Texas Christian University Bulletin

School of Medicine

FORT WORTH, TEXAS

ANNOUNCEMENTS

SESSION 1913-14

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CALENDAR

SESSION 1913-14

1913

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SPECIAL NOTICE IN REGARD TO CHANGE OF DATE FOR OPENING

Owing to the fact that the contractors will be unable to give possession of **CLARK HALL BEFORE SEPTEMBER 16**, the date of opening has been postponed one week—that is, from Tuesday, September 9, 1913, to **TUESDAY, SEPTEMBER 16.**

FACULTY

FREDERICK D. KERSHNER, M. A., LL. D.,
President of the University.

Emeritus Professors

ELIAS J. BEALL, M. D., Fort Worth, Texas.
JULIAN D. FIELD, M. D., Fort Worth, Texas
FRANK D. THOMPSON, M. D., Fort Worth, Texas
JAMES ANDERSON, M. D., Fort Worth, Texas
FRANK GRAY, M. D., Fort Worth, Texas

Professors

BACON SAUNDERS, M. D., LL. D., 404 Flatiron Bldg.
Professor of Surgery and Clinical Surgery.

WILLIAM A. DURINGER, M. D., 317½ Main St.,
Professor of Genito-Urinary and Rectal Diseases.

JOHN D. COVERT, M. D., 209-10 F. & M. Bank Bldg.,
Professor of Pathology.

M. E. GILMORE, Ph. C., M. D., 317 Western Natl. Bank Bldg.
Professor of Pharmacology and Therapeutics,

ROBERT B. GRAMMER, M. D., 100½ Main St.,
Professor of Pediatrics.

GOODRIDGE V. MORTON, A. B., M. D., 317½ Main St.
Professor of Obstetrics.

W. ERNEST CHILTON, M. D., 112½ W. Ninth St.
Professor of Gynecology.

WILMER ALLISON, M. D., 301 Flatiron Bldg.,
Professor of Nervous and Mental Diseases.

KENT V. KIBBIE, B. S., M. D., 112½ W. Ninth St.,
Professor of Anatomy, Histology and Embryology.

WILLIS G. COOK, B. S., M. D., 209-10 F. & M. Bank Bldg.,
Professor of Principles and Practice of Medicine.

J. A. KELLY, M. D., 509 Flatiron Bldg.,
Professor of Physiology.

W. B. PARKS, A. M., University,
Professor of Chemistry.

SIDNEY J. WILSON, M. D., 303 First National Bank Bldg.,
Professor of Dermatology.

HERMAN KINGSBURY, M. D., 205-8 West. Natl. Bank Bldg.,
Professor of Bacteriology.

W. R. THOMPSON, M. D., Touraine Bldg.,
Professor of Diseases of the Eye.

EDGAR DOAK CAPPS, M. D., 304 Dan Waggoner Bldg.,
Professor of Diseases of the Ear.

FRANK D. BOYD, M. D., 303 F. & M. Bank Bldg.,
Professor of Diseases of the Nose and Throat.

HOLMAN TAYLOR, B. S., M. D., 207 West. Natl. Bank Bldg.,
Professor of Hygiene and Preventive Medicine.

R. H. NEEDHAM, Ph. C., Medical College,
Professor of Physiologic Chemistry and Toxicology and Associate Professor of Physiology.

Associate Professors

ROY F. SAUNDERS, M. D., 404 Flatiron Bldg.,
Associate Professor of Surgery.

IRA CARLETON CHASE, A. M., M. D., 303 Western National Bank Bldg.,
Associate Professor of Surgery.

WM. C. DURINGER, M. D., 317½ Main St.,
Associate Professor of Genito-Urinary and Rectal Diseases.

WILHELMINA VON GERBER, B. A., M. D., Dan Waggoner Bldg.,
Associate Professor of Pathology.

FRANK G. SANDERS, Ph. G., M. D., Byers Opera House Bldg.
Associate Professor of Anatomy.

S. A. WOODWARD, M. D., 204-5 Western Natl. Bank Bldg.
Associate Professor of Practice of Medicine.

E. P. HALL, M. D., 509 Flatiron Bldg.
Associate Professor of Practice of Medicine.

J. A. GRACEY, M. D., 409 Flatiron Bldg.,
Associate Professor of Obstetrics.

JESSE BARDIN, M. D., Main and Exchange Ave.,
Associate Professor of Pediatrics.

JAMES D. BOZEMAN, M. D., Arlington Heights Sanitarium,
Associate Professor of Nervous and Mental Diseases.

OSCAR E. VEATCH, A. B., M. D., 206 F. & M. Bank Bldg.
Associate Professor of Pharmacology and Therapeutics and Assistant in Medicine.

W. H. ADKINS, A. M., University,
Associate Professor of Bacteriology and Histology.

ISAAC A. WITHERS, M. D., 205 Wheat Bldg.,
Associate Professor of Gynecology.

HOWARD B. DABBS, A. M., University,
Associate Professor of Chemistry.

Assistants

OLIF F. CARLSON, M. D., 112½ W. Ninth St.,
Demonstrator of Anatomy.

THOS. M. JETER, M. D., 306 Flatiron Bldg.,
Demonstrator of Anatomy.

W. N. CLARK, University,
Chemistry.

EDWIN DAVIS, M. D., 509 Flatiron Bldg.,
Pathology and Medicine.

AARON R. HAYS, M. D., 912½ Main St.,
Medicine.

RUFUS B. WEST, M. D., 100½ Main St.,
Medicine and Medical Jurisprudence.

CLAUDE O. HARPER, M. D., 404 Fort Worth Natl. Bk. Bldg.,
Surgery.

CHAS. H. HARRIS, M. D., 206-8 Western Natl. Bank Bldg.,
Surgery.

LEONIDAS A. SUGGS, M. D., 301 Flatiron Bldg.,
Surgery.

M. V. CREAGAN, Ph. G., M. D., 315½ Main St.,
Genito-Urinary and Rectal Diseases.

JNO. B. CUMMINS, M. D., 708½ Main St.,
Obstetrics.

JNO. M. FURMAN, M. D., 308 Fort Worth Natl. Bank Bldg.,
Obstetrics.

HENRY B. TRIGG, M. D., 209 Fort Worth Natl. Bank Bldg.,
Neuro-Pathology.

ROBERT W. MOORE, Ph. B., M. D., Touraine Bldg.,
Eye.

J. WESLEY HEAD, M. D., 303 F. & M. Bank Bldg.,
Nose and Throat.

R. B. SELLERS, M. D., 304 Dan Waggoner Bldg.,
Ear.

BROOKS C. GRANT, Fort Worth, Texas,
Student Assistant in Physiologic Chemistry.

GILES W. DAY, Fort Worth, Texas,
Student Assistant in Physiology and Pharmacology.

Demonstrators

GEO. D. BOND, M. D., 309-10 Flatiron Bldg.,
Demonstrator of X-Ray Diagnosis.

R. A. KOOKEN, M. D., 912½ Main St.,
Demonstrator of Anatomy (Special Senses).

C. B. SIMMONS, M. D., 912½ Main St.,
Demonstrator of Anatomy (Special Senses).

PIERRE F. HIGGINS, M. D., 406 Flatiron Bldg.,
Demonstrator of Anatomy.

MORRIS BADT, M. D., Dundee Bldg.,
Demonstrator of Anatomy.

OSCAR R. GROGAN, M. D., Fort Worth, Texas,
Demonstrator of Anatomy.

LEROY O. FOSTER, M. D., 1610½ Main St.,
Demonstrator of Minor Surgery and Bandaging.

J. A. DACUS, University,
Business Manager.

DELIA HARTMAN, Fort Worth, Texas,
Registrar.

OFFICERS OF FACULTY

BACON SAUNDERS, M. D. LL. D.,.....President of Faculty
M. E. GILMORE, Ph. C., M. D.....Vice-President
R. H. NEEDHAM, Ph. C. .....Secretary
IRA CARLETON CHASE, A. M., M. D.....Dean

CURRICULUM COMMITTEE

John D. Covert, M. D., Chairman
M. E. Gilmore, Ph. C., M. D. *Kent V. Kibbie, B. S., M. D.*
Ira Carleton Chase, A. M., M. D., Ex-officio
R. H. Needham, Ph. C., Ex-officio

CATALOGUE COMMITTEE

R. H. Needham, Ph. C., Chairman
Willis G. Cook, B. S., M. D. *Robert Worth Moore, Ph. B., M. D.*
Ira Carleton Chase, A. M., M. D., Ex-officio

DISPENSARY COMMITTEE

Sidney J. Wilson, M. D., Chairman
Willis G. Cook, B. S., M. D. *Herman Kingsbury, M. D.*

CLINICAL RECORD COMMITTEE

Holman Taylor, B. S., M. D., Chairman
Wilhelmina Von Gerber, B. A., M. D.
Frank G. Sanders, Ph. G., M. D.

PROMOTION COMMITTEE

S. A. Woodward, M. D., Chairman
Kent V. Kibbie, B. S., M. D. *Robert B. Grammer, M. D.*

MUSEUM COMMITTEE

Kent V. Kibbie, B. S., M. D., Chairman
John D. Covert, M. D.
Frank G. Sanders, M. D.

LIBRARY COMMITTEE

Wilmer Allison, M. D., Chairman
Holman Taylor, B. S., M. D. *Ira Carleton Chase, A. M., M. D.*

IN MEMORIAM

WILLIAM R. HOWARD, A. B., M. D.

EMERITUS PROFESSOR OF HISTOLOGY, PATHOLOGY AND BACTERIOLOGY

DIED DECEMBER 25, 1912

JAMES R. MITCHELL, A. B., M. D.

ASSOCIATE PROFESSOR OF CHEMISTRY

DIED APRIL 12, 1913

HISTORICAL REVIEW

The Medical Department of Texas Christian University was organized in 1894. It was known as the Medical Department of Fort Worth University. The first degrees of Doctor of Medicine were given the graduating class of 1895.

At that time there were no medical schools within a radius of 350 miles, a territory of 380,000 square miles, containing over four million people. Many of the nearest schools were poorly equipped, gave two year courses of instruction, furnished inefficient laboratory training and no bedside teaching. The right to practice medicine in Texas at that time rested on certificates from District Examining Boards, to obtain which, practically no medical knowledge was necessary. The country was rapidly filling up with physicians who had poor, or almost no Medical College training, and in addition there were no accessible anatomical, surgical, bacteriological or pathological laboratories, to which the medical profession in this vast territory could resort.

The organization of the school was the result of a desire on the part of then the strongest medical corps of the State to elevate the standard of the State Medical profession, provide better physicians and better facilities for practice and to assist the local profession to greater efficiency. The school has always stood for progress. It was one of the first colleges in the South to become a member of the Southern Medical College Association. Its faculty have been leaders in securing better Medical Practice Acts and Medical laws in the State.

At the time of its organization there were fifteen full professors with adjuncts, assistants and demonstrators. The scientific branches were for some years taught in the laboratories and buildings of Fort Worth University. In its second year a special building was erected on the University campus. Later a medical building in the heart of the city, the site of the present Seibold hotel, was secured and occupied for ten years. The demand for more modern equipment was met in 1905 by the erection of a new modern Medical building, today one of the best

structures of its kind possessed by any Southern Medical College.

After the removal of the Fort Worth University and its union with the Epworth University, at Guthrie, Oklahoma, the Medical School became affiliated June 28, 1911, with the Texas Christian University. Its relation with this University has been constantly growing closer until in June, 1913, the grounds, buildings and equipment became absolutely the property of the Christian University, and the medical school one of the departments of the University; its scientific branches will be taught on the University campus, its faculty has been elected by the University trustees as the faculties of other departments, and the institution financed from the general funds of the University.

It is a source of gratification to the faculty thus to be able to announce to the alumni of the school that a brilliant future for their old alma mater has been secured. The Texas Christian University is the only school of higher education, conducted by one of the strongest religious denominations in Texas. It is now one of the best universities in Texas and has a great future. The Medical Department will hereafter share in its rapidly growing prestige and increasing endowment fund.

The University trustees have plans to make the Medical Department second to none in the South. The paid teaching force will be largely increased for the coming year. There will be added a large amount of laboratory apparatus, and the clinical resources will be much increased and their use facilitated by the new City and County Hospital, now in course of erection adjoining the College building, as announced more fully elsewhere in this catalogue. The school complies with the standards of the Texas State Examining Board and the Council on Medical Education of the American Medical Asociation. With the completion of the new Hospital the school will possess a class A equipment. In points of property, income, university connection and eminence of its faculty, this school is not equaled by any other medical school in Texas.

The School of Pharmacy has now passed its seventh commencement. Its reputation has so spread throughout surrounding States that the coming year promises to practically double

the department. It has an unusually efficient corps of teachers and is equipped with every appointment necessary to teach scientific and practical pharmacy.

A school of nursing, organized six years ago, has passed its fifth commencement. The enlarged hospital facilities will greatly enlarge the scope and value of its training, making it one of the most desirable hospitals as an alma mater for those looking forward to a nursing profession. Some of the graduates now hold some of the best hospital appointments in the South.

COLLEGE BUILDING

The beautiful and commodious College building, made of gray brick and stone, is located on Fifth and Calhoun Streets. It is owned by the University and cost more than $60,000 for building and grounds, not including equipment. It has a floor space of over 25,000 square feet, well lighted and ventilated. The description following shows the conveniences and facilities for work.

FIRST FLOOR

This floor contains dark lecture room for lantern work, animal operating room, animal hospital, and experimental physiology and pharmacology laboratory and hospital wards. There are also rooms for kitchen, nurses and attendants. The boiler, dynamo, museum, and curator's room are on this floor.

SECOND FLOOR

On the Fifth Street entrance are the lobby, Dean's office, Faculty room, clinical laboratory, operating room, anesthetizing and sterilizing room, X-ray room and hallway and stairway leading to City Hospital.

At the Calhoun Street entrance is the dispensary, office, waiting room, and drug room. An operating room adjoins the waiting room; there are four large rooms for outdoor clinics.

