

# McWhorter School of Pharmacy





## Administration

Joseph O. Dean, Jr., Fred E. McWhorter Dean and Professor  
H. Anthony McBride, Associate Dean, Professor  
Susan P. Alverson, Assistant Dean for Student and Alumni Affairs, Assistant Professor  
Mary R. Monk-Tutor, Director, Academic Programs, Associate Professor  
Charles D. Sands III, Chair, Pharmacy Practice, Associate Professor  
Robert P. Henderson, Vice Chair, Pharmacy Practice, Professor  
Pamela J. Sims, Chair, Pharmaceutical Sciences, Professor

## Faculty

Timothy R. Covington, Anthony and Marianne Bruno Professor of Pharmacy,  
Director, Managed-Care Institute  
Roger D. Lander, Professor  
Roger E. Parker, Professor  
T. Sam Roe, Professor  
John G. Sowell, Professor  
Mark W. Todd, Affiliate Professor  
Bruce D. White, Affiliate Professor  
John D. Bowman, Associate Professor  
Amy E. Broeseker, Associate Professor  
Marshall E. Cates, Associate Professor  
Renee M. DeHart, Associate Professor  
Michael G. Kendrach, Associate Professor,  
Director, Global Drug Information Center  
Robert M. Riggs, Associate Professor  
Robert H. Schrimsher, Associate Professor  
Condit F. Steil, Associate Professor, Director, Center for Advancement  
of Pharmaceutical Care Development in Community Practice  
Paula A. Thompson, Associate Professor  
Andrew A. Webster, Associate Professor,  
Director, Samford University Pharmacokinetics Center  
Timothy E. Welty, Associate Professor  
C. Scott Asbill, Assistant Professor  
Jennifer W. Beall, Assistant Professor  
Kim W. Benner, Assistant Professor  
Gary W. Bumgarner, Assistant Professor  
Maisha Kelly, Assistant Professor  
Patricia Baldone Naro, Assistant Professor  
Sheryl O. Price, Assistant Professor  
Valerie T. Prince, Assistant Professor  
D'Andrea F. Skipwith, Assistant Professor  
Alan R. Spies, Assistant Professor  
Teresa A. Wilborn, Assistant Professor  
Mary Worthington, Assistant Professor  
Sunshine Jenkins Yocom, Assistant Professor

## History

The McWhorter School of Pharmacy of Samford University was established January 31, 1927, in Birmingham, Alabama as the Howard College Department of Pharmacy. The Department grew steadily and became the Division of Pharmacy in 1938. Designation as the Samford University School of Pharmacy occurred in 1965 when Howard College reorganized to become Samford University. In 1995, Samford University Trustees authorized naming the school the McWhorter School of Pharmacy of Samford University in recognition of the generous support of alumnus R. Clayton McWhorter ('55) and his family. In 2002, the School celebrated its 75th year of operation.

## Mission and Vision

The Mission of the Samford University McWhorter School of Pharmacy is to nurture and prepare pharmacists by providing exemplary education to improve society's health and the well being of humankind, as provided in a Christian context and shown through example, scholarship, and service to others.

The Vision of the Samford University McWhorter School of Pharmacy is to challenge pharmacists continually to improve the health of society by exhibiting the highest standards of quality in teaching, scholarship, and service and to assume the leadership role among schools of pharmacy in meeting the challenges of health care in the future.

## Accreditation

The McWhorter School of Pharmacy is accredited by the American Council on Pharmaceutical Education, 20 North Clark Street, Suite 2500, Chicago IL 60602, telephone (312)664-3575. Web address: [www.acpe-accredit.org](http://www.acpe-accredit.org).

## Resources

**World Wide Web** – Students are invited to visit the McWhorter School of Pharmacy Web pages ([www.samford.edu/schools/pharmacy.html](http://www.samford.edu/schools/pharmacy.html)) for additional information regarding faculty, admissions, curriculum and other useful student information. Centers of Excellence are listed at this Web site, among other topics.

Students may also visit the Samford University main Web page ([www.samford.edu](http://www.samford.edu)) for additional university information such as campus life, admissions, financial aid, and many other useful topics.

**Global Drug Information Center** – The DI Center serves as a resource center, a drug advisory source for practitioners, and an information retrieval center for students, faculty, and practitioners. In addition to a variety of journals, books, and other printed materials, major pharmaceutical and medical databases and many reference materials are available via CD-ROM and the Internet. The University's Davis Library also provides an Online Reference Service.

**Managed Care Institute** – A university-based professional and business entity providing leading-edge consultative services in drug benefit design and management to a variety of clients throughout the U.S. who are seeking optimal health outcomes at reasonable costs. The mission of the Managed Care Institute is to promote the safe, appropriate, effective and economical use of prescription and nonprescription drugs, to assist in producing optimal therapeutic outcomes by fostering precision in drug therapy management, and to foster the evolution of highly cognitive, outcome-oriented pharmaceutical care by maximizing the benefit of drug therapy and disease management, while operating to identify, resolve and prevent drug-related problems and therapeutic misadventures.

**Pharmacokinetics Center** – A research and service program that provides assays for therapeutic drug monitoring, performs clinical pharmacokinetics consultations, and conducts clinical research. It functions to involve faculty and students in interdisciplinary, revenue generating, research projects that provide critical training in a variety of research techniques.

**Student Computer Facilities** – Houses approximately 25 state-of-the-art Pentium computers that contain various drug information databases for course work and research. The University also has several computer labs on campus. The Campus Media Center is also equipped to produce many kinds of visual materials.

**Personal Digital Assistant [PDA]** – All students are provided a PDA for their use during the four years they are enrolled at McWhorter School of Pharmacy. They are a helpful resource in the classroom setting, in Early Practice Experiences [EPE] and Advanced Practice Experiences [APE].

