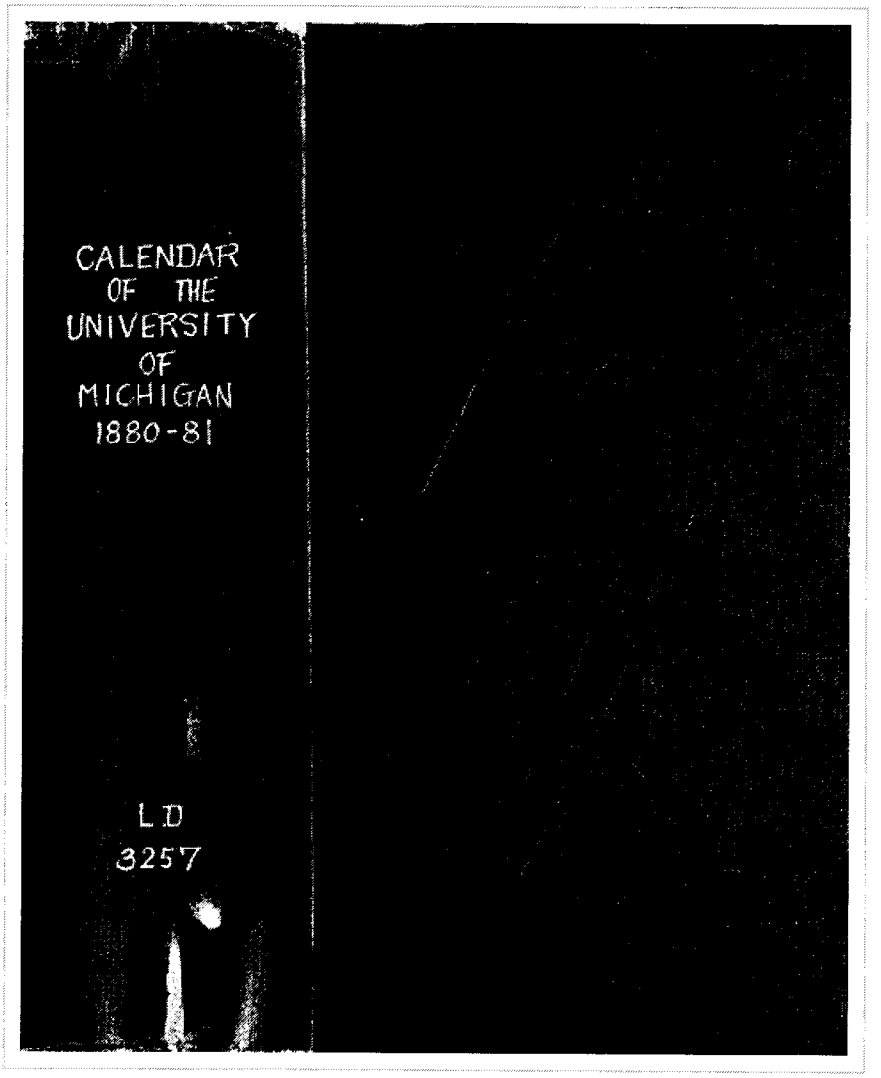

CALENDAR

OF THE

UNIVERSITY OF MICHIGAN

FOR

1880-81.

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CONTENTS.

	PAGE
ANNOUNCEMENTS FOR 1881–82	5
CALENDAR	6
BOARD OF REGENTS	7
BOARD OF VISITORS	7
EXAMINERS IN MEDICAL SCHOOLS	7
MEMBERS OF THE FACULTIES, AND OTHER OFFICERS	8—13
UNIVERSITY OF MICHIGAN	14—27
The University and the State	14
Organization of the University	14
The Libraries	15
The Astronomical Observatory	16
The Museums	17
The Laboratories	23
The Hospitals	26
Fees and Expenses	26
Relation of Students to the City Government	27
DEPARTMENT OF LITERATURE, SCIENCE, AND THE ARTS	28—65
Requirements for Admission	28—34
For Degree of Bachelor of Arts	28
For Degree of Bachelor of Science	31
For Degree of Bachelor of Letters	32
Admission to Advanced Standing	33
Times of Examination	33
Admission on Diploma from Michigan High Schools	33
Courses of Instruction	34—50
Requirements for Graduation	50—54
Description of the Courses in Professional Studies	54—62
Civil Engineering	54—59
Requirements for Admission	55
Technical Courses Described	55
Facilities for Instruction	57
Examinations	57
Requirements for Graduation	57
Requirements for Degree of Civil Engineer, after 1881	58
Mechanical and Mining Engineering	59
Analytical and Applied Chemistry	59
The Science and the Art of Teaching	61
The Teacher's Diploma	61
Rules and Regulations	62—65