THIRD FLOOR

This floor contains medical library and reading room, lecture

room, large assembly hall, a physiologic and pharmacologic la ratory, pathologic laboratory and stock room.

FOURTH FLOOR

On this floor are the pharmacy and chemic laboratories a stock rooms, lecture room, anatomic museum and study, a tomical laboratory, preparation room and autopsy amphithea

CLINICAL RESOURCES

The rapidity with which our city is growing, its manufactu ing industries, railroads, street car and interurban lines, packi plants, oil refineries, service corporations and its rapid increa in population, reaching near the 100,000 mark, makes it a pla unsurpassed for clinical advantages. Not only this but t outlying tributary territory, reached by twenty-four railro and interurban lines, makes it a natural distributing point the great Northwest, West and Southwest. These are importa factors, offering a large clinical field, unexcelled by any city its size in the country.

The City and County Charity Hospital is connected with t College; outlying institutions in which the school has contra hospital beds and teaching material are St. Joseph's Infirma All Saints' Hospital, Arlington Heights Sanitarium, Tarr County Orphanage, County Benevolent Home, and several m ternity homes for out clinic obstetric work.

NEW CITY AND COUNTY HOSPITAL

The city and county are jointly building a fireproof hospi adjacent to the Medical College. Construction is under w and the hospital will be completed within a year. The Fa of the Medical Department are members of the Hospital staff under the rules of the Board of Control. It will contain, in tion to the charity wards, an obstetrical and children's ward clinical amphitheater, an addition to the College building necting the two institutions, is being erected, thus e patients from the City and County Hospital to be more acce for clinical and teaching purposes. Until the completion o new hospital, city and county patients will be cared for i Medical College Hospital.

COLLEGE DISPENSARY

On the second floor of the College building is located the dispensary, and consists of patients' waiting room, a dispensary office and a drug room; connected with this is an operating room nicely tiled, lighted and equipped for short operations. Four large, commodious rooms adjoining a wide hall, connected with the patients' waiting room, are equipped for outdoor clinics, which will be held daily. Members of the Senior class have two hours' daily work in the dispensary and clinical laboratory, under the supervision of instructors. It is expected that over sixty out patients daily will be treated in the dispensary.

A dispensary clerk will be in attendance, and all medicines and treatment for indigent patients will be furnished free of charge.

ST. JOSEPH'S INFIRMARY

St. Joseph's Infirmary is located in the southern part of the city, readily accessible by a 12-minute car service. It is situated upon a high plateau, and is surrounded by spacious grounds. It is owned and operated by the Sisters of the Incarnate Word, who completed in 1907 a large wing, making room for 200 beds, four largs wards, four operating rooms, in one of which a commodious amphitheater has been erected. This is perhaps the largest and best equipped hospital in the State, having room for more than 400 beds. Every Saturday Clinics will be held here by the Professors of Surgery and Medicine, and Senior students will have an opportunity of witnessing most of the principal surgical operations and studying bedside treatment. Twenty-five beds are absolutely at the disposal of the Faculty for teaching purposes in medicine and surgery. The usefulness of the hospital is greatly enhanced by an efficient training school for nurses.

ANATOMIC LABORATORIES

The dissecting room occupies the fourth floor, having the full east and south ventilation. It has a good cement floor and direct sewer drainage. It is provided with fifteen dissecting tables, accommodating 60 second year men and 120 first year men.

This department is provided with good lockers, lavatorie lights, etc.

Connected with this room is the anatomic amphithea lighted by window and skylight, provided with fine slate boa and accommodating with raised seats 60 men. Here anatom demonstrations are given on the cadaver. The room is a used for autopsy work and demonstrations in operative surge

This department is also provided with a preparation with cement floor, direct elevator connections, water and with all appliances for the preservation of bodies.

The anatomic study laboratory is an important part of th department. Here is placed a large central table with for section study. The walls are fitted with cases containi models, charts, dissections, cross sections, colored bones graph ally showing muscular attachments, embryologic preparation pathologic specimens, anatomic library, etc.

The bone room is furnished with a large collection of w classified disarticulated bones for the practical study of ology. Tickets are secured at the Dean's office for $2.00, e titling holders to draw bones for study according to the printe rules issued with the tickets.

THE CHEMIC LABORATORY

The chemic laboratory occupies a room 48x25 feet on fourth floor. It is fittted wih 155 cabinet desks, accommodati 155 men. The desks are provided with drawers, lockers, wat gas, and furnished with reagents and chemical apparatus.

The department has a store room 12x18 feet, which may used for a private laboratory for special and research work the instructors. It contains an ample supply of the best class cal apparatus obtainable in American and German marke The equipment of this laboratory, for its size, is equal to that any other American medical college.

The laboratory connects with the chemical lecture hall, w accommodates 75 men, and is fitted with blackboards, demo stration desks, etc., necessary for chemical lecture work.

The chemical laboratories at the University proper are p larly equipped, and ample provision has been made for accommodation of an increased number of students.

HISTOLOGIC, EMBRYOLOGIC AND BIOLOGIC LABORATORY

This laboratory at the University is large and well lighted, furnished with all necessary tables, microscopes and other accessories, such as charts, drawings and a projecting lantern. Specimens of chick embryos in various stages of development will be kept for student instruction. A large number of parts of tissue in paraffin are kept on hand for section cutting. Material for biologic work will be supplied at the proper time.

THE PATHOLOGIC LABORATORY

This laboratory is situated on the north end of the third floor of the College building. It is 16x44 feet, and fitted with desks and lockers of progressive heights to enable all to have advantages of the ten large windows. This laboratory has compound microscopes and accessories sufficien to accommodate 50 men with individual outfits.

A large store-room stores material for this laboratory and the bacteriologic laboratory, which may be used for a private laboratory for the special and research work of the instructors. It is equipped with various baths, microtomes, specimens both mounted and unmounted, staining material of all necessary kinds.

A vertical photo-micrographic camera, mounted on table, with all accessories for taking photo-micrographs, has been provided. About 200 photo-micrographs of sections of normal and pathologic tissues have been prepared. This mattter will be added to from time to time.

THE PHYSIOLOGIC LABORATORY

The physiologic laboratory is on the second floor. This department has this year added to its equipment a complete new outfit, bringing our equipment up to four full Harvard units. The department possesses a good lecture room with good slate boards and necessary appratus for the standard experimental courses in physiology. The experimental work in pharmacology will be carried on in this laboratory.

THE BACTERIOLOGIC LABORATORY

The bacteriologic laboratory at the University has desks equipped with drawers, lockers, water, gas, bacteriologic apparatus, etc., sufficient to supply each student. The laboratory is furnished with incubators, individual and general, sterilizer, animal cages, and everything necessary to give a practical individual demonstration course in the nature, growth and pathologic properties of the principal micro-organisms. In addition to this equipment, improved electric centrifuge, autoclave, moist chambers, etc., have been purchased.

THE CLINIC LABORATORY

This laboratory is supplied with the necessary chemical apparatus and reagents, syphgmomanometers, blood counting apparatus, microscopes, hemaglobinometers, dark ground illuminators, etc. Pathological material can be frozen, sectioned and stained and given to the student for study and verification. The laboratory is in charge of a paid instructor and is used by Senior and Junior students on assigned cases from the various clinics. The work here forms a valuable adjunct to the instruction given in the clinical courses.

THE ANIMAL OPERATING AND LABORATORY ROOM

An animal operating room has been equipped on the first floor for operation on living animals to demonstrate operative surgery, pharmacologic and physiologic changes and phenomena. Adjoining this room will be one furnished for the detention and convalescence of animals. This room is provided with cages and other equipment for proper keeping and feeding of animals in the laboratory.

X-RAY LABORATORY

On the second floor, convenient to hospital and dispensary, is the X-ray laboratory, with the most modern light power X-ray machine, equipped for instantaneous exposures and transilluminative study; illuminating apparatus for the study of X-ray plate, etc., insuring up-to-date instruction in the use of this important phase of diagnosis.

PROJECTION APPARATUS

Desiring to give students every available teaching advantage, the faculty has secured for the Department the finest projection apparatus purchasable—a combined Epidiascope and Episcope, manufactured by Dr. Carl Zeiss, Jena, and imported at a large expense especially for this school. The instrument throws upon the screen the brilliantly illuminated image of all objects of a size to be placed within it. Cuts, plates, illustrations from books, drawings, models, physical apparatus, small plants and animals, pathologic and anatomical specimens, etc. It also projects lantern slides, micro-photographs, microscopical slides, hanging cultures of bacteria, etc. The instrument presents a wide range of applicability and will greatly increase the scope of illustrated teaching. During the past year we have purchased an Edinger Drawing and Projection apparatus for use in Histology, Pathology and Bacteriology. With the aid of this apparatus various slides can be shown, with ease and rapidity. We consider this one of our most valuable additions to our laboratory equipment.

MEDICAL LIBRARY

The College has about 1,000 volumes of medical books, which are placed in the library, properly indexed and under the supervision of a libarian. The library is the recipient of the leading medical and drug journals of the United States and Europe. Physicians and students have access to the library for reading and study.

MUSEUM

A large number of embryologic specimens and monstrosities have been collected and prepared. Quite a number of pathologic specimens have been carefully preserved. The museum contains many plaster casts of different parts of the body, showing dissections, etc. There is also a large supply of charts and drawings for anatomical instruction. Dissections of anatomic regions, with colorings, have been prepared in the anatomic

laboratory. The number of specimens will be added to as rapidly as possible.

COMBINED LITERARY AND MEDICAL COURSE LEADING TO THE DEGREES A. B. AND M. D.

By a carefully prepared combination of literary and medical studies, the student may secure both the degrees A. B. and M. D. in much shorter time than by taking the courses separately. The period required need not exceed seven years, and by many students may be reduced to six years. The course will include all the required branches in the College of Arts and the College of Medicine, with but a few literary electives. In this combination Chemistry will be considered the student's minor department and Biology his major department.

The required literary branches are: Mathematics 14 credits, English 15 credits, History 9 credits, Foreign Language 12 credits, Philosophy 12 credits, Bible History and Prophecy 17 credits.

Electives from any departments of the College of Arts for which the student is prepared to the amount of 21 credits, in addition to the regular full course in the Medical College will entitle the candidate to both the degrees.

TIME ALLOTTED TO SUBJECTS

FIRST YEAR

	Didactic.	Laboratory.	Total
Anatomy:			
Osteology and Arthrology	..	90	
Dissection	..	450	
Histology	72	100	
Embryology	30	32	

Chemistry:			
General Chemistry	60	...	
Organic Chemistry	60	120	
Toxicology	12	...	
New and Non-Official Remedies	6	...	
			258
Bacteriology	90	...	90
Total			1152

SECOND YEAR

	Didactic.	Laboratory.	Total
Anatomy:			
Nervous System and Special Senses	..	36	
Applied Anatomy	..	72	
			108
Physiology:			
Physiology	120	180	
Physiological Chemistry	...	180	
			480
Bacteriology	...	180	180
Pharmacology	54	120	174
Pathology	124	200	324
Total			1266

THIRD YEAR

	Didactic.	Laboratory.	Total
General Medicine	180	...	180
Physical Diagnosis and Clinical Lab.	...	200	200
Surgery	108	100	208
Obstetrics	108	75	183
Gynecology	36	...	36
Neurology (Neural Pathology)	36	100	136

Pharmacology	90	...
Pathology:		
Post-Mortem Operative Technic	....	36
Medical Jurisprudence	40	...
Hygiene and Climatology	72	...
Opthalmology and Oto-Laryngology	...	100
Total		

FOURTH YEAR

	Didactic.	Laboratory.
Surgery	72	...
Gynecology	72	...
Neurology	36	...
Therapeutics	18	...
Oto-Laryngology	36	...
Pediatrics	54	...
Opthalmology	54	...
Total		

GENERAL CLINICS

Ward Clinics—Visitations
Genito-Urinary
Dermatology
Neurology and Psychiatry
General Medicine
Surgery
Therapeutics
Gynecology
Eye, Ear, Nose and Throat

Total

Total number of hours: First year, 1152; second year, 1
third year, 1281; fourth year, 972; making a grand total
4673 hours, or an average of 1168¾ hours per year. In a
tion, 360 hours are available for case histories, clinical la
tory work, and outdoor clinics and dispensary work.

Freshman Year Schedule for Session 1913-1914

FALL TERM: September 11 to December 23, 1913

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9		Chem. U.	Chemistry	Chem. U.	Chemistry	Chem. U.
9-10		Biology U. to Nov. 20	Lab. U.	Biology U. to Nov. 20	Lab. U.	Biology U. to Nov. 20
10-11			Bact. to U. Nov 20.	Embryology Oct. 16. U.	Bact. to U. Nov. 20	
11-12		Bact. to U. No. 20	Hist. Lab. after Nov. 20	Bact. to U. Nov. 20	Hist. Lab. after Nov. 20	Bact. to U. Nov. 20
1-2						
2-3		OSTEOLOGY AND ARTHROLOGY 6				
3-4		DISSECTION D				
4-5						

WINTER TERM: January 2 to March 21, 1914

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9		Chem. U.	Chemistry	Chem. U.	Chemistry	Chem. U.
9-10		Hist. U.	Lab. U.	Hist. U.	Lab. U.	Hist. U.
10-11		Toxicol'y U. New Rem'd's	Hist. U.	Embry. U.	Hist. U.	Embry.
11-12		Bact. U.	Lab.	Bact. U.	Lab.	Lab. U. after Feb. 16
1-2						
2-3		OSTEOLOGY AND ARTHROLOGY 6				
3-4		DISSECTION D				
4-5						

SPRING TERM: March 24 to June 6, 1914

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9		Chem. U.	Chemistry	Chem. U.	Chemistry	Chem. U.
9-10		Hist. U.	Lab. U.	Hist. U.	Lab. U.	Hist. U.
10-11		Toxicol'y U. New Rem'd's	Hist. U.	Embry. U.	Hist. U.	Embry.
11-12		Bact. U.	Lab.	Bact. U.	Lab.	Lab. U.
1-2						
2-3		OSTEOLOGY AND ARTHROLOGY 6				
3-4		DISSECTION D				
4-5						

NOTE: U. denotes all work at University. All other work at Medical College.