## McWhorter School of Pharmacy Organizations

Academy of Managed Care Pharmacy  
Academy of Students of Pharmacy  
Alabama Society of Health Systems Pharmacists  
Christian Pharmacy Fellowship  
Kappa Psi Pharmacy Fraternity  
National Community Pharmacists Association  
Phi Lambda Sigma (Leadership)  
Rho Chi (Scholarship)  
Students of the National Pharmaceutical Association

## Academic Program and Requirements

### Major

Doctor of Pharmacy [Pharm.D.]

### Admission Policies

All communications regarding admission should be directed to the Director of External Relations and Pharmacy Admissions in the School of Pharmacy. Applications are considered on a competitive basis by the School of Pharmacy Admissions Committee. The Committee meets regularly beginning in January and notifies applicants as decisions are made. No student can be considered for admission to the program until 20 semester credits of core math and science coursework and 45 credits of total coursework have been completed. Applicants must have completed the first course in organic chemistry to be considered. Except as provided in the description of the Pre-Pharmacy Curriculum in this catalog, applicants to the School of Pharmacy must have a 2.75 grade point average [GPA] overall at the time of application and complete all coursework in the Pre-Pharmacy Curriculum with at least a 2.75 GPA both overall and in required math and science courses to meet admissions standards. Students with better admissions profiles are given admissions priority. Applicants who are international students, or American citizens who learned English as a second language, must demonstrate satisfactory written and verbal communication skills in English as a part of the admissions process.

In order for an applicant to be considered for admission, all admission materials must be submitted by **March 1**. To make application to the McWhorter School of Pharmacy, the applicant must complete the national online application at **[www.PharmCAS.org](http://www.PharmCAS.org)**. This application allows the applicant to apply to approximately 50 pharmacy schools throughout the nation. Official transcripts, essay, and other credentials are sent to PharmCAS and then forwarded to every pharmacy school the applicant designates. Additional credentials (personal references, etc.) are required by the McWhorter School of Pharmacy prior to an admission decision. These forms are mailed to the applicant once the application is received from PharmCAS. An ACT or SAT score (not PCAT) is required by the McWhorter School of Pharmacy, and this score should be sent to MSOP. The ACT/SAT is waived if the applicant has a prior B.S. or B.A. degree, is over thirty years of age, or if English is the applicant's second language. After an applicant is notified of acceptance, but before he or she enrolls in the McWhorter School of Pharmacy, official transcripts must be sent directly to Samford University. Applicants are encouraged to visit the school while their applications are under consideration. An interview on campus, at the applicant's expense, is required for applicants invited for consideration in the entering class.

Final decisions regarding admission are made by May 1. Students may be accepted from a rank-ordered alternate list approved for admission after this date if previously accepted students decline the opportunity to enter the program. Students who are notified of acceptance to the McWhorter School of Pharmacy must return a deposit of \$450 within a specified period of time to reserve a place in the class. The \$450 deposit is not refundable but will apply toward tuition for the first semester in residence.

Students who have been accepted by the McWhorter School of Pharmacy may be denied admission to the School of Pharmacy just prior to or at the time of enrollment for: (1) failure to submit final transcripts of all college work completed at another institution, (2) a significant drop in grade point average, or (3) failure to meet any

academic stipulations set forth in the letter of acceptance, and/or (4) proven behavior that is not well-suited for the responsibilities and privileges embodied in the practice of pharmacy.

Students are expected to be competent in a word processing and a spreadsheet program prior to entrance into the school. Samford University supports the Microsoft Office Suite software. After notification of admission to the McWhorter School of Pharmacy, students are expected to learn medical terminology on a self-study basis and be prepared for a proficiency examination during the introductory week at the start of the Fall Semester.

#### Required Health Data

Students enrolled in the McWhorter School of Pharmacy are required to obtain or show proof of specific immunizations and tests. All must be completed before Early Practice Experiences [EPE] begin in April of the first professional year. Documentation must be submitted to the Student Health Office of the University. Such documentation should be submitted after acceptance into the program. The following are required:

- The three series injections for hepatitis B. This series takes six months to complete, and the first of the three must be obtained before the first day of school.
- Measles/mumps/rubella [MMR]. Alabama guidelines state that people born after 1957 should receive a MMR booster after their eleventh birthday.
- A tuberculosis (TB) skin test or chest X-ray during the first school year and the proceeding April EPE. All positive skin tests must be followed by a chest X-ray. Failure to meet these requirements will prevent the student from completing first year course requirements.

#### Alabama Board of Pharmacy Registration

All students, regardless of home state, must register with the Alabama State Board of Pharmacy for an intern/extern license after class begins in the first year. Applications can be found in the Pharmacy Student Handbook, at [www.Albop.com](http://www.Albop.com), or from the Office of the Assistant Dean. This registration will be discussed during orientation for incoming students.

#### Academic Policies

In order to receive a degree, candidates must satisfy all requirements of the McWhorter School of Pharmacy and other applicable requirements of Samford University. A student must complete the MSOP Doctor of Pharmacy curriculum within six academic years from the original date of matriculation. Candidates who transferred pre-pharmacy hours to Samford University and do not hold a prior bachelor's degree must pass the Writing Proficiency Exam [WPE] by the second professional year. However, candidates who took Communication Arts II (UCCA 102) at Samford University and earned a grade of C- or above are exempt from this requirement. (See Bachelor's Degree Requirements in the Admission Policies and Regulations section.) A faculty-student advisory system attempts to inform students of these requirements, but it is the responsibility of the individual student to ensure that all requirements have been met.