PAGE

DEPARTMENT OF MEDICINE AND SURGERY ..... 66—78
Extension of the Course 66
Requirements for Admission 68
Assignment of Seats—Course of Instruction 69
Requirements for Graduation 72
Facilities for Instruction 73
Text-Books and Books of Reference 76
Fees and Expenses 77
DEPARTMENT OF LAW ..... 79—83
Requirements for Admission—Course of Instruction 79
Requirements for Graduation 81
Library—Prior Reading in Law 82
Fees and Expenses 83
SCHOOL OF PHARMACY ..... 84—88
Requirements for Admission—Course of Instruction 84
Requirements for Graduation 87
Post-Graduate Studies 87
Text-Books and Books of Reference 88
Fees and Expenses 88
HOMŒOPATHIC MEDICAL COLLEGE ..... 89—99
Extension of the Course 89
Requirements for Admission 90
Assignment of Seats—Course of Instruction 91
Requirements for Graduation 94
Facilities for Instruction 95
Text-Books and Books of Reference 98
Fees and Expenses 99
COLLEGE OF DENTAL SURGERY ..... 100—106
Requirements for Admission 100
Assignment of Seats—Course of Instruction 101
Requirements for Graduation 105
Facilities for Instruction 105
Text-Books 105
Fees and Expenses 106
CATALOGUE OF THE FACULTIES AND STUDENTS FOR THE YEAR 1880-81; PRECEDED BY A LIST OF THE GRADUATES OF 1880 ..... 107—161
Degrees Conferred in 1880 108
Department of Literature, Science, and the Arts 114
Department of Medicine and Surgery 129
Department of Law 140
School of Pharmacy 151
Homœopathic Medical College 155
College of Dental Surgery 159
Summary of Students 162
Summary by States, and by Departments 163
GENERAL INDEX 164

DEPARTMENT

—OF—

Medicine and Surgery.

I. EXTENSION OF THE COURSE.

Within the last three years important changes have been made in the course of instruction in the College of Medicine and Surgery. The extension of the course to three years of nine months each, long since recommended by the Faculty, and more recently by the Alumni of this College, and others of the medical profession of the State, has been accomplished. The great importance of this movement must be evident to all who appreciate the vast extension of medical science which has occurred since medical schools were established among us with four months' terms, or who compare the short courses prevalent in this country with those so much longer in Europe. The fault with many medical students in America is a desire to rush speedily over their course of study and enter, when but partially prepared, into the responsible duties of active practice. It is found, however, by the increase in the size of our classes since the extension of the term of instruction has been effected, that there are already many, and it is hoped that the number will increase, who desire more thorough and extended preparation, and that since the means of securing this thorough training are put by the liberality of the State within their reach, still more who have talent, energy, perseverance, and high aims, will avail themselves of the increased advantages offered.

In the plan of the extended course provided, which we are sure it will be for the interest of every medical student to take, the attempt has been made to combine a successive or graded course of study with reviews by repetition of the more important lectures, so as to obviate the serious objection of dismissing one part of a connected subject before its relations to other parts can be seen and appreciated, and to

avoid also the confusion incident to the presentation at the same time of so many parts of the general subject to the mind of the student at an early period of his studies.

This extended course affords time for the teaching and study of subjects not generally taught, or but very imperfectly taught, in our medical schools; and especially will it give more time for thorough work in the Laboratories now provided. Though not fully supplying the defects of preliminary education, this longer course, accompanied by repeated examinations and written exercises, will supplement the deficiences of earlier training, and of itself will be a most efficient means of mental discipline, and of literary as well as scientific culture.

This plan, which has been adopted with a view of avoiding the impracticable and of securing real and decided advancement, is presented in the hope that it will commend itself to the judgment and support of the profession. Upon the members of the profession who have encouraged such advancement by repeated recommendations, the schools making such improvements should be able to depend for more substantial encouragement than mere advice. Should physicians, while professing a desire for reform, send the students whom they control to schools where diplomas are soonest and most easily obtained, the cause of advanced medical education must suffer. Upon their consistency and practical efforts for reform, the success of these experiments must depend.