Sophomore Year Schedule for Session 1913-1914

FALL TERM: September 11 to December 23, 1913

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9						
9-10						
10-11		Bacteriology to November 13				
11-12		Lab. U.				
1-2						
2-3		Anatomy Special Senses and Nervous System, to February 28. 4				
3-4		Physiology 5 to Nov. 13	Pharm. 5	Physiology 5 to Nov. 13	Pharm. 5	Physiology to Nov.
4-5		Pathology to March 28. 5				
5-6			Physiology to Nov. 13. 5		Physiology 5 to Nov. 13	

WINTER TERM: January 2 to March 21, 1914

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9		Physiology Lab. November 13 to January 31				
9-10		Pharmacology Lab. January 31 to March 14				
10-11						
11-12						
1-2		Physiology to November 13				
2-3		Anatomy Special Senses and Nervous System to February 28				
3-4			Pharm. 5		Pharm. 5	
4-5		Pathology to March 28				

SPRING TERM: March 24 to June 6, 1914

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9		Pathology Lab. March 14 to end of Session				
9-10						
10-11						
11-12						
1-2		Physiology Chemistry March 28 to end of Session				
2-3						
3-4						
4-5						

NOTE: U, denotes all work at University. All other work at Medical College

Junior Year Schedule for Session 1913-1914

FALL TERM: September 11 to December 23, 1913

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9		Hygiene 3	Obstetrics 3			Hygiene 3
9-10		Surgery 3		Gynec. 5	Surg. 3	Post Mortem
10-11		Neurology 5	Medical Juris. 5	Pharm. 5	Pharm. 5	Med. Juris. Oct. 12 Phr. 5
11-12		General Medicine 3				
1-2		Physical and Clinical Diagnosis to February 14 A & B				
2-3						
3-4		Opathalmology and Otolaryngology to November 20 6				
4-5						

WINTER TERM: January 2 to March 21, 1914

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9		Hygiene 3	Obstetrics 3			Hygiene 3
9-10		Surgery 3		Gynec. 5	Surg. 3	Post Mortem
10-11		Neurology 5	Medical Juris. 5	Pharmacology 5		
11-12		General Medicine 3				
1-2		Neurology Lab. February 14 to April 25 B				
2-3		Obsterics and Gynecology November 20 to January 30 5				
3-4		Surgical Lab. after January 30 D				
4-5						

SPRING TERM: March 24 to June 6, 1914

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9		Hygiene 3	Obstetrics 3			Hygiene 3
9-10		Surgery 3		Gynec. 5	Surg. 3	Post Mortem
10-11		Neurology 5	Medical Juris. 5	Pharmacology 5		
11-12		General Medicine 3				
1-2						
2-3						
3-4						
4-5						

Senior Year Schedule for Session 1913-1914

FALL TERM: September 11 to December 23, 1913

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9	Ward Clinic and Visitations					Gen. Op. Clin. St. Joseph
9-10		Gynecology 5		Surg. 3	Neurology 5	
10-11		Pediatrics 3	Otolaryngology 6	Pediatrics 3 to Jan. 31	Opthal-mology 6	Surgery St. Joseph
11-12		Dispensary Clinics				Surgical Clin. St. Joseph
1-2	Therapeutic to Jan. 31 5	Medical Clinic Op. rm.	G. U. & Rect. Op. rm.	Medical Clinic Op. rm.	G. U. & Rect. Op. rm.	
2-3			Derm. Clinic Op. rm.		Neurology Clinic Op. rm.	Gynecological Clin. Op. rm.
3-4		Surg. Clinic Op. rm.	E. E. N. & T. Clinic Op. rm.	Surg. Clinic Op. rm.	E. E. N. & T. Clinic Op. rm.	
4-5		Dispensary Clinics				

WINTER TERM: January 2 to March 21, 1914

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9	Ward Clinics and Visitations					Gen. Op. Clin. St. Joseph
9-10		Gynecology 5		Surg. 3	Neurology 5	
10-11		Pediatrics 3	Otolaryngology 6	Pediatrics to Jan. 31 3	Opthal-mology 6	Surgery St. Joseph
11-12		Dispensary Clinics				Surgical Clin. St. Joseph
1-2	Ther. to Jan. 31, Cl after 5	Medical Clinic Op. rm.	G. U. & Rect. Clinic Op. rm.	Medical Clinic Op. rm.	G. U. & Rect. Clinic Op. rm.	
2-3			E. E. N. & T. Clinic Op. rm.		E. E. N. & T. Clinic Op. rm.	Gynecological Clin. Op. rm.
3-4		Surg. Clinic Op. rm.	Derm. Clinic Op. rm.	Surg. Clinic Op. rm.	Neurology Clinic Op. rm.	
4-5		Dispensary Clinics				

SPRING TERM, March 24 to June 6, 1914

Hrs.	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
8-9	Ward Clinic and Visitations					Gen. Op. Clin. St. Joseph
9-10		Gynecology 5		Surg. 3	Neurology 5	
10-11		Pediatrics 3	Otolaryngology 6		Opthal-mology 6	Surgery St. Joseph
11-12		Dispensary Clinics				Surgical Clin. St. Joseph
1-2	Ther. Clinic Op. rm.	Medical Clinic Op. rm.	G. U. & Rect. Op. rm.	Medical Clinic Op. rm.	G. U. & Rect. Op. rm.	
2-3			E. E. N. & T. Clinic Op. rm		E. E. N. & T. Clinic Op. rm.	Gynecological Clin. Op. rm.
3-4		Surg. Clinic Op. rm.	Derm. Clinic Op. rm.	Surg. Clinic Op. rm.	Neurology Clinic Op. rm.	
4-5		Dispensary Clinics				

CURRICULUM BY SUBJECTS

ANATOMY

Professor, Kent V. Kibbie, B. S., M. D.

Associate Professors:

Frank G. Sanders, Ph. G., M. D. W. H. Adkins, A. M.

Demonstrators:

Olif F. Carlson, M. D. R. A. Kooken, M. D.
Pierre F. Higgins, M. D. C. B. Simmons, M. D.
Thos. M. Jeter, M. D. Morris Badt, M. D.
Oscar R. Grogan, M. D.

GROSS HUMAN ANATOMY

General Anatomy covers two years' study, with a paid instructor in constant attendance, and falls under the following sections:

First Year

1. *Osteology and Arthrology.*—Students supplied with skeletons and bones. Clay modeling and accurate drawings of some of the typical bones will be required. Osteology of each part under dissection is also a requisite. Three hours a week for thirty weeks. Dr. Carlson.

2. *Arm and Thorax.*—150 hours dissection, quizzes and demonstrations.

3. *Head and Neck.*—150 hours dissection, Anatomy of Special Senses, quizzes and demonstrations.

4. *Leg, Pelvis and Viscera.*—150 hours dissection, quizzes and demonstrations, supported with lectures. Profs. Kibbie and Sanders, Drs. Higgins, Jeter, Kooken, Simmons, Badt and Grogan.

SECOND YEAR

5. *Anatomy of the Nervous System.*—Laboratory work on dissection of the human brain and cord, preceded by dissection of the sheep's brain, accompanied by lectures and quizes over dissections. Prof. Kibbie. 60 hours.

6. *Topographical and Applied Anatomy.*—The human body studied in sections, frequent use being made of special sections, models and wet dissections. Sketches of sections are required and passed upon. Regional anatomy, with special attention to surgical significance, is included in the course. Students who have not done satisfactory work the first year will not be allowed to enter upon this course. Prof. Kibbie. 48 hours.

FIRST YEAR

7. *Histology.*—Lectures and recitations for fifteen weeks, five one-hour periods per week, covering the study of cells, their reproduction, the structure and development of normal tissue. Each period of the work, as taken up, will be demonstrated by drawings, and, when possible, microscopic sections will be demonstrated by the projection lantern.

8. *Histology Laboratory.*—This course will be given for fifteen weeks, periods of four hours per day. Cut sections of various tissue, properly stained, will be given to the student to mount. Each mount will be studied and drawn and retained by the student for future reference. Special attention will be given to sections of organs of special senses and nervous system.

9. *Embryology.*—A course of six weeks, embracing five one-hour lectures per week. A study of individual cell division and formation of germ layers of the embryo. Lecture-work will be supplemented by drawings and lantern slides.

10. *Laboratory Work.*—A period of four weeks will be given this portion of the work, covering four two-hour periods per week. In this course the student will mount and study sections, showing the early stages of germ cells, germ layers, embryonic tissues, and the origin and early stages of organs.

11. *Biology.*—A laboratory course covering six weeks of five one-hour periods per week. Types of living organisms, such as the amoeba and other protozoa, will be studied microscopically. Then higher organisms, such as crawfish, starfish, etc., will be taken up and studied in detail. Prof. Adkins.

CHEMISTRY

Professor, William B. Parks, A. M.
Associate Professor, Howard B. Dabbs, A. M.
Assistant, Mr. W. N. Clark.

First Year

1. *General Chemistry.*—This course covers a course of sixteen weeks of consecutive work, with four one-hour periods per week. First consideration is given chemical physics, with their relations to the principles of chemistry, then taking up the non-metals and metals; their occurrence, properties, combinations and uses. Special effort will be made to acquaint the students with these substances, which properly belong to medical chemistry. The lectures will be supplemented by experiments and demonstrations. Profs. Parks and Dabbs.

2. *Laboratory Work.*—This work will consist of four hours of two periods each week for fifteen weeks. The first four weeks will be devoted to experiments, whereby the student may demonstrate for himself the properties and behavior of some of the more common elements and their compounds. Prof. Parks and Mr. Clark.

3. *Qualitative Analysis.*—This course will continue eight weeks and immediately follows the introductory laboratory work. Herein the student learns the tests and processes of separation of the different metals and acids. Each student must analyze one unknown of each group of metals in addition to the regular assigned work. Prof. Parks and Mr. Clark.

4. *Quantitative Analysis.*—A brief course in volumetric analysis and quantitative estimations, with the object of teaching the student the value of this work in Physiological Chemis-

try. Continues three weeks, four hours per week, follow qualitative analysis. Profs. Parks and Dabbs.

5. *Organic Chemistry.*—This course must be preceded by of General Chemistry. Fifteen lectures and recitati four hours per week, will be devoted to this subject, which the constitution, classification and derivation organic compounds will be considered. Very special att tion will be given those compounds and derivatives w are of medic and pharmaceutic importance. Work sup mented by experiments and demonstrations. Profs. P and Dabbs.
6. *Laboratory Work.*—Two regular laboratory periods of hours each week will continue during the course, in w the student will manufacture such preparations as ch chloroform, picric acid, acetanilide, etc. Prof. Parks a Mr. Clark.
7. *Toxicology.*—A series of twelve lectures will be given d ing the last three weeks of school, in which this science be taught in such a manner that the student may be m dered familiar with the more common poisons, their sym toms in the human body and their treatment. Demonstr tions of the methods for detection of such poisons mercury and arsenic will be made before the class. Pr Parks.
8. *New and Non-Official Remedies.*—Modern research and dustrial chemistry from time to time are furnishing medical science with new and valuable remedies which either not listed in text-books or are placed upon the ma ket under peculiar or fanciful names. Our object in gi this special course of six lectures—by appointment—i acquaint the student with the valuable modern Mate Medica. Prof. Parks.

PHYSIOLOGIC CHEMISTRY

Professor, R. H. Needham, Ph. C.
Assistant, Mr. Brooks C. Grant

Second Year

This is a laboratory course which will include recitat demonstrations and quizzes, and is required of all second

students. It must be preceded by the course in first year chemistry known as organic chemistry. The course will continue for nine weeks during the latter part of the year, consisting of four hours' work per day.

The study of enzymes, their classification and actions, will be first taken up. Experiments on enzymes and antienzymes and quantitative determinations of the activity of the more important ones will be demonstrated by the students in the laboratory. The composition of carbohydrates, proteins and fats will be next studied. The action of saliva and the chemical changes on foodstuffs, under the head of salivary digestion, will be carefully carried out. Protein material and the process of gastric digestion, together with analyses of both true and artificial gastric juice, will be given attention, each student being required to make at least one analysis aside from regular assigned work. Pancreatic digestion will next be taken up, due attention being given to the tests for enzymes and end products. Bile and its chemistry, also formation and composition of gall stones, will be considered.

Some time is devoted to the study of putrefactive products and the tests for same. The composition of feces and accompanying waste products will also receive attention. Careful attention is given the study of blood chemically and also the application of tests for its identity under various circumstances. Students will be expected to use the spectroscope in identifying suspected blood.

The composition of milk is studied and the student instructed in detecting adulterants and preservatives. A complete analysis of at least two samples of milk will be required of each student, such analysis including the Babcock test for butter fat.

The isolation of glycogen, myosin, etc., from muscular tissue or liver will be done by the class in sections.

The study of normal urine will be next taken up and the various constituents isolated wherever possible. Urea will be isolated and also prepared synthetically by the student. The salts of urea and uric acid will be studied chemically and microscopically. Hippuric acid will be prepared from urine, and the aromatic and sulphur compounds and their relation to health and disease will be demonstrated. The student will be instructed as to the pathological constituents, such as pigments,

sugar, bile, blood, etc., tests for these, and will be expected to analyze unknown samples of both pathological and normal urine. Careful drill is given in quantitative estimations, both gravimetric and volumetric. Each student will be expected to provide himself with a uniform note-book and to tabulate all results and experiments for the inspection of the instructor. Prof. Needham and Mr. Grant.

PHYSIOLOGY

Professor, J. A. Kelly, M. D.
Associate Professor, R. H. Needham, Ph. C.