Satisfactory academic progress is required of all students to remain in the McWhorter School of Pharmacy. Academic standing is determined by the GPA in the professional curriculum; therefore, grades earned in all PHRD courses at the School will be used in calculating the GPA. After matriculation in the McWhorter School of Pharmacy, courses in the professional curriculum taken at other academic institutions, with prior approval, will be counted toward the professional cumulative GPA.

Unless otherwise stated in the course syllabus, grades are assigned by instructors in the school according to the following scale: 92-100 = A, 90-91 = A-, 88-89 = B+, 82-87 = B, 80-81 = B-, 78-79 = C+, 70-77 = C, 65-69 = D, and below 65 = F. The minimum passing grade in Advanced Practice Experience [APE] courses is a C. Other letter grades that may be assigned and the quality point system utilized by the University are described in this catalog.

Students who receive an F grade must obtain permission from the School of Pharmacy Curriculum/Academic Standards Committee should they choose to repeat the course at another school of pharmacy. Your Samford Higher Ed Cumulative GPA must be at least 2.00 at the end of the current semester in order to have a Letter of Good Standing sent to another college or university. To have a Letter of Good Standing sent before the end of the current semester, a student must have a minimum GPA of 2.50. To attend summer classes at another institution, the Transient

<b>Pre-Pharmacy Curriculum for Transfer Students Required Courses</b>	<b>Course Credits</b>	<b>Total Required Credits</b>
<b>Humanities</b>		<b>12</b>
English Composition	6	
English or American Literature	3	
Religion, New or Old Testament*	3	
<b>Natural and Applied Sciences</b>		<b>34</b>
College Algebra or Precalculus	3	
Calculus or Business Calculus Survey	3	
Principles of Biology	4	
Anatomy and Physiology**	4	
Inorganic Chemistry	8	
Organic Chemistry	8	
Elementary Statistics	4	
<b>Social Sciences</b>		<b>6-9</b>
Speech	3	
World History <i>or</i> Western Civilization <i>or</i> U. S. History	3-6	
<b>Physical Activity Courses</b>		<b>2</b>
Two Activity Courses	2	
<b>Liberal Arts Courses</b>		<b>12</b>
Sociology or Psychology	3	
Other Liberal Arts***	9	
<b>Total Required Credits</b>		<b>66-69</b>

\*For students transferring more than 30 hours/credits, a religion course is not required. However, religion course credits may be applied to the Other Liberal Arts Courses requirement.

\*\*If Anatomy and Physiology is not available, Zoology credits may be applied.

\*\*\*The remaining credits may be chosen from political science, history, English literature, foreign languages, philosophy, psychology, sociology, geography, economics, religion, and either art, music, or drama appreciation (no more than 3 credits may be in appreciation courses).

<b>Pre-Pharmacy Curriculum for Samford Students Required Courses</b>	<b>Course Credits</b>	<b>Total Required Credits</b>
<b>Fall Semester I</b>		<b>18</b>
UCCP 101 Cultural Perspectives I	4	
UCCA 101 Communication Arts I	4	
UCFH 120 Concepts in Fitness and Health	2	
MATH 150 Precalculus	4	
CHEM 203 General Chemistry I	4	
<b>Spring Semester I</b>		<b>16</b>
UCCP 102 Cultural Perspectives II	4	
UCCA 102 Communication Arts II	4	
CHEM 204 General Chemistry II	4	
MATH 240 Calculus I	4	
<b>Fall Semester II</b>		<b>16</b>
UCBP 101 Biblical Perspectives	4	
Liberal Arts*	4	
CHEM 301 Organic Chemistry I	4	
BIOL 217 Principles of Human Anatomy	4	
<b>Spring Semester II</b>		<b>16</b>
Liberal Arts*	4	
CHEM 302 Organic Chemistry II	4	
BIOL 218 Principles of Human Physiology	4	
MATH 210 Elementary Statistics	4	
<b>Total Required Credits</b>		<b>66</b>

\*Choose either SOCI 100 Introduction to Sociology, or PSYC 101 General Psychology for one of the Liberal Arts requirements. The remaining four credits may be chosen from courses in political science, history, foreign languages, philosophy, psychology, sociology, geography, economics, and either art, music, or theatre appreciation.

Enrollment for Summer form must be obtained from and returned to the Office of Student Records. The Associate Dean will serve as your academic adviser. All courses from transient schools are required to have a letter grade of C or better in order to be posted as earned credit on your transcript. The student must request that an official transcript be sent to Student Records when coursework has been completed. A course for which an F grade was earned may not be repeated more than once. Students receiving two F grades in the same course (or the equivalent at another school) will be expelled from the McWhorter School of Pharmacy. An F grade must be removed at the first opportunity as such grades do not satisfy prerequisites for other courses in the Doctor of Pharmacy program.

Students must maintain a 2.00 professional GPA to remain in good academic standing in the McWhorter School of Pharmacy. Students who fail to achieve the minimum GPA at the end of any semester shall be placed on academic probation. Students who at the end of a probationary semester fail to achieve the required minimum GPA shall be suspended from the school. Suspended students must apply for readmission in writing to the Admissions Committee, and those who are permitted to reenter the school shall be readmitted on academic probation. Previously suspended students who fail to achieve the required minimum GPA at the end of their first semester back in school shall be expelled from the school. Students cannot be on academic probation for more than two semesters, either cumulative or sequential. If the GPA falls below 2.00 for a third semester, the student will be expelled from the school. Expelled students may not be readmitted to the McWhorter School of Pharmacy. A student may only be suspended once. A second suspension will result in being expelled from the McWhorter School of Pharmacy. A student will not be allowed to withdraw from the McWhorter School of Pharmacy more than twice after beginning courses, and only one of these withdrawals may occur while the student is on academic probation.