Should students be ready to begin the study of medicine near the opening of the term in October, it is advised that they enter the college at once and remain during the entire three years—the instruction in the graded course being adapted to beginners. Should it be more convenient for them to begin medical studies at a period distant from the opening of the college year, they should procure one of the text-books in Anatomy (Gray's is recommended), in Physiology, in Chemistry, and perhaps in General Pathology and Materia Medica, and a Medical Dictionary. A study of such works, even without a preceptor, will afford some general acquaintance with these fundamental subjects, and will, at least, give a knowledge of terms that will be of service in more readily comprehending the lectures.

The college year begins October 1, and ends in the last week of June. It is divided into two semesters to correspond with the arrangements in the Department of Literature, Science, and the Arts.

II. REQUIREMENTS FOR ADMISSION.

Every candidate for admission to the Department of Medicine and Surgery must be eighteen years of age, and must present to the Faculty satisfactory evidence of a good moral character.

Women are admitted, as to all other Departments of the University, on the same conditions that are required of men.

No previous study of medicine is required for admission. Candidates will be examined as to their elementary education and their fitness to pursue properly and profitably the technical study of medicine. The examination will be in writing. The candidate will be asked to give an account of his previous educational advantages, and to answer such questions in Arithmetic, Geography, and History, and on forms of government and current events, as shall show his general intelligence; and particularly will he be required to correct imperfect English, and to show his ability to express ideas correctly in writing. Since many present themselves a long time after completing their school education, the examination will not be technical, nor in the rules of school-books. The aim will be to ascertain the results of the candidate's previous training, and his present practical capacity and ability to appreciate the technical study of medicine. Such an examination is believed to be quite as effectual in guarding the profession from the introduction of illiterate and unworthy members as the requirements of a limited specified amount of school-book knowledge, to be studied up for the occasion. These preliminary requirements are not now of so high an order as it is hoped they will before long be made, but they are intended to be as exacting as is fairly practicable and consistent with the interests and rights of the profession and the people.

Graduates or matriculates of this University, or of any other University or College, graduates or advanced members of any academy or high school, persons holding certificates from any public school board of being properly qualified as teachers, and persons having certificates, based upon an examination by some recognized medical society, of being properly qualified to engage in the study of medicine, will not be required to pass the above examination.

Examinations will be held at 2 P. M., on Thursday and Friday, September 29 and 30, 1881. Candidates are required to present themselves on one of these days, as they are expected to be in attendance

on the first day of the term, at which time the regular course of instruction will begin. To provide for cases in which it is absolutely impossible for the candidates to be present at this time, supplementary examinations will be held at such times as may be determined upon by the Faculty, but no excuse, except of an urgent character, will be accepted for failure to appear at the first examination.

Before admission to examination every student is required to present to the Dean of the Faculty the Treasurer's receipt for the payment of the matriculation fee and the annual fee. It will, therefore, be necessary for the candidate to apply first to the Steward at his office in University Hall, register his name as a student in the Department of Medicine and Surgery, and pay his fees to the Treasurer. In case of rejection, the money paid preliminary to examination will be refunded.

ADMISSION TO ADVANCED STANDING.

Students who have studied medicine elsewhere at least one college year may be admitted, on examination, to an advanced position in the course, and may take such studies as they are able to pursue; but no such student can be admitted to the final examination for a degree who does not furnish evidence of having studied medicine three years, including the time spent in college, and who has not attended all the lectures as required in the schedule of studies. This course cannot be accomplished in less than four semesters of eighteen weeks each. Courses of lectures in other respectable medical colleges are, however, recognized.

III. ASSIGNMENT OF SEATS.

Students are allowed to select seats in the lecture-rooms in the order in which they pay their fees to the Treasurer, and each student is expected to occupy during the session the seat selected. In the clinical lectures the graduating class, by courtesy, are allowed the privilege of the seats nearest the operation table and lecture desk.

IV. COURSE OF INSTRUCTION.

The course of instruction consists of the lectures and exercises shown in the Table on the following page.