1. *Lectures and Recitations.*—Instruction in this branch will be confined entirely to the second year in Medicine and will be based upon laboratory work, demonstrations, and lectures. Lectures and recitations will continue for twenty-four weeks, five hours per week. Laboratory and demonstration periods will embrace a period of nine weeks, four hours per day. Our laboratory equipment is quite complete and we will be enabled to assign the work to the students in sections of four *only*, under an assistant, which will assure individual work upon the part of the student.

General Physiology.—An introduction beginning with cellular biology and proceeding to the physiology of muscle and nerve tissue and including the muscular system.

The physiology of the central nervous system and special senses will be discussed, taking up the general physiology of the brain, medulla, spinal cord, etc. The physiology of vision and the physics of refraction will be given special attention.

The physiology of the Organs of Circulation of Blood and Lymph and Respiration and those factors which concern these phenomena will be studied in detail. The student will study his own blood and that of others and master the technique of blood examination, familiarizing himself with the properties of normal human blood.

The influence of various conditions upon respiration, with the physical and chemical changes in air and blood caused by respiration, will be carefully considered.

Digestion and secretions, with reference to those changes in foodstuffs which take place in the alimentary canal. The effect of secretions and their role in digestion will be largely left to physiological chemistry. Under this head will be discussed the physiology of secretions and conditions which modify glandular activity.

Nutrition and heat production and regulation will receive due attention. Review will be given the principles of dietetics, and the metabolic changes which various foodstuffs undergo in the system will be followed.

The physiology of reproduction will be briefly considered as to functions of the reproductive organs, heredity, growth and senescense. Prof. Kelly.

2. *Laboratory Work.*—While the laboratory work will not parallel the courses in lectures, as all the laboratory work will be given during a consecutive period, still it is the intention to fully demonstrate all phenomena of value to the student, such as that of contraction, conduction, reflexes, etc. The more difficult experiments will be conducted by the demonstrator, while the more simple ones, such as pulse tracings, action of cardiagraph, syphmomanometer, blood count, etc., each student will be expected to perform and to write up complete data as to results. It is the ultimate aim to demonstrate in the laboratory those phenomena, principally, which will benefit the student in the pursuance of his medical course. Prof. Needham and Mr. Day.

BACTERIOLOGY AND PROTOZOLOGY

Professor, Herman Kingsbury, M. D.
Associate Professor, W. H. Adkins, A. M.

First Year

1. *Lectures and Quizzes.*—The definition, classification and morphology of bacteria; their role in nature; sterilization methods; chemistry and commercial bacteriology are studied. Especial attention is given the action and production of toxins, ptomains, the phenomena of immunity and infection. Each pathogenic organism is then discussed until the entire field of Bacteriology and Protozology is covered. The

bacteriology of milk and water is covered. One hour a d for eighteen weeks. Prof. Kingsbury.

SECOND YEAR

2. *Laboratory Work.*—This work will be pursued for two hours a week for nine weeks This will be a practical cou and examinations will be graded according to the work do written examinations, and identifications of unknow

Beginning with the preparation of the various cul media, the student makes pure cultures of the various orga isms and takes up staining technic. Part of the course w be taken up in culture and growth of the most importa non-pathogenic germs. When the student has acquired su ficient care and skill in handling germs, some of the pri cipal pathogenic organisms, such as Anthrax, Malign Edema, Tetanus, Tuberculosis, Glanders, Diphther Pneumococcus, Typhoid, Colon, Cholera, pus organis Meningitis and Gonorrhea, will be studied in a similar ma ner. Special attention will be given to animal experime opsonic index determination, the making of blood cultur water and milk analysis, the preparation of autogen vaccines, microscopic examination of sputa, gonorrheal di charge, Widal agglutination and serum tests. Bacteriol diagnosis will be made a careful study. This course wil of a practical nature and prepares the student for his w in the Clinical Laboratory. Prof. Adkins.

PATHOLOGY

Professor, John D. Covert, M. D.
Associate Professor, Wilhelmina Von Gerber, B. A., M. D.
Assistant, Edwin Davis, M. D.

SECOND YEAR

1. *Lectures and Quizzes.*—Five hours a week for twenty weeks will be devoted to lectures and quizzes on gen pathology. The causes of disease, the various retrogr changes, infiltrations, degenerations, necroses, atro hypertrophy, regenerations, inflammations, tumors, n formations, the granuloma and parasites will be thorou covered. Prof. Covert.

2. *Laboratory Work and Quizzes.*—This course does not contemplate the making of pathologists of every student, but giving the possibilities of the attainments of the laboratory and the acquaintance with the methods which enable them to understand and diagnose disease.

Twenty hours a week for ten weeks are devoted to this work, during which time each student is presented with over 175 specimens for examination and study. These specimens illustrate nearly all the pathologic changes in the body—the results of various diseased conditions—including pathology of the blood. Students will be required to write a description and make a drawing of each specimen studied. These specimens may be kept by the student for future reference and study. Each student will be required to become proficient in the technic of preparing specimens; their hardening, imbedding, cutting and staining, and in the use of the freezing microtome. Prof. Von Gerber and Dr. Davis.

THIRD YEAR

3. *Special Pathology—Post-Mortem and Post-Mortem Technic.* Lectures on special pathology will be illustrated by fresh and museum specimens and microscopic preparations. Autopsy technic will be thoroughly demonstrated on the cadaver and by lectures and quizzes. Each student will be required to write protocols of every autopsy, which, with the demonstration of the microscopic findings, will give a complete record of the year's work. One hour a week during the entire year. Prof. Covert.

NOTE.—Junior and Senior students are required to attend each autopsy and are excused from other work at this time.

PHARMACOLOGY AND THERAPEUTICS

Professor, Marquis E. Gilmore, Ph. C., M. D.
Associate Professor, Oscar E. Veatch, A. B., M. D.
Assistants:
R. H. Needham, Ph. C. Mr. Giles W. Day

The department of pharmacology and therapeutics has a full laboratory equipment for the study of the principles of materia medica, pharmacy and the physiological action of drugs.

The course of instruction consists of laboratory work, lectures and recitations. The work of the second year covers the materia medica, pharmacy and the physiological action of drugs. The third and fourth year instruction embraces the principles of the therapeutic application of all remedial agents.

The laboratory cabinets contain all the more important drugs and chemicals and their preparations.

PHARMACOLOGY

Second Year

1. *Materia Medica.*—This course is designed to familiarize the student with all the more important crude drugs. One hour per day for two weeks will be devoted to a study of their names, origin, history, physical appearance and composition, etc. Prof. Needham.

2. *Pharmacy.*—Three hours per day for two weeks. This is a laboratory course, wherein the student will be instructed in the rudiments of pharmacy and pharmaceuticals. He will manufacture U. S. P. and N. F. preparations, some of which will be used for experimental work in the laboratory. Prof. Needham.

3. *Lectures and Recitations.*—Two hours a week for twenty-seven weeks. The lectures are devoted mainly to the physiological action of drugs on the lower animals and man, and are preliminary to the laboratory course. Prof. Veatch.

4. *Laboratory.*—Four hours per day for four weeks. Devoted to animal experiments. The students will be divided into groups as occasion demands and each group will perform experiments designed to demonstrate the action of various drugs and preparations upon the physiological systems of the body. Experiments too difficult for the students to perform will be demonstrated by the instructor in charge. Prof. Needham.

Third Year

1. *Lectures.*—Two hours a week for thirty weeks will be devoted to a consideration of the relation between drug action

and the disturbed physiology of disease; and to the therapeutic application of medicinal and other remedial agents in the treatment of disease. Prof. Gilmore.

FOURTH YEAR

1. *Clinical Therapeutics.*—One hour a week for eighteen weeks will be given to applied Therapeutics, demonstrating the mode of administration and application of remedial agents. Remedial agents other than drugs will be demonstrated, namely: Hypodermoclysis, Infusion, Enteroclysis, Lavage, Bloodletting, Massage, Hyperemic and Movement Therapy, and the uses of heat and cold.

   Students are expected to prescribe for all patients brought before the class; these prescriptions, with the diagnosis, being subjects for general discussion. Prof. Gilmore.

PRACTICE OF MEDICINE

Including Clinical Laboratory Work and Medical Jurisprudence.

Professor, Willis G. Cook, B. S., M. D.

Associate Professors:

Ewing P. Hall, M. D. Samuel A. Woodward, M. D.

Assistants:

Wilhelmina Von Gerber, A. B., M. D. Holman H. Taylor, A. B., M. D.
Rufus B. West, M. D. Aaron R. Hays, M. D. Edwin Davis, M. D.
Oscar E. Veatch, A. B., M. D.

THIRD YEAR

1. *Physical Diagnosis.*—Eighty hours will be devoted to this course. Quizzes on text-book assignments, personally supervised examinations of patients, clinical lectures and history taking will comprise this course. Selected cases from the outdoor clinic and hospital cases will furnish sufficient material. All modern aids and methods of diagnosis are used. It is the aim of this course to train the student to make systematic and thorough examinations of patients. Prof. Cook.

2. *Clinical Diagnosis.*—One hundred and twenty hours of laboratory work and recitations will be given in this course.

Examinations of urine, sputa, gastric contents, pus, throat smears, blood, etc., are made by the students in the clinical laboratory. Instruction in the use of the microscope, blood counting, the staining and examination of blood smears, dark ground illumination, agglutination and hemolytic reactions will form an important part of this course. Courses 1 and 2 occupy a period of two hours per day for twenty weeks. Drs. Von Gerber and Davis.

3. *General Medicine.*—Five hours a week during the entire year will be given to lectures and recitations upon general medicine. An effort will be made to cover the field of the most important medical diseases, leaving to the fourth year the more detailed study of specific and rarer diseases. A special assignment has been made for the study of tropical diseases. Profs. Cook, Hall, Woodward and Dr. Taylor.

4. *Medical Jurisprudence.*—Two lectures a week for two weeks. The student will be taught his duties from a legal standpoint, his duties to the State and the legal relations between physician and patient. A few practical lectures on life insurance examination will be given in this course. Dr. West.

5. *Clinics.*—The schedule of clinics in internal medicine will be arranged so as to give the third year students opportunity of attending. This is not required, but the student will find it of advantage to do so.

Fourth Year

1. *Clinics.*—Two clinics a week will be held at the (illegible) building. These clinics will last one and one-half hours each. One clinic a week will be held at St. Joseph's Infirmary. Students will be assigned cases and opportunity given for their study and to make such examinations as may be necessary before presented in the clinic. Complete case histories and reports of all examinations made will be required and filed for record. The clinical laboratory will be in charge of competent instructors and accessible to students two hours each day. The preliminary study of

and preparation of histories are considered most important features of clinical instruction. Daily outdoor clinics will be held in the Dispensary. Prof. Cook and clinical staff.

2. *Ward Instruction.*—The class will be divided into sections and visits made with members of the Staff to the Hospital wards. Four hours a week. Drs. Veatch and Hays.

SURGERY

Professor, Bacon Saunders, M. D., LL. D.

Associate Professors:

I. C. Chase, A. M., M. D. R. F. Saunders, M. D.

Assistants:

Chas. H. Harris, M. D. C. O. Harper, M. D.

Leonidas A. Suggs, M. D.

Demonstrators:

Leroy O. Foster, M. D. Geo. D. Bond, M. D.

THIRD YEAR

1. *Principles of Surgery and Surgical Pathology.*—The aim of this course will be to teach the student in a thorough manner the causes, symptoms, and course of surgical diseases. It will be covered by three lectures a week for eighteen weeks, supplemented by quizzes and demonstrations of clinical cases and pathological material. Dr. Harper.
2. *Fractures and Dislocations.*—Three hours each week will be devoted to this subject for eighteen weeks. The diagnosis and treatment of these important injuries will have a thorough and practical consideration. The selection of proper mechanical appliances will have careful consideration and practical demonstration, in which the individual student will be required to participate. This course will immediately follow that on Principles of Surgery. Dr. Harris.

SURGICAL LABORATORY

3. *Minor Surgery and Bandaging.*—Three lecture periods each week, the first eight weeks, will be devoted to thoroughly acquainting the student with the practical use of bandaging and the proper method of preparation and application of

surgical dressings in minor injuries. In this cours student will be required to do the work under the vision of the instructor. Dr. Foster.

4. *X-Ray Diagnosis.—Lectures and Demonstrations.*—On for ten weeks. The uses of electricity in its applicati the diagnosis and treatment of disease will be given. emphasis will be made upon X-Ray diagnosis. Dr. Ben

5. *Surgical Anatomy.*—A review of topographical a with its relations to surgical anatomy and operative Amputations, ligations and operative technic will be t the students by demonstration on the cadaver. Late students will perform the work on the cadaver under supervision of the instructor. Two periods of two each will be given this subject for eight weeks immedi following the course in Minor Surgery and Band Prof. Roy F. Saunders.

6. *Surgical Anatomy and Technic.*—A thorough surgical technique on animals. It includes thoracic tions, gastrotomy, gastric resection, gastro-enter enterostomy, suprapubic cystotomy, ureteral anast and such joint, tendon and nerve surgery and organ plantation as time will allow. All work done by under strict supervision, on carefully anaesthetized which are given the best hospital care. Especial will be laid on after care and end results. This finishes the surgical laboratory work and receives hours a week the last twelve weeks of school. Prof.

FOURTH YEAR

1. *Practice of Surgery.*—Two hours per week throughout year will be given this important branch. Compet instruction will be given in the practice of surgery, a the diagnosis and treatment of surgical conditions a eases. Prof. Bacon Saunders.

2. *Orthopedic Clinics.*—Twelve clinics in this work will during the year, wherein the principles and Orthopedic Surgery will be demonstrated. Dr. Sapp

3. *Outdoor Clinics.*—Two clinics per week—including Orthopedic Clinics—will be held at the College and Hospital. This does not include the daily Dispensary Clinics. The Senior class will be organized into staffs, which will serve in rotation. To the class, the histories will be presented; they will reach a diagnosis and outline a course of treatment subject to the criticism of the Professor of Surgery. All patients admitted to the Hospital will be utilized to the fullest extent. All clinics will be in charge of the Professor of Surgery and his staff. Profs. Saunders, Chase, Drs. Harris and Suggs.