Students on academic probation and students suspended from the McWhorter School of Pharmacy shall not be allowed to serve as officers or committee members in any campus organization, participate in any extracurricular activity sponsored by Samford University which involves the expenditure of an appreciable amount of time, or be employed by any department on the Samford campus. Outside employment for such students is also discouraged. Students must achieve at least a 2.00 GPA in the professional curriculum before entering the Advanced Practice Experience [APE] courses in the fourth professional year.

### **Tuition and Financial Aid**

Students may apply for federal and private financial aid through the University's financial aid office. The McWhorter School of Pharmacy has additional but limited funds available for loans and scholarships. Three types of loan programs are available: a short-term emergency loan administered by the school; a no-interest, revolving-loan fund (The Bernice Cohron Pharmacy Student Loan Fund); and a long-term loan administered by the National Community Pharmacy Association. A number of pharmacy scholarships is available and awarded on the basis of both merit and need. Part-time work in School of Pharmacy laboratories is also available for a limited number of students. Students interested in the above financial aid opportunities should complete the proper application forms in the Office of the Assistant Dean for Student and Alumni Affairs in the McWhorter School of Pharmacy.

Students who wish to take non-PHRD courses (undergraduate or graduate) during the academic year will be required to pay the undergraduate or graduate rate upon enrollment. This fee will be in addition to the normal pharmacy tuition. The McWhorter School of Pharmacy will not allow a student to take a course which interferes with pharmacy coursework.

Tuition in the last professional year is paid in two equal installments for the fall and spring semesters, regardless of the number of hours taken.

### **Pre-Pharmacy Curriculum**

The Doctor of Pharmacy Degree at Samford University requires a minimum of six years of college work. Candidates have the option of enrolling in Samford University for the entire program or completing up to two years of pre-Pharmacy studies elsewhere and then completing the professional curriculum at Samford. Pre-Pharmacy courses equivalent to those listed on the following pages may be completed at any accredited junior college, community college, college, or university. Students entering Samford University as freshmen and enrolling in the Pre-Pharmacy Program must follow the Samford Pre-Pharmacy Curriculum, which includes the core curriculum courses unique to Samford University. Students enrolling at other institutions and expecting to transfer to the McWhorter School of Pharmacy should complete the

Pre-Pharmacy Curriculum for Transfer Students. Pre-Pharmacy students at other institutions are encouraged to work closely with the pre-Pharmacy or Health Sciences adviser to assure the courses they take are consistent with the Pre-Pharmacy Curriculum. Students are encouraged to contact the Director of External Relations and Pharmacy Admissions at the McWhorter School of Pharmacy for answers to specific questions at (205)726-2982 or (205)726-4242. It is the student's responsibility to satisfy all prerequisite coursework requirements.

The Pre-Pharmacy Curriculum includes courses in the arts, humanities, and sciences in order to provide students with a well-rounded liberal arts education. All pre-Pharmacy courses must be completed prior to entry into the McWhorter School of Pharmacy. Applicants holding a B.S. or B.A. degree and who have completed all mathematics and science requirements in the Pre-Pharmacy Curriculum shall only be required to satisfy the speech and statistics requirement.

Veterans, students over thirty (30) years of age, and students with physical disabilities may petition for special consideration concerning physical education requirements.



## MCWHORTER SCHOOL OF PHARMACY TUITION AND FEES FOR ACADEMIC YEAR 2003-2004

Description of Expense	Student Classification	Payment Regulations	Expense	Payment Due Date (1)
<b>Tuition</b>				
Less than 12 credits	Part-Time Pharmacy Students	Deposit nonrefundable See Refund Policies.	\$725/credit	\$450 Deposit upon acceptance and remainder on or before statement payment due date
12 to 21 credits	Full-Time Pharmacy Students	Deposit nonrefundable See Refund Policies.	\$8,935/semester	\$450 Deposit upon acceptance and remainder on or before statement payment due date
<b>Residence Hall Fees, Double Occupancy*</b>				
Beeson Woods, West Campus	Pharmacy Students starting June	See Refund Policies.	\$2,392/Fall semester	On or before statement payment due date
Evergreen Hall	Pharmacy Students starting June	See Refund Policies.	\$2,317/Fall semester	On or before statement payment due date
Ramsay Hall	Pharmacy Students starting June	See Refund Policies.	\$2,267/Fall semester	On or before statement payment due date
Beeson Woods, West Campus	Pharmacy Students starting Aug	See Refund Policies.	\$1,402/Fall semester	On or before statement payment due date
Evergreen Hall	Pharmacy Students starting Aug	See Refund Policies.	\$1,327/Fall semester	On or before statement payment due date
Ramsay Hall	Pharmacy Students starting Aug	See Refund Policies.	\$1,277/Fall semester	On or before statement payment due date
Student Apartments	Pharmacy Students starting Aug	See Refund Policies.	\$1,066/Fall semester	On or before statement payment due date
Beeson Woods, West Campus	Pharmacy Students Spring sem	See Refund Policies.	\$1,545/Spring semester	On or before statement payment due date
Evergreen Hall	Pharmacy Students Spring sem	See Refund Policies.	\$1,470/Spring semester	On or before statement payment due date
Ramsay Hall	Pharmacy Students Spring sem	See Refund Policies.	\$1,420/Spring semester	On or before statement payment due date
Student Apartments	Pharmacy Students Spring sem	See Refund Policies.	\$1,209/Spring semester	On or before statement payment due date
<b>Board</b>				
19 meals/wk + \$100 declining bal	Pharmacy Students starting June	See Refund Policies.	\$2,199/Fall semester	On or before statement payment due date
12 meals/wk + \$100 declining bal	Pharmacy Students starting June	See Refund Policies.	\$1,898/Fall semester	On or before statement payment due date
7 meals/wk + \$100 declining bal	Pharmacy Students starting June	See Refund Policies.	\$1,235/Fall semester	On or before statement payment due date
19 meals/wk + \$100 declining bal	Pharmacy Students starting Aug	See Refund Policies.	\$1,345/Fall semester	On or before statement payment due date
12 meals/wk + \$100 declining bal	Pharmacy Students starting Aug	See Refund Policies.	\$1,204/Fall semester	On or before statement payment due date
7 meals/wk + \$100 declining bal	Pharmacy Students starting Aug	See Refund Policies.	\$851/Fall semester	On or before statement payment due date
19 meals/wk + \$100 declining bal	Pharmacy Students Spring sem	See Refund Policies.	\$1,574/Spring semester	On or before statement payment due date
12 meals/wk + \$100 declining bal	Pharmacy Students Spring sem	See Refund Policies.	\$1,408/Spring semester	On or before statement payment due date
7 meals/wk + \$100 declining bal	Pharmacy Students Spring sem	See Refund Policies.	\$1,004/Spring semester	On or before statement payment due date
<b>London Programs at Daniel House, Samford's London Study Centre, Fees</b>			<b>subject to change</b>	
Pharmacy Externship (12 weeks)	Pharmacy Students	See Refund Policies.	TBD	Due at registration
Pharmacy Externship (8 weeks)	Pharmacy Students	See Refund Policies.	TBD	Due at registration
Pharmacy Participation Fee	Pharmacy Students	See Refund Policies.	\$150	Due at registration
<b>General Miscellaneous Fees</b>				
Application Fee for School of Pharmacy Admission	All Students	Nonrefundable	\$25/application	At time of submission
Auto Decal	All Students	Nonrefundable	\$20/academic year	
Auto Decal (Subsequent)	All Students	Nonrefundable	\$5	
ID Replacement Fee (First Time)	All Students	Nonrefundable	\$5	
ID Replacement Fee (Subsequent)	All Students	Nonrefundable	\$10	
Portfolio Evaluation Fee	All Students	Nonrefundable	\$100/credit	
Return Check Fee	All Students	Nonrefundable	\$28	
Stop Check Fee	All Students	Nonrefundable	\$28	
<b>Books and Supplies</b>	All Students	Nonrefundable	\$1,064 estimate	