SUBJECTS.	Number of Courses required.	Number of Lectures in each Course.	Number of Lectures necessary to be attended.	REMARKS.
Anatomy—Descriptive	2	90	180	Delivered in Anatomical Amphitheatre.
Anatomy—Practical	1	----	----	In which all the anatomical structures are to be worked out by each student, requiring from 10 to 12 weeks of afternoon work in the dissecting-rooms, besides class reviews by examinations.
Physiology	2	40	80	Didactic Lectures in Amphitheatre, with Illustrations.
General Pathology	2	20	40	In General Lecture-room.
Histology with practical use of the Microscope, Mounting, etc.	----	----	----	In sections in the Physiological Laboratory. Fifteen lessons of afternoon work. (Optional).
Pathological Anatomy	1	20	20	In Amphitheatre, with Illustrations.
General Chemistry	2	48	96	In General Lecture-room, with Illustrations.
Qualitative Chemistry	1	----	----	Requiring six weeks of afternoon work in the Chemical Laboratory.
Analysis of Urine	1	----	----	Requiring six weeks of afternoon work in the Chemical Laboratory.
An Extended Course in Analysis and Toxicology	----	----	----	Continuing through a college year in Laboratory. (Optional).
Botany, Zoölogy, and Physics	----	----	----	Instruction given in the Department of Literature, Science, and the Arts. (Optional).
Materia Medica and Therapeutics	2	60	120	In General Lecture-room.
Electro-Therapeutics	----	----	----	Twelve lessons—practice with Instruments in Laboratory. (Optional).
Physical Diagnosis	2	16	32	In General Lecture-room, supplemented in the Hospital.
Obstetrics	2	60	120	In General Lecture-room.
Diseases of Women and Children	2	45	90	In General Lecture-room.
Clinical Gynæcology and Diseases of Children	1	72	72	In Hospital Amphitheatre.
Ophthalmology and Otology	1	24	24	In General Lecture-room.
Eye and Ear Clinic	1	72	72	In Hospital Amphitheatre, at regular forenoon hours.
Clinical Ophthalmology, at irregular hours	1	128	128	In Hospital, with sections of the class. (Optional).
Systematic Surgery	2	80	160	In General Lecture-room.
Clinical Surgery	1	72	72	At regular forenoon hours in Hospital Amphitheatre.
Clinical Surgery, often shorter lessons	1	128	128	In Hospital Amphitheatre, at midday. (Optional).
Practice of Medicine (Systematic)	2	90	180	In General Lecture-room.
Clinical Medicine	1	108	108	In Hospital Amphitheatre.

In this course the studies are so arranged that they may be pursued in the following order:

FIRST YEAR.—Anatomy, Physiology, Chemistry, Materia Medica, and Therapeutics.

SECOND YEAR.—Continuation of Anatomy, Physiology, Chemistry, Materia Medica, and Therapeutics; with Pathology, Medical Chemistry, and Clinical Medicine and Surgery.

THIRD YEAR.—Practice of Medicine, Surgery, Obstetrics and the Diseases of Women and Children, Ophthalmology and Otology, with Clinical Medicine and Surgery.

The above list will be understood to include all the special studies that appertain to, and form an essential part of, the general subjects enumerated. Such are: Histology, Physiological and Pathological; Laboratory work in Medical Chemistry, in Microscopy, and in Electro-Therapeutics; Qualitative, Physiological, and Pathological Analyses; Toxicology; Physical Diagnosis, etc.

The lectures are so arranged that, for the most part, the more elementary subjects are presented before the student proceeds to those more advanced, so as to secure as far as practicable an orderly succession of studies; while the more fundamental subjects are presented a second time during the course, so as to secure a more perfect comprehension of their principles and relations, and to fix the facts more firmly in the mind. The hours of the required lectures are so arranged (four being given each day) that no two are given at the same time, and every facility is afforded for students to attend the repetition of the lectures as often as may be thought profitable. The Faculty recognize what is evident in the experience of all medical students, that attendance upon lectures on the same subject a second time, after other related branches have been studied, is much more interesting and profitable than the first; and hence they require students to attend lectures on all the leading subjects more than once.

The students are examined often upon the subjects of the lectures in progress, either by the professors or their assistants, and these examinations are regarded as an important part of the teaching.

Clinics are regularly held in the Hospital Amphitheatre every Wednesday and Saturday during the college year, for medical, surgical, gynæcological, and ophthalmological cases, at which time examinations are made, prescriptions given, and surgical operations performed, in the presence of the class.

In addition to the didactic lectures, an elective course in Electro-Therapeutics is open to students. The work under this head is strictly practical, and is illustrated with special apparatus.

Two extended optional courses have also been established, one in Physiological and Pathological Chemistry, and another in Toxicology. The first will embrace analysis of the blood, urine, gastric juice, brain, bile, bone, muscle, and other fluids and solids of the body. The second will embrace courses in Qualitative and Quantitative Analysis, and the special examination of foods and of the tissues and fluids of poisoned animals, for the detection of the various mineral and organic poisons. Each of these special courses occupies about one college year of Laboratory work. Students willing to devote time to *original work* in Physiological Chemistry or other branches, after due preparation, are given the fullest encouragement and coöperation. Courses in Quantitative Analysis, and in Pharmaceutical Preparations, are also open to students of medicine who may desire such special training.

