

APRIL, 1903

NUMBER 20

THE
UNIVERSITY OF NORTH CAROLINA
RECORD



DESCRIBING

THE DEPARTMENT OF PHARMACY.

PUBLISHED BY THE UNIVERSITY.

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POST OFFICE, CHAPEL HILL, N. C.

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THE UNIVERSITY PRESS
CHAPEL HILL

THE DEPARTMENT OF PHARMACY.

FACULTY.

FRANCIS PRESTON VENABLE, PH.D., PRESIDENT.

EDWARD VERNON HOWELL, A.B., PH.G., *Dean and Professor of Pharmacy.*

JOSHUA WALKER GORE, C.E., *Professor of Physics.*

CHARLES BASKERVILLE, PH.D., *Professor of Chemistry.*

*HENRY VAN PETERS WILSON, PH.D., *Professor of Biology.*

CHARLES STAPLES MANGUM, A.B., M.D., *Professor of Materia Medica.*

ISAAC HALL MANNING, M.D., *Professor of Physiology.*

JAMES EDWIN DUERDEN, PH.D., A.R.C.S. (LOND.), *Acting Professor of Biology.*

ALVIN SAWYER WHEELER, PH.D., *Associate Professor of Organic Chemistry.*

WILLIAM CHAMBERS COKER, PH.D., *Associate Professor of Botany.*

*JAMES EDWARD LATTA, A.M., *Instructor in Physics.*

JAMES EDWARD MILLS, PH.D., *Instructor in Chemistry.*

CLARENCE ALBERT SHORE, S.M., *Instructor in Biology.*

WILLIAM MORGAN PERRY, *Assistant in the Pharmaceutical Laboratory.*

ROYALL OSCAR EUGENE DAVIS, PH.B., *Assistant in Chemistry.*

IVEY FOREMAN LEWIS, A.B., *Assistant in Biology.*

FOUNDATION.

The Department of Pharmacy was established in 1897 and was opened for students in September of that year. Its location at the seat of the University assures to its students the most modern scientific instruction with

* Absent on leave, 1902-03.

all the laboratory facilities of the academic department, as well as the courses of instruction in allied branches. These opportunities will meet the requirements of the large number of students who were compelled heretofore to obtain their pharmaceutical education in other States. Briefly stated, the advantages are as follows :

1. Thorough, careful, *individual* instruction.
2. The practical experience derived from active work in the laboratories.
3. Intimate association with the other departments of the University, to all of which the student of pharmacy has access, and the daily contact with students pursuing various branches of learning.
4. The use of the large library and reading room and the well-equipped gymnasium.
5. The comparatively small cost at which a two-years' course may be obtained.
6. The course here consists of two sessions of nine months each,—nearly a fourth longer than in many of the Colleges of Pharmacy.

The success of the students of this department in their examinations before the State Boards has been very gratifying. Students of this department have been applicants before the State Boards of Maryland, Pennsylvania and North Carolina. None of the graduates of this department applying for license before State Boards, have failed to pass the examinations.

ARRANGEMENT OF COURSES.

The courses are arranged for two sessions of nine months each, and lead to the degree of Graduate of Pharmacy (Ph.G.).

First Year.

The instruction includes:—

Theory and Practice of Pharmacy, Practical Course in Operative Pharmacy, Elementary Physics, Descriptive Chemistry, Physiology (optional), Lectures in Pharmaceutical Botany.

Second Year.

The instruction includes:—

Theory and Practice of Pharmacy, Practical Course in Operative Pharmacy, General Biology (optional), Materia Medica and Toxicology, Qualitative Analysis, Urinary Analysis.

COURSES OF INSTRUCTION.

Pharmacy.

Professor HOWELL.

1. Theory and Practice of Pharmacy. First year. *Five hours a week.*
 This Course consists of lectures upon the following subjects, with practical demonstration and the employment of proper apparatus whenever necessary:
 Metrology: comminution, heat, evaporation, distillation, sublimation.
 Fusion: calcination, granulation, oxidation, reduction, etc.
 Solution: of solids, liquids and gases, deliquescence, efflorescence, etc.
 Colation: filtration, decolorization, clarification, precipitation, etc.
 Maceration: expression, infusion, decoction, etc.
 Percolation, and the preparation and study of the following: waters, syrups, honeys, glycerites, mucilages, mixtures, spirits, elixirs, liniments, collodions, tinctures, wines, vinegars and fluid extracts.
2. Theory and Practice of Pharmacy. Second Year. *Five hours a week.*
 The official forms and preparations of drugs are taken up in detail. Beginning with the inorganic compounds, the salts are considered with regard to their commercial qualities and pharmaceutical uses and preparations. The organic compounds are studied, commencing with the salts of the organic acids and passing to the natural and organic compounds.
3. Lectures on Pharmaceutical Botany. *Two hours a week (spring term.)*
 This Course is preparatory to the study of Materia Medica, and takes up the study of the flower, the various topics of fruits, seeds, etc., and a careful study of the descriptive terms as applied to leaves, stems and roots. Instruction is given in the gathering and proper mounting of specimens of the various official herbs that grow in this vicinity.