\*Double rooms assigned for single occupancy are 150% of the rate for double-occupancy rooms.

**(1) Charges incurred after semester statement bill date are due on or before the first day of class as published in the Academic Calendar. Charges incurred during the drop/add period are due when incurred. Classes may be canceled for non-payment.**

## Professional Pharmacy Curriculum

The Professional Pharmacy Curriculum is designed to inculcate in students the knowledge, skills, and attitudes essential for the practice of pharmacy today, as well as in the future. The Doctor of Pharmacy degree is a professional degree that provides basic educational preparation required to provide pharmaceutical care and perform managerial functions.

The curriculum is a lock-step program requiring completion of prerequisite coursework in a satisfactory manner before continuation to a higher-level coursework. The professional curriculum includes 148 semester credits of didactic and laboratory instruction with approximately 40 weeks (1520 contact hours) of supervised training in various practice settings. All courses in the professional curriculum, including required Early Practice Experiences [EPE] and Advanced Practice Experiences [APE], are to be completed at Samford University. On rare occasions, and for compelling reasons, a required course in the professional curriculum, excluding selectives, taken at another accredited school or college of pharmacy may be substituted for a Samford University course provided the course to be substituted is determined to be equivalent by the Academic Standards and Curriculum Committee of the school, and a grade of C or better is achieved. A grade of F in a course taken at another institution, which is a repeat of a course taken in the School of Pharmacy, will result in dismissal from the School of Pharmacy. After matriculation in the McWhorter School of Pharmacy, courses in the professional curriculum taken at other academic institutions, with prior approval, will be counted toward the School of Pharmacy GPA. Students may not enroll in professional coursework unless specified prerequisites have been satisfied.

The professional curriculum requires 32 credits of APE, beginning in June or immediately following the successful completion of all coursework prior to the fourth professional year in the McWhorter School of Pharmacy curriculum. No student may enroll in an APE unless all required courses at the PHRD 300-500 level have been completed. APEs that must be completed by all students include: PHRD 605 Ambulatory Care, PHRD 606 Drug Information, PHRD 607 Adult Medicine I, PHRD 608 Adult Medicine II or Medicine Subspecialty, and four additional 600-level APEs. The choice of these may be limited in a given semester due to availability of training sites and preceptors.

The School uses active learning [AL] and problem-based learning [PBL] concepts in many of its courses, with the percentage of time devoted to AL/PBL dependent upon the adaptability of the course material to these learning methodologies. Certain courses utilize a minimum of AL/PBL activity, while other courses are extensively or totally delivered by AL/PBL methodologies. Students in each professional year are divided into teams/groups of six to eight students, and team/group work is periodically assigned. The percentage of the final grade for the course from team/group work varies but is clearly stated in the syllabus for each course.

The maximum load for a pharmacy student is 21 semester hours. Full-time status is granted for students taking 12 semester hours. If, for compelling reasons, a student is enrolled in less than 12 semester hours, the university will classify the student as part-time. A student taking less than 12 hours will pay tuition at the hourly rate specified in the Financial Section of this catalog.

The Professional Pharmacy Curriculum of the McWhorter School of Pharmacy follows the Samford University undergraduate calendar as much as possible, but the School incorporates January in its spring semester. Students enrolled in the Professional Pharmacy Curriculum cannot take courses offered in the university's Jan Term due to class conflicts. Furthermore, the fall semester of the fourth professional year begins the first working day in June. Consequently, students enrolled in the last year of the professional curriculum cannot take courses offered during the summer terms at Samford or another university. Tuition for the fall semester is due and payable on or before June 1 for students in their fourth or last year.