SEPARATE INSTRUCTION FOR WOMEN.

The course of instruction for women, though equal in all respects to that provided for men, is, for the most part, given separately. The two sexes are together, however, in the study of Chemistry, at the public clinics, and at some other exercises. Ample provision has been made for the women's classes in the way of lecture rooms, dissecting-rooms, etc.

EXAMINATIONS.

Written examinations are held in the closing week of each semester, and the student may be called upon to write upon some theme assigned by the instructor or selected by himself; the essay, if required, to be defended before the class.

The final examinations in Chemistry, Anatomy, Physiology, Materia Medica, and Therapeutics, are held at the end of the second year. The final examinations will be conducted, in part at least, in writing.

V. REQUIREMENTS FOR GRADUATION.

To be admitted to the degree of Doctor of Medicine, a student must be twenty-one years of age and possess a good moral character. He must have successfully pursued the study of practical anatomy and practical chemistry, and, unless the full course of study has been taken

in this College, have been engaged in the study of medicine for the period of three years, including the time spent in attendance upon lectures. He must also have passed satisfactory examinations on all the studies included in the full course of instruction ; or, if admitted to advanced standing, he must have attended at least two full courses of medical lectures, the last of which was at this College, and have passed the required examinations.

In consequence of the prominence given to written examinations through the course, no graduating thesis is required.

Students who matriculated prior to 1880, will, however, be allowed to graduate upon the conditions in force at the time of their matriculation.

Students who, in the first year, are allowed by the Faculty to take all the lectures of which duplicates are required, and who also take a suitable number of those required but once, may, after examination, obtain permission to pursue their studies with a competent preceptor out of the College during their second year ; and, after completing the course required by strict attendance during the full third year, may present themselves for examination for the degree at the end of that year.

The two medical schools in this University are distinct organizations, and, under the regulations established by the Regents, the Professors in one school are not required to take any part in conducting the final examination of students in the other, or in recommending them for graduation, or in signing their diplomas.

VI. FACILITIES FOR INSTRUCTION.

This Department is abundantly supplied with collections of plates, photographs, models, specimens, preparations, apparatus, and instruments, for the purpose of illustrating the different studies embraced in the course. Additions are made from time to time to these collections by special appropriations of the Board of Regents, so that the Faculty are able to adopt every new method of illustration, and to exhibit to the classes each year all important improvements in the way of instruments and apparatus that are employed in the practice of medicine and surgery, and to show their application.

The museums of Professors Ford and Sager, embracing several thousand specimens, which are the result of many years' labor in the

collection and preparation of materials intended to aid directly in teaching, have now become the property of the University, and are used in the daily work of the class-rooms. These museums contain a valuable collection of bones, illustrating healthy as well as diseased conditions, the various changes that occur from infancy to old age, and the processes of first and second dentition; dissections, general and partial, of the vascular, nervous, and muscular systems, both normal and abnormal; models of various portions of the body in wax, papier maché, and plaster, illustrating morbid growths, skin diseases, etc.; preparations in the comparative embryology, neurology, and craniology of the vertebrata; human embryology, and anatomy and pathology of the diseases of women, etc. The collection of monstrosities, both single and double, of man and the lower animals, is one of the largest in the United States.

The collections illustrative of Materia Medica consist of a very complete collection of crude organic medicinal substances, finely displayed and arranged according to their order in Natural History; also about one thousand other specimens of simple mineral and vegetable substances, and pharmaceutical and officinal preparations, active principles, etc., arranged in groups convenient for study. Medical Botany is further illustrated by several hundred large finely-colored Plates.

Ample supplies of materials for the purposes of Practical Anatomy are always on hand, and special attention is given to this important study.

Junior students will have an opportunity under competent instruction to study Comparative Anatomy and Physiology practically by dissecting various animals. While thus becoming familiar with structures and tissues, they will also acquire dexterity in the use of instruments preparatory to work upon the human cadaver.