Materia Medica and Toxicology.

Professors HOWELL and MANGUM.

1. **Materia Medica.** Lectures on the geographical and botanical sources of drugs, descriptions and uses of the same, together with their physical and toxic effects. *Three hours a week.*

Opportunity is given to the student to familiarize himself with most of the crude drugs and their preparations.

2. **Toxicology.** Lectures on poisons and their specific action on the various parts of the body in their minimum and maximum doses. *Three hours a week.*

Attention is called to the symptoms exhibited in cases of poisoning, to the mode of action of chemical antidotes and physiological antagonistics, and to the relative values of mechanical treatments.

Physics.

Dr. MILLS.

1. **Elementary course.** The fundamental facts of physics presented and the general laws illustrated by experiment. *Three hours a week (fall term.)*

Chemistry.

Professor BASKERVILLE, Dr. MILLS and Mr. DAVIS.

1. **Descriptive Chemistry.** Lectures with laboratory work. A study of the elements and their compounds, including an introduction to organic chemistry. *Three hours a week.*

Associate Professor WHEELER and Mr. DAVIS.

9. **Qualitative Analysis and Toxicology.** Laboratory work with lectures. *Three hours a week (five and a half months.) Second year.*

Associate Professor WHEELER.

10. **Physiological Chemistry, including Urine Analysis.** Lectures and laboratory work. *Three hours a week. (Three and a half months.) Second year.*

The following courses are not required of students in Pharmacy but may be elected profitably:

Physiology.

Professor MANNING.

1. Lectures, laboratory work and demonstrations. *Three hours a week (spring term).*

A brief but practical study is made of the skeleton, joints, muscles, heart, blood-vessels, brain, eye, ear and viscera. Demonstrations are given of the blood-flow in the capillaries, phenomena of reflex action and microscopic structure of the chief tissues.

Biology.

Professor DUERDEN.

1. General Biology. Fundamental principles worked out in selected animal and plant types. Lectures and laboratory work. *Five hours a week.*

Botany.

Associate Professor COKER.

9. General introduction to Systematic Botany, with special attention to medicinal plants. Laboratory and field work with recitations. *Three hours a week (spring term).*

Open to students of Pharmacy only.

Prescription Filling.

Professor HOWELL.

In order that students may gain experience in prescription filling, a course in the practical "every day work" of a drug store and in selling poisons and filling prescriptions is given. The prescriptions selected are those that will give the largest amount of practical ex-

perience. For this course a fee of ten dollars is required, to cover the cost of ingredients, bottles, labels, etc.

OPTIONAL COURSES.

The following optional courses may be taken on the payment of a small laboratory fee to cover cost of materials, etc.

Industrial Chemistry. Lectures. The application of chemistry to the arts and industries. *Three hours a week.*

This course includes metallurgy, glass making, pottery, (*fall term*); food, clothing, building materials, explosives, photography, etc., (*spring term*.)

Agricultural Chemistry. Lectures. *Three hours a week (spring term).*

This course includes the chemistry of the plant and the soil and the discussion of plant-food, etc. Many specimens have been collected in the Industrial Museum to illustrate these courses.

Quantitative Analysis and Assaying. Laboratory work. *Three or five hours a week.*

This course is intended to give the student a thorough grounding in analytical methods and manipulations.

Quantitative Analysis. Laboratory work. *Three or five hours a week.*

The student in this course is led further into the study and practice of analytical methods. The work may take any special direction desired by him, fitting him to be an agricultural chemist, iron chemist, manufacturing chemist, physician, druggist or teacher of chemistry. Encouragement is given to the student to make original researches.

Determinative Mineralogy. Lectures with laboratory work. Dana's Text-book of Mineralogy. *Two hours a week.*

Bacteriology.