4. *Clinics (St. Joseph's Infirmary).*—Every Saturday morning two or more hours will be devoted to operative work at the clinical amphitheater of the Infirmary, at which time the Senior class will be given instruction in surgery and technic. Prof. Bacon Saunders.

GENITO-URINARY AND RECTAL DISEASES

Professor, W. A. Duringer, M. D.
Associate Professor, W. C. Duringer, M. D.
Assistant, M. V. Creagan, Ph. G., M. D.

Fourth Year

1. *Clinical Lectures and Technic.*—This course will consist of two clinical lectures a week during the entire year, illustrated with abundant clinical material of great variety. Lectures will completely cover the etiology, pathology, diagnosis and treatment of diseases of the genito-urinary organs and rectum. The technic in the use of endoscope, cystoscope, bougies, irrigators, instillations, etc., will be thoroughly demonstrated. Appointments from the class to assist in the operations, giving opportunities for thorough training in surgical work and diagnostic technic. The students will be assigned to cases and will be required to take complete case histories and present to the clinics with their diagnosis. Profs. Duringer and Dr. Creagan.

OBSTETRICS

Professor, Goodridge V. Morton, A. B., M. D.
Associate Professor, Joseph A. Gracey, M. D.
Assistants:
Jno. B. Cummins, M. D. Jno. M. Furman, M. D.

THIRD YEAR

1. *Lectures and Quizzes.*—Three hours a week during the entire session. In order that the student shall have a thorough knowledge of obstetrics, a large part of the work will consist of quizzes from texts. Profs. Gracey and Cummins.
2. *Laboratory and Demonstration.*—This course consists of [illegible] hours a day for seven and one-half weeks. The student is thoroughly drilled in manikin work and becomes proficient in diagnosis of presentations, positions and postures and the application of forceps. The diagnosis of pregnancy is thoroughly studied. The clinics, when available, will be used for this purpose. The student is thoroughly drilled in asepsis and antiseptics and in the technic of obstetrical surgery. Prof. Morton.
3. *Clinics.*—Hospital clinics and an outdoor obstetrical service have been planned. The Senior class is divided into sections and an equal number from each are taken in rotation so that during the Senior year the student will have witnessed, assisted and delivered a large number of cases in the hospital and in the out-clinic obstetric service. Profs. Morton and Gracey and Drs. Cummins and Furman.

NEUROLOGY

Professor, Wilmer Allison, M. D.
Associate Professor, Jas. D. Bozeman, M. D
Assistant, Henry B. Trigg, M. D.

THIRD YEAR

1. *Lectures.*—One hour each week during the entire session will be devoted to didactic teaching. Prof. Bozeman.
2. *Laboratory and Demonstration.*—Two hours each day for ten weeks will be devoted to demonstration and laboratory work. The anatomy and physiology of the nervous system is thoroughly reviewed. The pathology underlying

nervous symptom is studied by slides, charts and quizzes. Practical application of all of the methods of diagnosis of nervous conditions are made use of, in order that the student may become familiar with all diagnostic aids. Drills in taking case histories and making of a diagnosis in nervous and mental disorders are emphasized. Prof. Bozeman and Dr. Henry B. Trigg.

FOURTH YEAR

1. *Lectures.*—One hour a week during the entire year, continuing the work of the Junior year, this covering the entire ground of nervous and mental diseases. Prof. Allison.

2. *Clinics.*—One hour a week is devoted to clinics. Practically all forms of nervous diseases will be shown at these clinics. We have, outside of the hospital, cases from private sanitariums, as well as interesting cases from private practice. The County Jail furnishes an abundance of psyciatry cases, thus affording the students ample opportunities to become familiar with the forms of mental and nervous diseases. Daily clinics at the Dispensary. Profs. Allison and Bozeman.

GYNECOLOGY

Professor, W. Ernest Chilton, M. D.
Associate Professor, Isaac A. Withers, M. D.

THIRD YEAR

1. *Lectures and Recitations.*—One hour a week during the entire session. Anatomy and physiology of the female generative organs, etiology, pathology, diagnosis and treatment of diseases under the head of Medical Gynecology, are studied. Prof. Withers.

2. *Laboratory.*—Practical demonstrations and drills in examinations, case histories, methods of diagnosis of various pathological conditions are given in conjunction with the laboratory course in obstetrics. Two hours a day for seven and one-half weeks. Prof. Withers.

Fourth Year

1. *Lectures and Quizzes.*—Two hours a week during the s year, consisting of clinical and didactic recitations, co ing the Junior year and taking up surgical gyneco Prof. Chilton.
2. *Quizzes.*—One clinic per week of two hours will be de to gynecology. In addition, ward clinics from 8 to 9 o'c every morning will be held. The class is divided into tions so that the entire class during the year has a equal opportunity to study gynecologic cases. The clinical lab tory enables the student to work up his cases to the advantage. Profs. Chilton and Withers.
3. *Clinics.*—One regular two-hour clinic will be held College and a daily outdoor clinic. Profs. Chilton Withers.

OPHTHALMOLOGY

Professor, William R. Thompson, M. D.
Assistant, R. W. Moore, Ph. B., M. D.

Third Year

1. Fifty hours will be devoted to laboratory work. A co study of the instruments of precisioin will be made demonstration of their uses. Special attention will b to refraction and ophthalmoscopy. Dr. Moore.

Fourth Year

1. Fifty-four hours will be devoted to didactic work, con of class conferences of cases presented in the clinic study of the more common eye diseases, together wi quent quizzes. Prof. Thompson and Dr. Moore.
2. Twenty-four hours or more will be devoted to clini struction, during which time all the more common will be presented, together with many complications Thompson and Dr. Moore.

OTOLOGY

Professor, Edgar Doak Capps, M. D.
Assistant, R. B. Sellers, M. D.

Third Year

1. Twenty-five hours will be devoted to laboratory work, consisting of a careful study of instruments commonly used in the diagnosis and treatment of otological conditions and their complications. Special attention will be devoted to hearing tests and study of the labyrinth. Dr. Sellers.

Fourth Year

1. Eighteen hours will be devoted to didactic teaching in covering the more common otological diseases and their complications. Frequent quizzes will be an important feature of the class work. Prof. Capps and Dr. Sellers.
2. Twenty-four hours or more will be devoted to clinical teaching, during which time the many otological conditions will be presented to the class of diagnosis. Prof. Capps and Dr. Sellers.

RHINOLOGY

Professor, Frank D. Boyd, M. D.
Assistant, J. Wesley Head, M. D.

Third Year

1. Twenty-five hours will be devoted to laboratory instruction, during which time the more common instruments used in rhinological work and their uses will be demonstrated to each member of the class. Special attention will be directed to transillumination of the sinuses. Dr. Head.

Fourth Year

1. Eighteen hours will be devoted to didactic instruction, during which time the more common rhinological conditions will be studied. Frequent quizzes will be an important feature of this work. Prof. Boyd and Dr. Head.

2. Twenty-four hours or more will be devoted to clinical instruction. During this time many interesting rhinologic conditions will be presented for diagnosis and treatment. Individual examination and diagnosis will be insisted upon by the staff. Prof. Boyd and Dr. Head.

3. Clinics will be held daily at the Dispensary. Profs. Thompson, Capps, Boyd and assistants.

PEDIATRICS

Professor, Robert B. Grammer, M. D.
Associate Professor, Jesse S. Bardin, M. D.

Fourth Year

1. *Lectures and Recitations.*—Two lectures a week during the Fall term. In this course the anatomy and physiology of infants, with their development and growth, hygiene and general care in early life, will be carefully considered. Prof. Bardin.

2. *Laboratory.*—This course will demonstrate the modification of cow's milk for infant feeding, Pasteurization, etc., the composition and nutritive values of the different proprietary infant foods, and the proper selection of foods and feeding in different diseases. Six hours by appointment. Prof. Bardin.

3. *Lectures and Recitations.*—One lecture a week, supplemented with frequent quizzes, during the Winter and Spring terms. This course will be devoted to the consideration of the diseases of childhood, their influence upon the development and growth of childhood, the proper care and feeding for sick children. The methods of diagnosis, history taking, treatment, etc., will receive special attention. Prof. Grammer.

4. *Clinics.*—Daily clinics will be held at the Dispensary and County Orphans' Home.

DERMATOLOGY AND SYPHILOLOGY

Professor, Sidney J. Wilson, M. D.

1. *Clinics.*—This course will comprise a study of the essentials of diagnosis, including a classification of the various skin lesions, and a general consideration of the more common skin diseases. A systematic course on syphilis as a whole and detailed consideration of its cutaneous manifestations, will be given. One clinic will be given each week during the entire year, besides a daily outdoor clinic.

Students are required to make examinations, write histories, make diagnoses, and suggest treatment. The College Dispensary furnishes an abundance of clinical material for a thorough course in this branch. Prof. Wilson.

HYGIENE AND CLIMATOLOGY

Professor, Holman H. Taylor, B. S., M. D.

The first part of the course will be devoted to the study of Preventive Medicine. The relation to the general public of preventable diseases, epidemics, prophylaxis of tuberculosis, etc. tuberculosis and other infectious diseases in our public schools and other public institutions. The effects upon society, of the feeble-minded, the delinquent and the criminal. Later, the study of the nutritive value of foods, the amount necessary for health, their composition, and food adulterations, general, personal and public hygiene.

A careful study will be made of climate, high and low altitudes, winds, isotherms, isobars, hygroscopy, etc., their influence upon epidemics, as carriers or harbingers of infections. In fact, this will be a most interesting course.

The latter part of the year will be devoted to the study of public sanitation, taking up the influence upon the public health, of the air, soil, and water. The disposal of garbage and sewage, including infection, susceptibility and immunity. Lectures, two per week during the year. Prof. Taylor.

MATRICULATION REQUIREMENTS

Basis of 14 Units*

Regulations of the Board of Medical Examiners for the State of Texas relating to Medical Colleges and admitting to medical study:

SECTION 1. *Authority.*—The Board of Medical Examiners for the State of Texas is, by the Medical Practice Act of 1907, allowed to admit to its examinations for license to practice medicine only applicants who are graduates of *bona fide* reputable medical schools of the first-class. The law says: "Such shall be considered reputable within the meaning of this act whose entrance requirements and course of instruction are as high as those adopted by the better class of medical schools of the United States." Upon this authority are issued the following standard requirements for Texas Medical Colleges, equivalent to those adopted by the better class of medical schools of the United States. Only those Texas medical schools enforcing the following entrance requirements and having the following prescribed facilities and courses of instruction will be considered reputable and their graduates admitted to the examinations of this Board.

SECTION 2. *Entrance Requirements.*—Colleges to be considered reputable shall admit to their courses of instruction only students to whom entrance certificates have been granted by this Board. These entrance certificates will be issued upon the following:

*A unit represents the work done in one full session of a high school course, accomplished by one 40-minute recitation five days in the week for a period of not less than 36 weeks.

ACCEPTABLE CREDENTIALS

(a) A diploma from a reputable university or college granting the degree of A. B., B. S., or equivalent degree.

(b) A student's certificate of admission by examination issued by a university or college of the first class, which will be accepted for admission to the College of Arts of the University of Texas.

(c) A diploma from the Texas State Normal Schools, the Agricultural and Mechanical College, or the Girls' College of Industrial Arts.

(d) A diploma from a high school which is fully affiliated in the first grade with the University of Texas.

Graduates of high schools affiliated with the University of Texas in the second and third groups of affiliated schools will be credited with the subjects which have been completed and in which the schools are affiliated. They will be required to pass examinations on sufficient number of elective branches to give them credit for fourteen units.

(e) A diploma from a normal school, academy, seminary or other school legally constituted, when documentary evidence shows that the work included a four years' course which was preceded by eight years of study in elementary and intermediate grades, provided the work in such school is equal to a standard high school.

(f) A medical student's certificate will be required at the time of entrance, issued upon examination by a State Board of Medical Examiners having reciprocity arrangements with this Board, on a fourteen unit basis.

(g) Holders of first grade Teachers' Certificates will be given credit for eight units. Holders of permanent State Teachers' Certificates will be given credit for eleven units.

Where additional units are to be made, credit will be given when certified to by the high school superintendent of the district from which the applicant comes, from the electives as indicated in the following:

STANDARD HIGH SCHOOL COURSE

Schedule of subjects offered in academic and secondary schools, credits which are acceptable for entrance to this school.

SUBJECTS—	Units.	Required.	Elective
English:			
Reading and Practice	2	2	..
Study and Practice	1	..	1
Mathematics:			
Algebra to Quadratics	1	1	..
Algebra (Quadratic Equations, Binomial Theorem and Progressions)	½	..	½
Plane Geometry	1	1	..
Solid Geometry	½	..	½
Trigonometry	½	..	½

SUBJECTS—	Units.	Required.	Elec
Latin:			
Grammar and Composition	1	1	
Cæsar	1	1	
Cicero	1	..	
Virgil	1	..	
Cornelius Nepos	1	..	
Greek:			
Grammar and Composition	1	..	
Xenophon	1	..	
Homer	1	..	
German:			
Elementary	2	..	
Intermediate	1	..	
French:			
Elementary	2	..	
Intermediate	1	..	
Spanish:			
Elementary	2	..	
History:			
United States History	1	1	
Greek and Roman History	1	..	
Medieval and Modern	1	..	
English	1	..	
Science:			
Botany and Zoology, each	½	..	
or Biology	1	..	
Chemistry	1	..	
Physics	1	1	
Physiography	½	..	
Physiology	½	..	
Drawing	1	..	
Music:			
Appreciation	1	..	
Harmony	1	..	
Total	34	8	

PRESENTATION OF CERTIFICATES OR CREDENTIALS

Proper credentials or certificates mentioned above should be presented to the Dean, who will secure entrance certificates for applicants from the Secretary of the State Board of Medical Examiners. A certified copy of all credentials should be filed with the Secretary of the Faculty.