The apparatus to illustrate the lectures in Chemistry and Chemical Physics is very full and complete. The Chemical Laboratory provides thorough instruction and suitable appliances for the practical study of all branches of Medical Chemistry. In each of the two Laboratory courses *required for graduation*, namely, Qualitative Chemistry (devoted to the study of chemical changes and incompatibilities), and Analysis of Urine (applied to clinical uses and physiological study), students are taken in sections of limited number for daily drill in the

class-room, to direct the daily practice in the Laboratory. Before beginning Laboratory work the student takes a preparatory course, with daily recitation, in chemical notation, and, at the close of the work in each course, is held to an examination. The times at which students may enter upon these courses will be announced at the opening of the college year.

By an act of the Legislature, a liberal appropriation for the equipment and conducting of a Physiological Laboratory has been made. Microscopes, a stereopticon, sphygmographs, and numerous other instruments for extended practical work have been procured, and are in daily use. By the coöperation of the Professors of Anatomy, Physiology, and Pathology, the students have opportunities in this Laboratory for practical instruction, under efficient instructors, in Experimental Physiology and in Histology, both Physiological and Pathological. This instruction supplemented by instruction in Pathological Anatomy and Medical Chemistry, is designed to afford students facilities for minute and specific scientific study and research. Such facilities, the want of which has been deeply felt by all advanced medical practitioners, are exceedingly rare in this country.

The University Hospital, with new pavilion buildings of sufficient capacity for a large number of patients, is now thoroughly equipped, and is in the immediate charge of a competent house surgeon and physician and an experienced matron. The whole is placed under the direction of the Faculty, who attend regularly upon the patients (each upon such cases as come within his special department) and give clinical instruction in the wards to advanced students. In connection with the Hospital a new and spacious clinical amphitheatre was erected last year.

The Hospital is kept open for patients applying from this and other States, during the whole college year, the only restriction being that no contagious diseases are admitted. Under the present organization, patients are much better accommodated, and clinical instruction is rendered more systematic and efficient than has hitherto been possible. The expenses to patients will be only for their board and for unusual appliances and medicines, the services of the Faculty being rendered gratuitously.

In addition to the foregoing aids to study, the students in medicine have free access to the general botanical, zoölogical, and geolog-

ical cabinets of the University, which are estimated to contain 255,000 specimens. The General Library, containing about 30,000 volumes, of which 2,350 are medical works, is also open to all students. A complete catalogue of the Library, arranged both by the names of authors and by subjects, is accessible to readers. The leading medical periodicals of this country and of Europe are taken and kept on file in the Library.

VII. TEXT-BOOKS AND BOOKS OF REFERENCE.

The books mentioned in the following list are standard authorities, and will form a good nucleus for a medical library. Any one of those mentioned in each department will answer the necessities of the student; and, wherever a preference exists, it is given to the one first in order on the list.

ANATOMY.—Gray, Wilson, Darling, Ford's Questions on Anatomy, Histology, and Physiology.

HISTOLOGY.—Stowell's Manual, Frey's Compendium, Stricker.

PHYSIOLOGY.—Foster, Dalton, Flint. *For Reference.*—Kirke, Carpenter, Sanderson's Handbook for the Physiological Laboratory, Foster and Langley's Practical Physiology.

CHEMISTRY.—*General Chemistry.*—Miller's Chemical Physics, Miller's Inorganic Chemistry, Eliot and Storer's Manual of Chemistry. *For Laboratory.*—Prescott's First Book in Qualitative Chemistry, Vaughan's Physiological Chemistry, Rose on Poisons, Wormley on Poisons, Woodman and Tidy.

MATERIA MEDICA AND THERAPEUTICS.—H. C. Wood, Jr., Stillé, Waring, Ringer. *Special Subjects.*—Headland on the Action of Medicines, Anstie on Stimulants and Narcotics, National Dispensatory.

PATHOLOGY AND PATHOLOGICAL ANATOMY.—Green, Wagner, Paget, Williams's Principles. *For Reference.*—Rokitansky, Virchow.

OBSTETRICS.—Playfair, Leishman, Byford. *For Reference.*—Schroeder, Cazeaux, Hodge. *Special Subjects.*—Tanner on Pregnancy, Barnes on Obstetric Operations, Elliott's Obstetric Clinic, Barker on Puerperal Diseases.

DISEASES OF WOMEN.—Thomas, Emmet, Goodele's Lessons in Gynæcology, Byford, Barnes. *Special Subjects.*—Tilt on Uterine Therapeutics, Klob on Pathological Anatomy of the Female Sexual Organs, Peaslee on Ovariotomy, Sims on Uterine Surgery, Emmet on Vesico-Vaginal Fistula, Skene on Diseases of the Bladder and Urethra.