The student learns by practical experience the methods of cultivating, staining and identifying the principal bacteria, and their pathological significance is explained by lectures and demonstrations by inoculation of animals. In this way the chief pathogenic bacteria are studied in pure culture on the various media, after which the methods of obtaining pure culture from mixtures of bacteria are learned. The necessary manipulations are carried out by the

students, who thus obtain a practical knowledge of the subject which can be gained in no other way.

Students in Pharmacy have also the privilege of attending any of the regular academic courses.

EXAMINATIONS.

All students matriculating in the School of Pharmacy are required to pass an examination in the usual rudimentary branches of an English education.

Final examinations are held at the end of each term on the subjects embraced in the course.

An average of 70 per cent. on the intermediate and final examinations is required to pass in the various branches.

QUIZZES.

Quizzes upon the different branches are regularly held. Specimen quizzes upon *Materia Medica*, Chemistry and Pharmacy are held once a week, and consist in the recognition and correct writing of the official name of the specimen presented.

Students are required to make an average of 70 per cent. on the examinations given on specimens at the close of each term.

THE PHARMACEUTICAL LABORATORY.

OFFICERS.

EDWARD VERNON HOWELL, A.B., PH.G., DIRECTOR and *Professor of Pharmacy.*

WILLIAM MORGAN PERRY, *Assistant in the Pharmaceutical Laboratory.*

The rooms occupied as Pharmaceutical Laboratory are admirably adapted to this purpose. They are conveniently situated on the first floor, are

well lighted and well equipped with water, electric lights and gas. To each student is assigned a desk, provided with lock and key and containing all the apparatus necessary to the every day work of a pharmacist. In the store room is kept a supply of materials for practical work as well as the apparatus for the more complex operations. Ample space is provided for work at the prescription counter, where practical instruction in the compounding and dispensing of prescriptions is given.

A small deposit fee is required to cover the cost of breakage of apparatus. At the end of the session this amount will be returned, less the amount of breakage occurring during the term.

OTHER LABORATORIES.

The laboratories of Physics, Chemistry and Biology are open to students in Pharmacy. These laboratories are all equipped with the most improved apparatus for experimentation and illustration of lectures.

READING ROOM AND LIBRARY.

The Pharmaceutical Department is provided with a well selected library and with a reading room, inaugurated by the class of 1897, in which are filed a large number of medical and pharmaceutical journals.

In addition to these advantages, students of this department enjoy the privileges of the University reading room, in which are filed all the leading newspapers and magazines, and free access to the University Library, which numbers forty thousand volumes and twenty thousand pamphlets.

REQUIREMENTS FOR GRADUATION.

Every person upon whom the degree of Graduate in Pharmacy of this University shall be conferred, must have completed the work of both years

in the Department of Pharmacy of this University, or one course (that of the second year) here after one in some recognized college of Pharmacy. He must obtain satisfactory marking in attendance and make a general average of 70 per cent. in the various branches, and submit a satisfactory thesis.

He must also have had a practical experience of at least four years with some qualified pharmacist or pharmacists in a dispensing store. Satisfactory evidence on this point must be submitted to the head of the department.

Students who have not had the full four years' experience will be permitted to stand examinations for graduation; but their diplomas will be withheld until they shall have satisfied this requirement.

No person will be entitled to a diploma until his dues to the University have been paid.

THESES.

The thesis must be an original essay embodying the results of the student's personal research in some branch of pharmacy, which he has prosecuted under the direction of the professor who has assigned him the subject. The thesis will be published at the discretion of the professor. The thesis, together with certificate of time of practical experience, must be deposited with the Registrar *on or before May 1*.

PRIZES.

The Bradham Prize, offered by C. D. Bradham, of Newbern, N. C., will be given to the student making the highest general average during the two years of study.

The Gilpin Langdon Prize, offered by Gilpin Langdon & Co., of Baltimore, Md., will be given to the student making the best line of preparations in the pharmaceutical laboratory.

Prizes will also be given:

1. For the best thesis.
2. For the best collection of native medicinal herbs.

3. For the best exhibit of chemical salts made by a second year student.
4. For the best work in the recognition of materia medica specimens.
5. To the student recognizing the largest number of pharmaceutical preparations.

EXPENSES.

The charges of each term are payable at the beginning of the term. They are as follows:

Tuition.....	\$30.00
Registration and incidental fees...	10.00

For Chemistry 1 there is a fee of \$1.25; for Chemistry 9 and 10, a fee of \$5.00. In the Prescription Course there is a fee of \$5.00.

The payment of these fees entitles the student to the use of the gymnasium, the library and reading room and, in case of sickness, to medical attention and the use of the infirmary.

ADMISSION AND REGISTRATION.