CLASS OF STUDENTS ADMITTED

In accordance with the foreoing rules governing admission to medical colleges by the State Board of Medical Examiners, this school will during 1913-14 admit two classes of students.

1. Those who matriculate for the first year of a four-year course of medicine, anticipating the Degree of Medicine. Such students must present an entrance certificate from the Texas State Board of Medical Examiners, based on 14 units of high school work.

2. Special and post-graduate students who are not candidates for the degree will be admitted without entrance certificates.

Beginning January 1, 1914, the minimum requirement for admission will be enlarged to include at least one year of college work in physics, chemistry and biology and a reading knowledge German or French. The University inaugurates this course this fall.

ADVANCED STANDING

The following classes of students may apply for advanced standing and obtain it if they undergo a satisfactory examination upon each branch below the class desired to be entered:

(a) Graduates and matriculants who have completed one or more courses in Colleges of Homeopathy and of Eclectic Medicine, providing their entrance requirements and standard of work are equivalent to that of this school.

(b) Credit will be given for work done in other accredited medical colleges upon presentation of proper credentials and certificates of attendance and examination, with an honorable dismissal from school previously attended, signed by Dean.

(c) As soon as the reorganized and enlarged hospital facilities are completed and an A. M. A. classification in Class "A" is received, the rules of the American Medical College Associa

tion regarding credits from Class "C" and Class "B" will be enforced.

SPECIAL STUDENTS

Post-graduate and special students who are not candidates for the degree of Doctor of Medicine, are exempt from entrance examination requirements and are permitted to take any regular or special course they may select. A fee of $50.00 will be charged, which does not cover laboratory courses. At the close of the term a certificate will be given showing attendance and course of lectures taken.

Alumni of this school are invited to avail themselves of the privileges of all lectures and clinics free. A small fee will be charged for any laboratory course taken by such students. The State Anatomical Law provides material at a low cost, which affords excellent opportunity for post-graduate work in the anatomical or surgical lines.

REQUIREMENTS FOR GRADUATION

An applicant for the degree of Doctor of Medicine must have fulfilled all of the requirements set forth in this announcement.

1st. He must notify the Dean in writing on or before the first day of April of the college year of his intention to take the final examinations.

2d. He must have removed all conditions previously established against him before presenting his application, which must be accompanied by an examination fee of $25.00; all previous fees having been paid.

3rd. He must have previously met all the matriculation requirements of this college; must have attended at least four full courses of lectures, recitations, laboratory work and clinics, the last course of which must have been in this college. If any student fails in, or refuses to take, any branch or branches of the four years' graded course, he will not be considered eligible for graduation and his name will not be presented to the faculty for the degree of Doctor of Medicine.

4th. He shall have completed the courses in all departments of the college, with an attendance of no less than 80% in each department, and his percentage of proficiency not less than 75% in all the branches shown in the curriculum.

5th. He must be present at the time and place scheduled by the Dean for final examination, and his absence from any examination in any given department will indicate failure in that department; no special examinations will be given.

6th. He must undergo all written examinations, or both written and oral, at the discretion of the professor in charge of the department, and each examination must be written in English, and the penmanship, orthography, punctuation and general style and characteristics of each paper will be considered. In case a candidate fails to pass a satisfactory examination for his degree in any previous year in this college, he will be required to stand satisfactory examinations upon all the branches belonging to the Senior year. *No exception will be made to the above ruling.*

EXAMINATIONS AND PROMOTIONS

Final examinations are held the last ten days of the scholastic year. The examinations will cover the work of the entire year. The order of these examinations will be posted, and no variations from same will be permitted except by permission of the Faculty. Promotions are based on grades made at these examinations. No student shall be considered eligible for final examination for credit in any course who has not been in actual attendance in eighty per cent. of the time allotted to such course.

Term examinations are not considered as final except wherein a course has been completed. All grades shall be designated by the following terms: Passed, conditioned and failure. A grade of 70 and above shall constitute a pass, one of 60 to 70 a condition, one below 60 a failure. No student shall be eligible to promotion who has failures or conditions amounting to ten per cent. of the total hours in the year's work. Students who have failed, that is a grade below 60, in any subject, will be required to take the work over the following year.

Credit in any department shall be composite, that is, the student must have made suitable grades in both didactic and laboratory work before he can receive credit for that department. Memoranda records are kept of each individual course, both didactic and laboratory, and a failure in didactic or laboratory work shall not count as a failure in the total number of hours in

that department, but as a failure or condition for the number of hours in the particular course in which he is deficient.

Deficiency examinations are held only at the beginning of each year for those students who were conditioned the preceding year. These examinations are given but once, and a schedule of such examinations is posted the first week of school.

PRIZES

First Year Proficiency Prize.—Awarded by the Faculty, in memory of the late Dr. W. P. Burts, formerly Professor of Obstetrics in this College. It will be presented to the first year student who receives the highest grades upon the work of the Freshman class. This prize consists of a gold medal.

Second Year Proficiency Prize.—Will be presented to the second year student who receives the highest grades upon the work of the Sophomore year. It consists of medical books valued at $25.00.

Third Year Proficiency Prize.—To the Junior student passing the best final examination on the branches of the third year, a selection of medical books valued at $25.00.

General Proficiency Prize.—This is awarded only to students who have taken all of their courses in this school, and is presented to the student making the highest percentage during the four years necessary to graduation. It will not be awarded except to students whose general average on final examinations is 90 per cent. or over. Grades made in special examinations will not be considered. The prize is a handsome gold medal.

The Degree Cum Laude.—The degree of Doctor of Medicine Cum Laude, is conferred upon students of marked ability and high moral character, who shall have made an average of 90 per cent. or more on all final examinations in all the subjects of the four-year course in this institution. Grades made in special examinations will not be considered.

HOSPITAL APPOINTMENTS

Through the courtesy of friends of this school the Faculty is able to offer interneships in the leading hospitals enumerated below. In awarding them, the prize committee will not be governed wholly by the scholarship of the applicant, but will also

sider his general fitness for the position. Full information concerning these appointments may be had by applying to the Dean. Other appointments of this character will probably be offered before the close of the term.

SENIORS

St. Joseph's Infirmary, House Surgeon (2), Fort Worth, Texas.
St. Vincent's Sanitarium, Interne, Sherman, Texas.
Provident Sanitarium, Interne, Waco, Texas.
Harris Sanitarium, Interne, Fort Worth, Texas.
St. Anthony's Sanitarium, Interne, Amarillo, Texas.

JUNIORS

International & Great Northern Hospital, Interne, Palestine, Texas.
All Saints' Hospital, Interne, McAlester, Oklahoma.
Medical College Hospital, House Surgeon, Fort Worth, Texas.

EXPENSES

The wide range between actually necessary expenses and the amount one might spend in a medical course precludes exactness in preparing a statement of this kind. The figures given below are based upon the experience of a large number of students. A little more liberal expenditure of money will secure better accommodations; but for the figures used in this estimate wholesome food and comfortable lodgings can be obtained. The tuition, $100.00, one-half of which is payable at the opening of school and one-half at the beginning of the Winter Term, is the same for all students and is uniform for each of the four years of the medical course.

ESTIMATE OF EXPENSES

Matriculation fee (paid but once)	$ 5.00
Tuition for a term of thirty-six weeks	100.00
Board and lodging for thirty-six weeks	140.00
Laundry	25.00
Incidentals	45.00
Total	$310.00

No allowance is made in this estimate for the purchase of text-books. Every student, in making his financial arrangements at home, should provide himself with means to purchase one of the recommended texts for each of the branches he expects to study, and should purchase them at the time of matriculation. It is not infrequent that poor grades are directly traceable to the want of necessary books, made doubly essential since the method of teaching by lectures has given way to recitations.

LABORATORY FEES

Students are required to deposit with the Registrar the following laboratory fees, the whole or a part of which is returnable in case of material unused or apparatus returned: Osteology, $2.00; Chemistry, $3.00; Pharmacy, $4.00; Bacteriology, $5.00; Histology, $5.00; Pathology, $5.00; Clinic Laboratory, $5.00.

BOOKS

The books used as texts are the latest editions. Students do themselves injustice by purchasing old editions.

The following is a conservative estimate of the money necessary for the books, which may be obtained at Dean's office:

Freshman Year	$40.00
Sophomore Year	40.00
Junior Year	40.00
Senior Year	55.00

FEES FOR EXAMINATION

No fees are charged in this school for examination, except the finals in the fourth year. Students applying for graduation are required to pay an examination fee of $25.00, which is not returnable in case applicant fails to pass. No fee will be charged for diploma.

MISCELLANEOUS INFORMATION

Fort Worth is a delightful place of abode during the months of the school term. The climate is mild, and the winter sunshine very grateful to students who wish to avoid the rigors of a

more northern latitude. The cost of living, as elsewhere stated, is moderate. Room rent varies from $3.00 to $5.00 per week, furnished, according to the distance from the business portion of the city.

In patronizing a home school, students should remember that there is a great saving in the one item of railroad fare alone, large enough in many instances to pay for all the books needed during the course, or to provide the most requisite surgical instruments with which to begin practice.

The Dean's office will be open from 8 a. m. until 1 p. m., and from 2 p. m. until 5 p. m., for the transaction of business. Students are requested to matriculate promptly, and to bring to the office all credentials bearing on the previous courses, in order that assignments may be made without unnecessary delay.

Students who contemplate entering the Freshman class and who desire information with reference to securing the Medical Students' Certificates mentioned on previous pages, should write at once to the Dean, who will take pleasure in giving them all necessary information.

A large list of boarding and rental houses is kept at the Dean's office for convenience of students, and information concerning this or any other school matter will be cheerfully furnished. Address all correspondence to

IRA CARLETON CHASE, A. M., M. D., *Dean*,
Fort Worth, Texas.

TEXT-BOOKS

ANATOMY:
Gray, $6.00; *Cunningham's Manuals* (2 vols.), $5.00; Cunningham, $6.00; Piersol, $7.50; Gerrish, $6.50; Morris, $6.00; Spaltzholz.

BACTERIOLOGY:
Parks, $3.75; *Schneider*, $2.00; Jordon, $3.00; Hiss Zinsser, $3.75; McFarland, $3.50; Levy & Klemperer, $2.50.

BIOLOGY:
McFarland, $1.75.

CHEMISTRY:
Simon, $3.00; *Hawks-Physiological*, $2.50; *Rockwood's Analytical*, $1.50; Hill, $3.00.

CLIMATOLOGY:
Ward, $2.00; Solly, $4.00.

CLINICAL DIAGNOSIS:
Emerson, $5.00; *Faught*, $2.00; *Morris*, $3.00; Simon, $4.00; Sahli, $6.50; Wilson, $6.00; Todd, $2.25.

DERMATOLOGY:
Stelwagon, $6.00; Pusey, $6.00; Hyde, $5.00.

DICTIONARIES:
American, $5.00; Lippincott, $5.00; Gould, $5.00.

EAR:
Phillips, $6.00; *Bacon*, $2.25; Dench, $5.00.

EMBRYOLOGY:
McMurrich, $3.00; Heisler, $3.00.

ELECTRO-THERAPEUTICS:
Snow, $3.00; *Bythell & Barclay*.

EYE:
De Schweinitz, $5.00; Fuchs, $6.00; Fox, $6.00.

GENITO-URINARY:
Keyes, $6.00; *White & Martin*, $6.00; Morton, $4.00.

GYNECOLOGY:
Ashton, $6.50; Hirst, $5.00; Montgomery, $6.00; Kelly Operative (2 vols.), $15.00.

HISTOLOGY:
Bailey, $3.00; Hardesty, $1.50; Piersol, $3.50; Huber Laboratory Manual, $1.50.

HYGIENE:
Bergey, $3.00; Rhoe & Robin, $3.00; Harrington, $4.25.

MEDICAL JURISPRUDENCE:
Draper, $4.00; Emerson, $5.00.

NERVOUS DISEASES:
Church & Peterson, $5.00; Gordon, $2.50; Kraepelin, Oppenheimer, $5.00.

NOSE AND THROAT:
Ballinger, $5.50; Douglas, $2.50.

OBSTETRICS:
Williams, $6.00; Hirst, $6.00; Herman Difficult Labor, Labor, $2.50; De Lee.

PATHOLOGY:
Ziegler, $5.50; *Cattell* (Post Mortem), $4.00; Mallory & Wright, $3.00.

PEDIATRICS:
Holt, $6.00; Kerley, $5.00; American Text Book, $7.00; Remington, $6.00.

PHARMACOLOGY AND THERAPEUTICS:
Sollman, $4.00; *Sayre*, $5.00; *Cushny*, $3.75; *Culbreth*, $4.75; Butler, $4.00; Wilcox, $3.50.

PHYSICAL DIAGNOSIS:
Cabot, $3.00; Da Costa, $3.50; Anders & Boston, $6.00; Cabot's Differential, $5.50.

PRACTICE:
Osler, $5.50; Anders, $5.50; Hughes, $2.50.

PHYSIOLOGY:
Howell, $4.00; *Martin*, $2.50; Hall's Laboratory Manual, $2.75.

RECTUM AND ANUS:

Gant, $3.50; Tuttle, $6.00.

SURGERY:

Nancrede, $2.50; *Da Costa*, $5.50; *Scudder* (Fractures) $6.00; *Wharton* (Minor Surgery), $3.00; *Bradford & Lovett* (Orthopedic), $5.00; Binnie, $7.00; Bickham, $6.50; Rose & Carless, $6.00; Sluss, $3.50; Stimson (Fractures) $.00; Wyeth, $6.00; Mumford, $7.00; Taylor (Orthopedic, $5.00; Cotton (Fractures), $6.00.

TOXICOLOGY:

Holland, $3.00; Peterson & Haines, (2 vols.), $10.00.

URANALYSIS:

Saxe, $1.75; Purdy, $3.00.

ENROLMENT—SESSION 1912-13

CATALOGUE OF CLASSES

SENIORS

Cross, J. G.
Carter, Chas.
Campbell, C. C.
Freeman, I. S.
Godley, L. O.
Goodman, T. L.
Grogan, O. R.
Jones, Elmer W.
Locker, H. L.
Lipps, P. K.
Monk, J. A.
Rayburn, C. M.
Saunders, C. C.
Shoemaker, J. W.
Stewart, S. H.
Wehinger, A. D.
Whitten, S. D.