Professional Pharmacy Curriculum Required Courses Summary-All Years	Total Required Credits
<b>Year I, Total Required Credits</b>	<b>40</b>
<b>Year II, Total Required Credits</b>	<b>38</b>
<b>Year III, Total Required Credits</b>	<b>36</b>
<b>Year IV, Total Required Credits</b>	<b>34</b>
<b>Total Required Credits for All Years</b>	<b>148</b>

Professional Pharmacy Curriculum Required Courses	Course Credits	Total Required Credits
<b>Year I, Fall</b>	<b>19</b>	
PHRD 303 Information Systems	1	
PHRD 304 Calculations	2	
PHRD 305 U. S. Health Care Systems	2	
PHRD 306 Physiological Chemistry	4	
PHRD 308 Physiology and Pathophysiology I	6	
PHRD 310 Pharmacy Dosage Forms Tech I	4	
<b>Year I, Spring I</b>	<b>17</b>	
PHRD 307 Clinical Communications	2	
PHRD 309 Physiology and Pathophysiology II	6	
PHRD 311 Pharmacy Dosage Forms Tech II	4	
PHRD 312 Sterile Products	2	
PHRD 313 Infectious Disease I	3	
<b>Year I, Spring II</b>	<b>4</b>	
PHRD 301 Early Practice Experience I [EPE]	3	
PHRD 302 Pharmacy Practice	1	
<b>Year I Total Required Credits</b>		<b>40</b>
<b>Year II, Fall</b>	<b>18</b>	
PHRD 400 Legal Principles of Pharmacy Practice	2	
PHRD 403 Pharmacology I	5	
PHRD 405 Medicinal Chemistry I	4	
PHRD 407 Therapeutic Drug Management I	4	
PHRD 413 Infectious Disease II	3	
<b>Year II, Spring I</b>	<b>3</b>	
PHRD 401 Early Practice Experience II [EPE]	3	
<b>Year II, Spring II</b>	<b>17</b>	
PHRD 404 Pharmacology II	5	
PHRD 406 Medicinal Chemistry II	4	
PHRD 408 Therapeutic Drug Management II	4	
PHRD 410 OTC Medications I	2	
PHRD 414 Infectious Disease III	2	
<b>Year II Total Required Credits</b>		<b>38</b>
<b>Year III, Fall</b>	<b>17</b>	
PHRD 502 Advanced Pharmacy Practice	2	
PHRD 510 OTC Medications II	3	
PHRD 521 Therapeutics I	6	
PHRD 524 Fiscal Management	3	
PHRD 550 Physical Assessment*	1	
Elective	2	
<b>Year III, Spring I</b>	<b>19</b>	
PHRD 522 Therapeutics II	4	
PHRD 523 Therapeutics III	6	
PHRD 525 Human Resources Management	3	
PHRD 527 Drug Literature Evaluation	3	
PHRD 550 Physical Assessment*	1	
PHRD 551 Ethics in Christianity and Health Care	2	
<b>Year III Total Required Credits</b>		<b>36</b>
<b>Year IV, June-May**</b>		
<b>Required Advanced Practice Experiences [APE] – 5</b>	<b>20</b>	
PHRD 605 Ambulatory Care	4	
PHRD 606 Drug Information	4	
PHRD 607 Adult Medicine I	4	
PHRD 608 Adult Medicine II <i>or</i> a medicine subspecialty APE	4	
PHRD 600-level Selective Experience	4	
<b>Elective APE-2</b>	<b>12</b>	
600-level Experience	4	
600-level Experience	4	
600-level Experience	4	
<b>Professional Seminars</b>	<b>2</b>	
PHRD 615 Professional Seminar I	1	
PHRD 616 Professional Seminar II	1	
<b>Year IV Total Required Credits</b>		<b>34</b>
<b>Total Required Credits</b>		<b>148</b>

\*PHRD 550 is a two-credit course, extended over the academic year.

\*\*Students are required to take eight APEs in ten possible time periods offered during the fourth year.

## Advanced Practice Experiences [APE]

Enrollment in 600-level courses is based on availability of training sites and preceptors for each course. Successful completion of all coursework prior to the fourth professional year in the pharmacy curriculum is a prerequisite for all 600-level courses. Refer to APE Manual for additional information.

PHRD 605 Ambulatory Care (4)
PHRD 606 Drug Information (4)
PHRD 607 Adult Medicine I (4)
PHRD 608 Adult Medicine II (4)
PHRD 609 Association Management (4)
PHRD 610 Adult Medicine III (4)
PHRD 612 Advanced Community Pharmacy I (4)
PHRD 614 Advanced Institutional Pharmacy I (4)
PHRD 617 Advanced Institutional Pharmacy II (4)
PHRD 618 Geriatric Pharmacy (4)
PHRD 620 Pediatric Pharmacy (4)
PHRD 622 Advanced Drug Information (4)
PHRD 624 Poison Information/Toxicology (4)
PHRD 626 Metabolic Support (4)
PHRD 628 Advanced Adult Medicine (4)
PHRD 629 Medicine Subspecialty (4)
PHRD 630 Advanced Ambulatory Care (4)
PHRD 631 Medical Critical Care (4)
PHRD 632 Advanced Geriatric Pharmacy (4)
PHRD 633 Surgical Critical Care (4)
PHRD 634 Advanced Pediatric Pharmacy (4)
PHRD 635 Cardiac Critical Care (4)
PHRD 636 Pharmacokinetics (4)
PHRD 637 Neurological Critical Care (4)
PHRD 638 Clinical Pharmacy Research (4)
PHRD 640 Managed-Care Pharmacy (4)
PHRD 642 Community Pharmacy (4)
PHRD 643 Advanced Community Pharmacy II (4)
PHRD 644 Home Infusion Therapy (4)
PHRD 646 Psychiatric Pharmacy (4)
PHRD 648 Pharmacy Management (4)
PHRD 650 Renal Medicine (4)
PHRD 651 Neurology (4)
PHRD 652 Hematology/Oncology (4)
PHRD 653 Infectious Disease (4)
PHRD 654 Cardiology (4)
PHRD 656 Neonatology (4)
PHRD 660 Pedagogics (4)
PHRD 690 Nuclear Pharmacy (4)

