Two parallel courses.

(a). *Comparative anatomy,* - - - DR. OHLMACHER.

(b). *Human osteology and myology,* - - -  
DRS. MITCHELL and TANQUARY.

(a). The course in comparative anatomy consists in the study of the morphology of the following types. A short descriptive lecture is given at the opening of the laboratory hour, and each portion of the course is closed by a demonstration of some selected subject, a quiz or a written examination:

(1). The cray fish or lobster. Technique of dissections and drawings.

(2). The amœba. The bell animalcule. The fresh-water hydra. Elementary microscopical technique, measurement and drawing of microscopical objects.

(3). The earth-worm. (5). The pigeon.

(4). The frog. (6). The dog or rabbit.

For the first four sections, Huxley & Martin's *Elementary Practical Biology* is used as a guide. At the completion of this work the student will have attained sufficient proficiency in dissection to be able to prosecute the work in sections (5) and (6) with the guidance of the teacher.

On the completion of the regular work the student will be assigned some special subject for original study under the teacher's direction. This work will furnish the material for a thesis.

(7). Subjects for special study: Aside from advanced work on the types above mentioned, the student may select as a subject the cat, the rat, the turtle, the snake, the fish. Some special organ, or system of organs, is selected, with the approval of the teacher, and the attempt is made to produce an accurate set of drawings and descriptions.

TEXT-BOOK. — Huxley & Martin: Elementary Practical Biology (Second Edition). Macmillan & Co.

REFERENCE.—Wilder & Gage: Anatomical Technology as Applied to the Domestic Cat. A. S. Barnes & Co.

Howell: Dissection of the Dog. Henry Holt & Co.

Ecker: The Frog.

Lang: Comparative Anatomy. Macmillan & Co.

Huxley: Invertebrate Anatomy. D. Appleton & Co.

Barker: Elementary Biology. Macmillan & Co.

(b). *Human osteology, arthrology and myology.*

The bones, their development, articulations and functions.

The joints, their attachments, functions and nerve supply.

The muscles, their attachments, functions and nerve supply.

Students will be expected to name and describe bones at sight. They will make semi-diagrammatic drawings of limbs or selected sections of the skeleton.

TEXT-BOOK.—Quain's Anatomy (Longman, Green & Co.), or Gray's Anatomy (Henry C. Lea's Sons).

2. *Comparative physiology and histology.*

(a). *Comparative physiology,* - DR. OHLMACHER.

(b). *Histology,* - - - DR. EARLE.

(a). In connection with the course in comparative anatomy the student will become familiar with the life history of the types under observation.

Beginning with the simple, unicellular organisms, the student will be lead from a study of their life phenomena to the consideration of the functions of the various organs and systems of the higher forms of animal life. In this way he will proceed from the simple to the complex, and will carry on simultaneously the study of structure and of function. As far as possible, the subject will be made practical by simple experiments, which the student will carry out.

The use of the microscope will be taught in section (b) of this group under Dr. Earle.

Members of this class may select some subject for original study in this section instead of that in group (*I. a. 7*).

TEXT-BOOK.—Foster & Langley: Practical Physiology. Macmillan & Co.

(*b*). *Histology.*

1. The microscope. Optical laws involved. The simple microscope. The compound microscope. The stand, the care of the microscope and its accessories. The objective. The eye-piece. The production of the image. The immersion, objective, principle, and how used. Abbe's theory. The angle of aperture. The cover glass, objections to, how corrected. The Abbe sub-stage condenser, principle and use. The Abbe camera lucida, principle and use. Determination of magnifying power, measure and drawing of microscopical objects.

TEXT BOOK.—Gage: The Microscope and Histology.

REFERENCE.—Carpenter: The Microscope and its Revelations.

2. The study of sections illustrated by fruit. Prospective drawings of sections.

The microtome, its construction and use. Technique. Ribbon sections, principle, use and technique of.

3. The theory of fixing, staining, imbedding, cutting and mounting. Technique of same.

Special fixation methods. Technique.

Special imbedding methods.

TEXT-BOOK.—Lee: Microtomists' Vade Mecum.

4. The minute anatomy of the earth-worm.

5. The minute anatomy of the tad-pole.

6. The minute anatomy of special organs in the mammals. Especially the skin and its appendages, the blood and blood vessels, the lymph and lymphatic system, the organs of digestion, of secretion and excretion, and the organs of locomotion.

7. Comparative study of one selected organ in a series of animals in the line of original work. This will correspond with the work done in group (*I. a. 7*) of this year's work.

The work is done by the student from the first. He removes his own material from the recently killed animal. Takes it through all the stages of fixing and staining, and cuts it himself. Makes his own drawings in flat, and then in perspective. Constructs diagrammatic and semi-diagrammatic figures, and makes critical word pictures of the same.

REFERENCE BOOKS.—Landois & Stirling's Physiology; Klein & Noble Smith's Histology; Foster's Physiology.

3. *Pharmacognosy and pharmacy.* This group is composed of two parallel sections. - - - DR. HALSTEAD.

(a). *Pharmacognosy*, the study of the physical properties of medicine. This course includes the study of the selected portions of the materia medica. Students are taught to recognize the material as it is found in commerce. The chemical substances are tested for the common adulterants.

REFERENCE.—Bastin's Botany.

(b). *Pharmacy.*

It is not expected or desired that the students will become druggists, but a knowledge of what preparations are obtainable,—a knowledge of their properties and uses,—is essential to intelligent prescribing. This course will consist of a study of the United States Pharmacopœia, its origin, its scope and its use.

Weights, measures and specific gravity; the metric system and its relation to apothecaries weights and measures.

The relation of crude drugs to their preparations, and the relation of various preparations to each other. For example: Solid and fluid extracts and abstracts, tinctures, spirits and wines, waters and solutions, mucilages and syrups, mixtures and emulsions, infusions and decoctions, linaments and washes, cerates, ointments and plasters, alcoholoids, glucoids



and resins, volatile and fixed oils, pills, powders, capsules, suppositories and troches, chemical and therapeutical incompatibles and proprietary and patent medicines.

The writing of prescriptions.

REFERENCE BOOKS.—The United States Pharmacopœia, 1890; The Dispensatory; Remington's Pharmacy; H. C. Wood's Materia Medica and Therapeutics.

3. *General Chemistry.*

(a). The lectures and recitations, - - PROF. LYDSTON.

This course covers theoretical chemistry and chemical physics, the chemistry of the non-metallic and metallic elements, and the rudiments of organic chemistry.

Barker's Chemistry is used as the text-book.

(b). The laboratory work, - - MR. WESENER.

The laboratory work consists of experiments illustrating the laws of chemical combination and the essentials of qualitative analysis. The demonstrator will furnish printed syllabi covering the course.

Atfield's Chemistry is recommended for collateral reading and reference.

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For Catalogue and further information address

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