JUNIORS

Christian, E.
Cadenhead, J. Frank
Evans, S. Ray
Francis, Fred W.
Greer, N. E.
Grisso, Doc.
Genochio, E. P.
Hammond, Judd E.
Hodges, E. D.
Logsdon, Will K.
Littlepage, H. B.
May, J. Carl
Randel, B. W.
Saunders, D. J.
Scott, K. J.
Sorrell, L. B.
Tolson, T. T.

SOPHOMORES

Arnold, Carl
Allen, Will
Crump, T. E.
Day, Giles W.
Franklow, Davis
Garlington, E. F.
Grant, B. C.
Horn, Fred W.
Henry, E. V.
Hyde, Ximmie
Lockhart, J. P.
Odom, C. C.
Robinson, Jno. E.
Randel, H. O.
Thompson, James E.
Tucker, Jno.
Teddlie, Gomer
Tyler, Earl

FRESHMEN

Bond, Thomas
Brittain, Eugene G.
Curby, Roy B.
Finley, G. P.
Gerald, N. O.
Holcomb, Irl
Hancock, E. C.
Nies, W. B.
Reynolds, W. W.

SPECIAL STUDENTS

Brown, E.
Boswell, M. T.
Boswell, H. M.
Terry, Houston

SCHOOL OF PHARMACY

FACULTY

FREDERICK D. KERSHNER, M. A., LL. D.,
President of the University.

R. H. NEEDHAM, Ph. C., 1311 Harrington Ave., N. Ft. W.
Professor of Pharmacy, Physiologic Chemistry and Toxi
and Dean of the Faculty.

M. V. CREAGAN, Ph. G., M. D., 1230 Hurley Ave,
Associate Professor of Pharmacy.

M. E. GILMORE, Ph. C., M. D., Fifteenth and Lagonda
Professor of Materia Medica and Pharmacology.

JOHN D. COVERT, M. D., 1508 Hemphill St,
Professor of Bacteriology.

J. A. KELLEY, M. D., 509 Flatiron Bldg,
Professor of Physiology.

J .C. MAY, 1300½ Main St,
Assistant in Physiology.

WILLIAM B. PARKS, A. M., Fort Worth, Texas
Professor of Chemistry.

HOWARD A. DABBS, A. M., University.
Associate Professor of Chemistry.

W. N. CLARK, Fort Worth, Texas,
Assistant in Chemistry.

W. S. ADKINS, A. M., University.
Professor of Botany.

HOLMAN TAYLOR, B. S., M. D., 207 Western Nat. Bk. B
Professor of Hygiene.

OSCAR E. VEATCH, A. B., M. D., 206 F. & M. Bank B
Associate Professor of Pharmacology and Therape

E. R. BENTLEY, Fort Worth, Texas,
Assistant in Physics.

E. P. GENOCHIO, Ph. C., Fort Worth, Texas,
Assistant in Pharmacy Laboratory, Materia Medica and Posology.

BROOKS C. GRANT, Fort Worth, Texas,
Assistant in Chemistry.

ROSS WOODALL, Fort Worth, Texas,
Assistant in Pharmacognosy and Inorganic Materia Medica.

RAY YOCUM, Fort Worth, Texas,
Assistant in Pharmacy Laboratory.

GILES W. DAY, Fort Worth, Texas,
Assistant in Pharmacology and Physiology Laboratory.

ANNOUNCEMENT

The School of Pharmacy is operated under a provision of the charter of Medical Department of Texas Chrisian University. It was organized in July, 1905, the faculty of the Medical Department having recognized, through the medical fraternity and druggists, that there was a demand for a Pharmacy School in connection with the Medical College. The success of the school has proven beyond any doubt the correctness of this conclusion and the rapid and substantial increase in both attendance and interest, developed by physicians and druggists, has demonstrated that our efforts to establish a good School of Pharmacy have been fully appreciated by the people of this section of the State.

Our object in entering the educational field was not confined entirely to selfish interests, but to establish an institution of learning where students could be thoroughly trained for their chosen profession, and, at the same time, come in contact with those studying medicine, the intercourse of which would better fit them for the business of pharmacists. There are many advantages to be gained in a school thus situated, which are wanting in those devoted to pharmacy alone. The drug business of today is quietly and persistently demanding that the men and women who engage therein must be better educated. While we realize that pharmacy is a commercial business, yet it has its professional side, and is recognized as a science and an art. The demand for educated, reliable drug clerks was never greater than it is today, with salaries showing an upward tendency; at the same time the State Boards of Pharmacy are demanding that both preliminary and pharmaceutical education be of higher standards. We have so arranged our curriculum as to meet these needs, and our entrance requirements will be up to those demanded by the Texas State Board.

In the beginning it was decided to give but one course, that one to be of two years' work, leading to the degree of Graduate in Pharmacy (Ph. G.). All efforts were directed to make this course one of the best. The number of hours devoted to lecture and laboratory work during the two years is in excess of [illegible]. We realize that these hours demand of the student a great amount of time and study, but our experience in this line

work leads us to believe that the future will demand additional hours. Our course embraces instruction in all the most important branches, conforming to the requirements of the State Board of Pharmacy in every respect.

EQUIPMENT

The College Building.—The College building is located at the corner of Fifth and Calhoun streets, two blocks from the main business street, two blocks from the car line, and in close proximity to good boarding houses. It is a four-story brick structure, new and modern in every detail. The lecture rooms and laboratories are ample, well lighted and ventilated, and completely equipped for up-to-date pharmaceutical instruction.

Pharmaceutical Laboratory.—This laboratory is located on the fourth floor of the building. The room is furnished with an abundance of light, and is thoroughly equipped as a pharmacy laboratory. Each student will have a desk to himself, fitted with drawers and a locker, besides gas and water. Sinks have been so arranged as to be within easy access. The laboratory will accommodate about thirty-five students at one time, or about seventy, working in different sections.

Chemical Laboratory.—The Chemical Laboratory occupies a large room on the same floor. It is commodious, well lighted and equipped with desks, lockers and individual gas and water supply. In this laboratory instruction will be given in general and analytical Chemistry, Physiological Chemistry and Uranalysis.

Vegetable Histology and Pharmacognosy.—This laboratory is stiuated on the third floor and is well adapted for the use of the microscope. Each student is assigned a locker and compound microscope and made thoroughly acquainted with the technical use of it in studying the minute structure of plants and drugs.

Dispensary.—The Free Dispensary maintained by the Medical Department is under the direct supervision of the Dean of the School of Pharmacy. All the prescriptions from the various clinicians of the College will be dispensed by the students of the Senior class, under the direct supervision of the Dispensary Chief. This affords the exceptional opportunity of actual prac-

tice in prescription work, greatly superior in many respects to the laboratory work assigned for drill only.

REQUIREMENTS FOR ENTRANCE

Each applicant for admission shall be required to present credit for eight units—seven required and one elective. The value of the unit to be the same as required for admission to the College of Arts of the University of Texas, on the following subjects:

REQUIRED UNITS

English—3 Units. To the Extent Taught in Public Schools.

English Grammar ..... 1 Unit
English Composition..... 1 Unit
English Rhetoric ..... 1 Unit

History—2 Units. Any two Units from This List.

American . ..... 1 Unit
English . ..... 1 Unit
French . ..... 1 Unit
German . ..... 1 Unit
Spanish . ..... 1 Unit
Mexican . ..... 1 Unit

Mathematics—Two Units.

Higher Arithmetic ..... 1 Unit
Algebra to Quadratics..... 1 Unit
Plane Geometry ..... 1 Unit

ELECTIVE UNITS

One Unit *only*, to be selected from the following subjects, with value attached:

Languages.

German . ..... 1 Unit
French . ..... 1 Unit
Spanish . ..... 1 Unit
Latin . ..... 1 Unit

Vocational Subjects.

Bookkeeping . ..... 1 Unit
Stenography . ..... 1 Unit
Typewriting . ..... 1 Unit
Domestic Science . ..... 1 Unit
Drawing . ..... ½ Unit

Science.

Civil Government .....½ Unit
Physics . .....½ Unit
Bacteriology . ..... ½ Unit
Chemistry . ..... 1 Unit

In lieu of the above requirements, schools admitting without examination the following parties will also be considered reputable, to-wit: Graduates of High Schools, Colleges and

Academies affiliated with the University of Texas, persons holding first grade teachers' certificates; anyone having been admitted upon examination, or otherwise, to any one of the Departments of the University of Texas, A. & M. College, Texas Christian University, and students of other approved colleges and universities, and any one who has completed at least two years in one of the State Normal Schools. All others must pass entrance examination, obtaining credit by such examination for eight units, upon subjects as above enumerated.

TIME ALLOTTED TO SUBJECTS

JUNIOR YEAR

	Didactic.	Laboratory.	Total
Pharmacy—			
Arithmetic	24		
Latin	24		
Theory	24		
Practice	24		
Commercial	24—120	144	264
Chemistry—			
Elementary Physics	24		
Inorganic Salts	48		
Qualitative Analysis	— 72	96	168
Materia Medica—			
Pharmacognosy	48		
Inorganic Salts	12		
Posology	12— 72	12	84
Physiology	60	25	85
Botany	48	48	96
Vegetable Microscopy	20	20	40
			737

SENIOR YEAR

	Didactic.	Laboratory.	Total
Pharmacy—			
Practice	24		
Prescription Reading	24		
Drug Assaying	— 48	130	178

	Didactic.	Laboratory.	Tot
Chemistry—			
Pharmaceutical and Manufacturing	12		
Quantitative Analysis	5		
Physiological	54		
Toxicology	12		
New and Non-Official Remedies.	6— 89	165	
Pharmacognosy	24	...	
Pharmacology	48	...	
Bacteriology	60	6	
Dispensing	...	50	
Hygiene	30	...	

CURRICULUM BY SUBJECTS

PHARMACY

Professor, R. H. Needham, Ph. C.
Associate Professor, M. V. Creagan, Ph. G., M. D.
Assistants:
E. P. Genochio, Ph. G. Mr. Ray Yocum

1. *Physical Manipulation.*—A brief review of the principles of physics relating to pharmacy, including weights, measures and specific gravity; the use of various instruments employed in testing the strength and purity of the official substances. Prof. Creagan.
2. *Descriptive Pharmacy.*—An introduction to the study of pharmacy, the apparatus and processes used in the preparation of medicines; and a systematic study of the classes of official preparations. Prof. Creagan.
3. *Pharmaceutical Arithmetic.*—Tables of weights and measures; metric system; conversion of weights and measures; computing specific gravities; drill in calculating percentage and dosage. Prof. Creagan.
4. *Pharmaceutical Latin.*—A brief course in medical and pharmaceutical Latin, with declensions, conjugations and

paridigms, tending to familiarize the student with terms and expressions with which he will come in contact in the practice of Pharmacy. Prof. Needham.

5. *Commercial Pharmacy.*—A series of lectures on drug store management, salesmanship, accounts, bookkeeping, etc Our object is to make this course interesting by securing practical druggists to deliver a part of these lectures. Profs. Needham, Creagan, et al.

6. *Galenical Preparations.*—Practical work in the manufacture of standard medicinal preparations; laboratory work. Mr. Yocum.

7. *Theory and Practice of Pharmacy.*—A review of the preparations of the United States Pharmacopeia and National Formulary, methods of identification, chemical reactions which occur in manufacture, tests for purity of official substances and preparations. Prof. Needham.

8. *Prescriptions.*—The fundamentals of prescription writing, reading of difficult and illegible prescriptions, incompatibles and reactions resulting from prescription compounding. Prof. Needham.

9. *Pharmaceutical Testing and Drug Assaying.*—Introduced by a short course in volumetric analysis and quantitative estimations; the separations and estimation of the alkaloids of vegetable drugs; the standardization of drugs used in medicine; lectures; laboratory work. Mr. Genochio.

10. *Dispensary.*—Actual practice in the College Dispensary. Each student will be appointed in rotation to serve a week at a time in the Dispensary under the supervision of the dispensary chief. Prof. Needham.

Text-Books.—Remington's Theory and Practice of Pharmacy, U. S. P. National Formulary, Sayre & Havenhill's Drug Assaying, Havenhill's Pharmaceutical Arithmetic.

CHEMISTRY

Professors:
W. B. Parks, A. M. R. H. Needham, Ph. C.
Associate Professor, Howard B. Dabbs, A. M.
Assistants:
Mr. Brooks C. Grant Mr. Giles W. Day
Mr. E. R. Bentley Mr. W. N. Clark

JUNIOR YEAR

All of the Junior year chemistry and physics will be given at the University. The Senior year chemistry will be given at the Medical College.

1. *Elementary Physics.*—This course consists of twenty-four lectures given by the department of physics during the first six weeks. The laws and principles of physics as pertaining to chemistry and pharmacy more especially will be considered. Mr. Bentley.

2. *Inorganic Chemistry.*—Four lectures per week for twelve weeks following the course in elementary physics. Chemical laws and principles will be considered. The metals, non-metals and their compounds will be studied. Special emphasis will be placed upon those and the substances entering into medicinal and pharmaceutic preparations. Prof. Dabbs and Mr. Clark.

3. *Laboratory Work.*—Experimental work will be performed in the laboratory to teach and familiarize the student with the technique and manipulation of apparatus and the manufacture of different compounds. Laboratory periods will continue for twelve weeks, four hours per week. Prof. Dabbs and Mr. Clark.

4. *Qualitative Analysis.*—This course will immediately follow and will continue for twelve weeks, four hours per week. The metals and acids will be studied, tests applied, and methods of separation will be the regular assigned class work. Each student must work out at least one unknown in each group. Prof. Parks and Mr. Clark.