## Courses

### PHRD 301 and 401 Early Practice Experience [EPE] I-II (3 each course)

A course sequence designed to give the student a pharmacy practice experience early in his/her career. *Offered: Spring only.*

### PHRD 302 Pharmacy Practice (1)

This course presents basic practice-related information. Demonstration of how pharmacy practice systems should interface with physiological concepts of disease processes and chemical features of drug therapy for effective pharmacy service are presented. Relevant calculations, computer systems, and other related technology are included to present the application to basic prescription service and pharmacy practice. *Offered: Spring only.*

### PHRD 303 Information Systems (1)

An introduction to information systems available to the practicing pharmacist. Students are introduced to information retrieval systems in the Davis Library and the Samford University Global Drug Information Center. *Offered: Fall only.*

### PHRD 304 Calculations (2)

This course presents the basic elements of applied pharmaceutical mathematics including weights and measures, calculation of doses, methods of expressing concentration, and interconversion between units. *Offered: Fall only.*

### PHRD 305 U. S. Health Care Systems (2)

This course introduces first-year students to the "big picture" of health care in this country. Several aspects of patient care, such as societal, financial, organizational, and governmental influences, are addressed. The pharmacist's role in various aspects of the health care system is a major focus of the course. *Offered: Fall only.*

### PHRD 306 Physiological Chemistry (4)

This course deals with the chemistry associated with physiological processes. Attention is given to the various classes of biochemical compounds; amino acids, proteins, carbohydrates, enzymes, lipids, and nucleic acids, and also serves to introduce the student to the concept of producing drugs by biotechnology. At appropriate points, the action of drugs on the biological system is introduced. *Offered: Fall only.*

### PHRD 307 Clinical Communications (2)

A course designed to acquaint the student with the fundamentals of patient counseling. Communication between the pharmacist and other health professionals is also addressed. *Offered: Spring only.*

### PHRD 308 and 309 Physiology and Pathophysiology I-II (6 each course)

This two-course series introduces the concepts of molecular biology, physiology, immunology, and anatomy. The physiology of each organ system is followed by the pathophysiology so that the student is aware of normal and abnormal conditions. *Prerequisite for PHRD 309: PHRD 308.*

*PHRD 308 offered: Fall only; PHRD 309 offered: Spring only.*

### PHRD 310 and 311 Pharmacy Dosage Forms Technology I-II (4 each course)

This course sequence presents the theory, technology, and techniques involved in the development, formulation, and preparation of pharmaceutical dosage forms. One laboratory exercise is included each week, demonstrating practical applications. These courses must be taken in sequence.

*Corequisite for PHRD 310: PHRD 304.*

*Prerequisites for PHRD 311: PHRD 304 and PHRD 310.*

*PHRD 310 offered: Fall only; PHRD 311 offered: Spring only.*

### PHRD 312 Sterile Products (2)

A course designed to acquaint the student with aseptic technique and the production of sterile products. The course includes hands-on experiences and the use of vertical and horizontal laminar-flow hoods. *Offered: Spring only.*

### PHRD 313, 413, and 414 Infectious Disease I-II-III (3, 3, and 2, respectively)

A three-course sequence designed to introduce the student to the concepts of microbiology and human pathogens. Emphasis is placed on the pathophysiology and treatment of infections of bacterial, fungal, and viral origin in humans.

*Prerequisite for PHRD 413: PHRD 313.*

*Prerequisite for PHRD 414: PHRD 413.*

*PHRD 313 offered: Spring only.*

*PHRD 413 offered: Fall only; PHRD 414 offered: Spring only.*

### PHRD 400 Legal Principles of Pharmacy Practice (2)

This course presents the legal basis of pharmacy practice by examining state and federal laws, regulations, and court decisions dealing with drug manufacturing and distribution, professional liability, and handling of medicinals, poisons, and controlled substances. *Offered: Fall only.*

### PHRD 403 and 404 Pharmacology I-II (5 each course)

This course sequence presents basic principles of pharmacology and the pharmacology of therapeutic agents. Emphasis is placed on mechanisms of action, therapeutic indications, side effects, and toxicity.

*Prerequisites for PHRD 403: PHRD 306 and PHRD 309.*

*Prerequisites for PHRD 404: PHRD 403.*

*PHRD 403 offered: Fall only; PHRD 404 offered: Spring only.*

### PHRD 405 and 406 Medicinal Chemistry I-II (4 each course)

This course sequence presents the chemistry of biologically active compounds of natural, synthetic, and semisynthetic origin.

*Prerequisite for PHRD 405: PHRD 306.*

*Prerequisite for PHRD 406: PHRD 405.*

*PHRD 405 offered: Fall only; PHRD 406 offered: Spring only.*

### **PHRD 407 and 408 Therapeutic Drug Management I-II (4 each course)**

These courses examine pharmaceutical and physiological factors influencing the bio-availability of drugs from various dosage forms. Pharmacokinetic principles governing drug disposition and drug therapy are presented, and emphasis is placed on the application of pharmacokinetic principles and patient-specific data in optimizing therapeutic outcomes and overall patient management.