Candidates for admission into the School of Pharmacy should present themselves on the same days and at the same hours with candidates for admission into the College. For the next academic year, these days will be *Monday, Tuesday or Wednesday, September 7, 8 or 9, 1903*, and *Saturday, Monday or Tuesday, January 2, 4 or 5, 1904*. The session of the School of Pharmacy is of the same length as the College year.

The members of the School of Pharmacy enjoy all the privileges extended to other students in the University.

STUDENTS IN PHARMACY.

NAME.	YEAR.	RESIDENCE.
Ahrens, Adolph George.	<i>Special,</i>	Wilmington.
Austin, Troy Edward.	<i>First,</i>	Smithfield.
Bass, Bisco Staton,	<i>First,</i>	Henderson.
Bateman, Walter Castarphen,	<i>First,</i>	Wilson.
Bell, Holley Mackie,	<i>First,</i>	Warrenton.
Boddie, Samuel Perry,	<i>Special,</i>	Laurel.
Boyette, Addie Howard,	<i>Special,</i>	Smithfield.
Bullock, David Archie,	<i>Second,</i>	Wilmington.
Byrd, Clement,	<i>First,</i>	Wilson.
Cannon, Claudius Lillington,	<i>First,</i>	Ayden.
Cates, Claude Holt,	<i>First,</i>	Wakulla, Fla.
Clements, William Jasper,	<i>First,</i>	Durham.
Crowell, Charlie,	<i>First,</i>	Lincolnton.
Davenport, Peter Ernest,	<i>Second,</i>	Pactolus.
Gardner, J. E.,	<i>First,</i>	Ayden.
Gilbert, Loamie,	<i>First,</i>	McKay.
Gorham, Richard Speight,	<i>First,</i>	Rocky Mount.
Graves, Yancy Baze,	<i>First,</i>	Mount Airy.
Griffin, Leonidas Coleman,	<i>Second,</i>	Marshville.
Hicks, Oscar Vernon,	<i>Second,</i>	Goldsboro.
Hicks, William Jacob,	<i>First,</i>	Goldsboro.
Hoffman, Solomon Wallace,	<i>First,</i>	Statesville.
Hollowell, J. K.,	<i>Second,</i>	Wilson.
Hood, William,	<i>First,</i>	Smithfield.
Howell, John Thomas,	<i>First,</i>	Kenly.
Jenkins, Joseph Van,	<i>First,</i>	Rocky Mount.
Kluttz, Felix Hoyle,	<i>First,</i>	Albemarle.
Lee, Permillas Arten,	<i>First,</i>	McKay.
LeGwin, John Bunyan,	<i>First,</i>	Wilmington.
Martin, Earle Wall,	<i>First,</i>	Morven.

Matthews, Leander,	<i>First,</i>	Buies Creek.
Pemberton, Thomas Rush,	<i>First,</i>	Greensboro.
Perry, William Morgan,	<i>Second,</i>	Elizabeth City.
Pickelsimer, Jesse Benjamin,	<i>First,</i>	Brevard.
Pittman, Henry Hampton,	<i>Second,</i>	Lumberton.
Rhodes, Thomas Floyd,	<i>Second,</i>	East Stroudsburg, Pa.
Richardson, Luther Wyatt,	<i>First,</i>	Kenley.
Scott, Shelton George,	<i>First,</i>	Elizabeth City.
Smith, John McNeill,	<i>First,</i>	Laurinburg.
Snuggs, William Henry,	<i>First,</i>	Albemarle.
Stewart, William Marsh,	<i>Second,</i>	Matthews.
Stribling, William George,	<i>First,</i>	Anderson, S. C.
Taylor, Karl Dixon,	<i>First,</i>	LaGrange.
Tugwell, James Benjamin,	<i>Second,</i>	Tugwell.
Webb, Clyde Irwin,	<i>First,</i>	Kings Mountain.
Webb, Eugene Lea,	<i>First,</i>	Roxboro.

Announcements

THE Fall Term of the University of North Carolina will begin September 7th, 1903; the Spring Term, January 2nd, 1904. There is a recess of about ten days at Christmas. Commencement will be on June 3, 1903.

2. Applicants for admission into the University will be examined September 7th, 8th and 9th, 1903. They should reach Chapel Hill one or more days before the examination period.

3. Lectures in the Academic and in the Professional Schools will begin September 10th, 1903.

4. For the Catalogue or for detailed information, address

F. P. VENABLE, PRESIDENT

UNIVERSITY OF NORTH CAROLINA
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