Senior Year

1. *Pharmaceutical and Manufacturing Chemistry (Organic.)*—This course will consist of four weeks of three one-hour periods per week. The class will be instructed as to the technique and manipulation of apparatus in the manufacture of the principal organic preparations, including ether, chloroform, etc. Mr. Grant.
2. *Laboratory Work.*—Four hours per week—two periods—in which the student will prepare and manufacture preparations and pharmaceuticals involving chemical reactions. Mr. Grant.
3. *Quantitative Analysis.*—Lectures to the number of five or more will be given, supplemented by laboratory work, over a period of four weeks. The laboratory periods will consist of two periods per week of two hours each. Volumetric and gravimetric and gasometric estimations will be made. Students will be expected to tabulate and file written reports of results. Mr. Grant.
4. *Physiological Chemistry.*—This is a laboratory course, which will include demonstrations and quizzes. The course will continue for nine weeks during the latter part of the year, consisting of three hours' work per day, with at least fifty hours devoted to lectures.

   The study of enzymes—their classification and actions—will be first taken up. Experiments on enzymes and anti-enzymes and quantitative determinations of the activity of the more important ones will be demonstrated by the students in the laboratory. The composition of carbohydrates, proteins and fats will be studied next. The action of saliva and the chemical changes on foodstuffs, under the head of salivary digestion, will be carefully carried out. Protein material and the process of gastric digestion, together with analysis of both true and artificial gastric juice, will be given attention, each student being required to make at least one analysis aside from the regular assigned work. Pancreatic digestion will next be taken up, due attention being given to the tests for enzymes and end products. Bile and its chemistry will be considered

The composition of milk is studied and the student is structed in detecting adulterants and preservatives. A complete analysis of at least two samples of milk will be required of each student, such analysis including the babcock test for butter fat.

The study of normal urine will be next taken up and the various constituents isolated wherever possible. Urea will be isolated and also prepared synthetically by the student. The salts of urea and uric acid will be studied chemically and microscopically. Hyppuric acid will be prepared from urine and the aromatic and sulphur compounds, and their relation to health and disease will be demonstrated. The student will be instructed as to the pathological constituents such as pigments, sugar, bile, blood, etc., tests for them and will be expected to analyze unknown samples of both pathological and normal urine. Careful drill is given in quantitative estimations, both gavimetric and volumetric. Each student will be expected to provide himself with a uniform note-book and to tabulate all results and experiments for the inspection of the instructor. Prof. Needham and Mr. Day.

5. *Toxicology.*—A series of twelve lectures will be given during the last three weeks of school, in which this science will be taught in such a manner that the student may be rendered familiar with the more common poisons, their symptoms upon the human body and their treatment. Demonstrations of the methods of detection of such poisons as mercury and arsenic will be made before the class. Prof. Needham.

6. *New and Non-Official Remedies.*—Modern research and industrial chemistry from time to time are furnishing the medical science with new and valuable remedies which are either not listed in text-books or are placed upon the market or are placed upon the market and used under peculiar and fanciful names. Our object in giving this special course of six lectures, by appointment, is to acquaint the student with the valuable modern Materia Medica. Prof. Needham.

Text-Books.—Simon, Rockwood's Analytical Chemistry, Hawk's Physiological Chemistry, Holland's Toxicology.

BOTANY

Professor, W. S. Adkins, A. M.

Junior Year

The course in Botany will be given at the University. This will include both Systematic Botany and Vegetable Histology.

1. *Pharmacal Botany.*—A graduated course of lectures for beginners, introducing Systematic Botany. The arrangement of this course acquaints the student with the germination, morphology and growth of the higher plants, after which a series of lectures will be given covering paleobotany. Next, the lowest types of plants will be taken up, proceeding upward in the scale of plant life. Special effort will be made to teach the student the application of his knowledge of botany, to the classification of the plants indigenous to this country and especially medicinal plants. The lectures will be supplemented with laboratory work.

2. *Vegetable Histology.*—This study will be introduced by a number of lectures on cell structure and formation of plant tissue, after which the student will take up the use of the microscope in studying and drawing cell structure. A few weeks will be devoted to staining and mounting the more typical forms of bacteria. Later, when the student has become familiar with the histology of plant structures, sections of plants will be identified and drawn. Special attention given to the identification of powdered drugs.

Text-Books.—Gray, Kraemer, Sayre.

PHARMACOGNOSY

Senior Year

1. *Pharmacognosy.*—As applied to U. S. P. drugs, such as the volatile oils, gums, alkaloids and glucosides. Other active principles of non-official drugs will be studied according to their importance in the drug trade. Prof. Needham.

MATERIA MEDICA AND PHARMACOLOGY

Professor, M. E. Gilmore, Ph. C., M. D.
Associate Professor, Oscar E. Veatch, A. B., M. D.
Assistants:

R. H. Needham, Ph. C. — Giles W. Day
E. P. Genochio, Ph. C. — Ross Woodall

JUNIOR YEAR

1. *Organic Materia Medica.*—A course of lectures on crude vegetable and animal drugs, embracing those which are official and the most important non-official ones. The drugs will be taken up in their order, considering the U. S. P. names, English names and synonyms, parts used in medicine, the geographical distribution, physical characteristics, active principles and official preparations. Mr. Genochio.
2. *Pharmacognosy Laboratory.*—A laboratory course in which the students will be instructed on points of identification of crude drugs; unmarked samples will be given to the class from time to time, and at the end of each hour a period will be devoted to the rapid identification of specimens. Mr. Woodall.
3. *Inorganic Materia Medica.*—Lectures and recitations on the principal inorganic drugs of the U. S. P., taking up the nomenclature, source, manufacture, physical properties, general and specific characteristics of the salts, the dosage and use in medicine. Lectures supplemented by laboratory work. Mr. Woodall.
4. *Posology.*—A course in dosage of the U. S. P. and N. F. drugs and preparations, the active principles of plant and animal drugs. Mr. Genochio.

SENIOR YEAR

5. *Pharmacology.*—Taking up the theory of pharmacodynamics, drugs with predominant systemic actions and local acting drugs. This course will embrace a brief review of the junior year materia medica, by which this course must be preceded. Consideration of the therapeutic effect of official drugs and new and non-official remedies will be brought to the attention of the student. The last ten weeks of the

course will be devoted to laboratory work and demonstrations showing the physiological action of drugs on living animals. Prof. Veatch and Mr. Day.

Text-Books.—Sollmann, Sayre.

PHYSIOLOGY

Professor, J. A. Kelley, M. D.

Assistants:

J. C. May Giles W. Day

Junior Year

1. *Lectures and Demonstrations.*—Three hours a week for twenty weeks.

(a) *General Physiology.*—Cellular biology and the physiology of muscle and nerve-tissue and of the muscular system.

(b) *Special Physiology.*—The physiology of circulation and respiration, and the physiology of the blood. Mr. May.

2. *Laboratory Work.*—Four hours a week for six weeks. The instruction based upon laboratory work and demonstrations. The student will be instructed in laboratory technic and required to demonstrate for himself the fundamental laws of physiology and observe the phenomena upon which these laws are based. The demonstrations will include those experiments in which the technic is too difficult for the student. Prof. Kelley, Mr. May and Mr. Day.

Text-Book.—Martin.

HYGIENE

Professor, Holman H. Taylor, B. S., M. D.

1 *Lectures.*—One per week for the thirty weeks, covering sanitation, hygiene, climatic conditions, etc., having a bearing upon health, both public and private.

BACTERIOLOGY

Professor, John D. Covert, M. D.

Senior Year

1. *Lectures.*—Two a week for thirty weeks. This course will include the definition and classification of bacteria; their

morphology and their role in nature; methods of sterilization and of preparing the various culture media. Considerable time will be devoted to the study of special microorganisms. The subject of toxins, ptomains, immunity, etc. will be fully explained.

2. *Laboratory Work.*—Six hours by appointment. Methods of staining and mounting will be taken up. Prof. Covert.
   Text-Book.—Schneider.

ENTRANCE CONDITIONS

Women are admitted to the course in pharmacy on the same terms and conditions as men.

Students will not be admitted under seventeen years of age.

Students, who enter with a view of taking a degree in pharmacy, must furnish evidence of sufficient high school work to entitle them to credits of at least eight units, or pass a satisfactory examination.

Special students, not candidates for a degree, will be admitted at the discretion of the Faculty. Such students should apply for admission at the beginning of the school year, although they may be admitted at a later date.

Applicants for advanced standing must comply with the conditions above and furnish evidence of having completed in some other school the courses for which they ask credit.

COURSE OF STUDY

The School of Pharmacy offers a two years' course of study leading to the degre of Graduate in Pharmacy (Ph. G.).

The degree of Graduate in Pharmacy (Ph. G.) will be granted only to those students who have completed the course of instruction in this school and have passed all examinations.

The Texas State Board of Pharmacy does not recognize diplomas of any Pharmacy Schools. All applicants for registration must pass examinations. Therefore, the degree of Graduate in Pharmacy (Ph. G.) will be granted, regardless of drug store experience.

Students will be required to attend at least 90 per cent. of lectures, recitations and laboratories during the year.

FINAL EXAMINATIONS

Final examinations on all studies of the Junior and Senior courses will be held during the latter part of the session. The order of these examinations will be posted and no variation from same will be permitted except by permission of the Faculty.

PRIZES

The Faculty offers a general proficiency prize consisting of a beautiful gold medal, which will be awarded to the Senior student making the highest average in the two years' work.

A membership in the American Pharmaceutical Association will be awarded to the Junior pharmacy student having the highest average for the year's work. The names of those only whose class records average 90 per cent. or more will be considered in the awarding of this prize.

Special students are not eligible to compete for these prizes.

REQUIREMENTS FOR GRADUATION

All candidates for the degree of Ph. G. must meet the following requirements:

1. Must possess a good moral character.
2. Must have attended two full courses of instruction in a recognized college of pharmacy, the last of which must be in this school.
3. Must have completed the required laboratory courses and passed satisfactory examinations in the full course of instruction.
4. Must have paid all fees in full.

FEES

Matriculation	$ 5.00
General Lecture and Laboratory Ticket:	
Junior Year	75.00
Senior Year	75.00
Graduation Fee	15.00

A deposit of $10.00 will be required to cover cost of drugs, chemicals and materials used in pharmacy laboratory work; a deposit of $3.00 for chemical laboratory work; also $1.00 for laboratory fee in physiology and vegetable histology.

For further information concerning the School of Pharmacy address R. H. NEEDHAM, Ph. C., *Dean*, Fort Worth, Texas

ENROLMENT—SESSION 1912-13

CATALOGUE OF CLASSES

SENIORS

Brown, R. O.
Belson, M. E.
Brock, Fred D.
Holzmann, E. W.
Moore, De Witt
Mullenix, J. A.
Porter, A.
Remington, M. F.
Smotherman, R. M.
Weaver, E. E.

JUNIORS

Horn, Joe
Pruden, Floyd
Thorne, Clinton
Woodall, Ross
Yocum, Ray

SPECIAL STUDENTS

Agee, Milton
O'Neal, F. C.
McCollum, Joe

SCHOOL
OF
NURSING

FACULTY

FREDERICK D. KERSHNER, M. A., LL. D.,
President of the University.

JOHN D. COVERT, M. D., 209-10 F. & M. Bank Bldg.,
Lecturer on Bacteriology, Asepsis and Sanitation, and Dean the Faculty.

KENT V. KIBBIE, A. B., M. D., 112½ W. Ninth St.,
Lecturer on Anatomy and Surgical Cases.

OSCAR E. VEATCH, A. B., M. D., 206 F. & M. Bank Bldg.
Lecturer on Physiology.

V. E. BONELLI, M. D., 404 First National Bank Bldg.,
Lecturer on Materia Medica.

ISAAC A. WITHERS, M. D., 206 Wheat Bldg.,
Lecturer on General and Special Gynecology.

JOHN B. CUMMINS, M. D., 708½ Main St.,
Lecturer on Obstetrics.

H. L. WARWICK, M. D., Western National Bank Bldg.,
Lecturer on Eye, Ear, Nose and Throat.

F. G. SANDERS, Ph. G., M. D., Byers Opera House Bldg.,
Lecturer on Pediatrics.

S. A. WOODWARD, M. D., 206-8 Western Natl. Bank Bldg.
Lecturer on Medical Diseases.

BROOKS GRANT, Fort Worth, Texas,
Lecturer on Chemistry and Uranalysis.

ANNOUNCEMENT

Lecture course begins September 9, 1913.

Final examinations June 1, 1914.

Two years' course of training, which includes practical instruction in nursing of medical, surgical, gynecological and obstetrical cases, the nursing of children, and invalid cookery.

Pupils may enter at any time.

For general instructions to applicants for admission to the Training School, address

MISS JESSIE GASS, *Superintendent of Nurses,*
Medical College Hospital,
Fort Worth, Texas.

SCHEDULE OF SUBJECTS AND LECTURES

Anatomy	6 Lectures
Physiology	6 "
Materia Medica and Therapeutics	10 "
Bacteriology, Asepsis and Sanitation	6 "
Chemistry and Uranalysis	3 "
Medical Diseases	10 "
Care of Surgical Cases	4 "
General and Special Gynecology	3 "
Obstetrics	4 "
Eye, Ear, Nose and Throat	3 "
Children's Diseases	6 "
Total	61 Lectures

In addition to the above schedule, about sixty lectures on general hospital work will be given during the year by the Superintendent of Nurses.

PROFICIENCY PRIZE

The Howard Gold Medal.—Awarded by Mrs. Wm. R. Howard of Fort Worth, to students who have taken their full two years' work in this school, and is presented to the student making the highest grades and doing the most efficient work.

MATRICULANTS

1912-13

Brown, Flavia ..... Wilhelm, La.
Franks, Velma ..... Beeville, Texas
Marks, Anna Louise ..... Little Rock, Ark.
Shaw, Estelle ..... Stonewall, Miss.
Suttle, Mrs. R. L. ..... Little Rock, Ark.
Sedgwick, Benetta ..... Oklahoma City, Okla.
Tulley, Mrs. Edith ..... Fort Smith, Ark.