*Prerequisites for PHRD 407: PHRD 303, PHRD 304, PHRD 306, PHRD 308, PHRD 309, PHRD 310, PHRD 311, PHRD 312, and PHRD 313.*

*Prerequisite for PHRD 408: PHRD 407.*

*PHRD 407 offered: Fall only; PHRD 408 offered: Spring only.*

### **PHRD 410 and 510 OTC Medications I-II (2 and 3)**

A two-course sequence designed to prepare pharmacists to function effectively as therapeutic advisers to patients in the selection, use, and monitoring of nonprescription medication.

*Prerequisites for PHRD 410: PHRD 403 and PHRD 407.*

*Prerequisites for PHRD 510: PHRD 410, PHRD 404, and PHRD 408.*

*PHRD 410 offered: Spring only.*

*PHRD 510 offered: Fall only.*

### **PHRD 502 Advanced Pharmacy Practice (2)**

This course reviews basic concepts in pharmacy practice with inclusion of legal issues in drug distribution, storage, and record keeping. Pharmacy services in long-term care are included in the course. Emerging roles in pharmacy practice (immunization provision, ambulatory infusion, DME service, pharmaceutical care, and disease management) are merged with traditional roles in pharmacy practice to present comprehensive pharmacy practice models. *Offered: Fall only.*

### **PHRD 521, 522, and 523 Therapeutics I-II-III (6, 4, and 6, respectively)**

This three-course sequence is designed to develop applied knowledge of the more commonly occurring acute and chronic diseases with emphasis on therapeutic drug management.

*Prerequisites for PHRD 521: PHRD 403 and PHRD 404.*

*PHRD 521 offered: Fall only.*

*PHRD 522 and PHRD 523 offered: Spring only.*

### **PHRD 524 Fiscal Management (3)**

Fiscal Management is designed to cover fiscal concepts and theories encountered in all practice settings. The course focuses on making wise decisions about obtaining and using financial resources in order to increase the value of the organization.

*Prerequisite: Completion of second professional year of study or permission of course coordinator. Offered: Fall only.*

### **PHRD 525 Human Resources Management (3)**

Human Resources Management is designed to cover organizational structure and behavior in all pharmacy practice settings. The planning process, the implementing process, and the analyzing process, as related to personnel are emphasized.

*Prerequisite: Completion of second professional year of study or permission of course coordinator. Offered: Spring only.*



### **PHRD 527 Drug Literature Evaluation (3)**

A course designed to prepare pharmacists to evaluate biomedical literature and drug advertising and to discuss pharmacoeconomics. Drug utilization evaluation and drug utilization review procedures will be presented. *Prerequisite: PHRD 303. Offered: Spring only.*

### **PHRD 550 Physical Assessment (2)**

This hands-on, two-semester course introduces students to basic physical assessment with emphasis on monitoring for optimal drug therapy. Mini-lectures are supported by labs that provide opportunities to practice skills. A grade of IP (in progress) will be issued at the end of the Fall semester; this does not affect the GPA for the Fall semester. A final grade reflecting progress in the entire course will be issued at the end of the Spring semester. *Offered: Fall and Spring in this sequence.*

### **PHRD 551 Ethics in Christianity and Health Care (2)**

This course is based around six character traits of ethical persons, as biblical perspectives and health care perspectives on each of these traits are addressed. Classroom lectures are supplemented by small-group discussions during which ethical issues and viable options are discussed. The course is facilitated by faculty trained in pharmacy, nursing, religion, and philosophy. *Offered: Spring only.*

### **PHRD 605 Ambulatory Care (4)**

A clinical APE designed to provide experience in providing clinical pharmacy services to ambulatory patients in a community pharmacy setting and/or selected outpatients of a general medicine/family practice ambulatory care service. *Offered: Fall and Spring.*

### **PHRD 606 Drug Information (4)**

A clinical APE designed to enhance knowledge and skill in preparing for the pharmacist's role as a pharmacotherapy adviser and consultant. *Offered: Fall and Spring.*

### **PHRD 607, 608, and 610 Adult Medicine I-II-III (4 each course)**

A sequence of clinical APEs designed to enhance knowledge and skill in providing clinical pharmacy services to adult populations. *Prerequisite for PHRD 610: PHRD 608. Offered: Fall and Spring.*

### **PHRD 609 Association Management (4)**

An APE focusing on development of knowledge, skills, and attitudes necessary for professional association management. Experiences provided include budgeting, publication coordination, membership activities, legislative activities, and meeting planning. *Offered: Fall and Spring.*

### **PHRD 612 Advanced Community Pharmacy I (4)**

An APE focusing on development of clinical and managerial skills in a community pharmacy/ambulatory care setting. *Offered: Fall and Spring.*

### **PHRD 614 Advanced Institutional Pharmacy I (4)**

An APE focusing on development of knowledge and skills in institutional pharmacy management and application of such systems in various practice environments. *Offered: Fall and Spring.*

### **PHRD 615 and 616 Professional Seminar I-II (1 each course)**

This two-course sequence is designed to give students opportunities to develop and defend a research proposal or to research a drug, therapeutic controversy, or management problem and make an oral presentation to fellow students and faculty. These courses are taken during APEs in the fourth professional year. *Offered: Fall and Spring.*

### **PHRD 617 Advanced Institutional Pharmacy II (4)**

An APE designed to enhance knowledge and skill in institutional pharmacy management and application of such systems in various practice environments. *Prerequisite: PHRD 614. Offered: Fall and Spring.*

### **PHRD 618 Geriatric Pharmacy (4)**

A clinical APE providing the student an opportunity to develop his/her knowledge and skills in serving the unique drug therapy needs of a geriatric population. *Offered: Fall and Spring.*

### **PHRD 620 Pediatric Pharmacy (4)**

A clinical APE providing the student an opportunity to develop his/her knowledge and skills in serving the unique drug therapy needs of a pediatric population. *Offered: Fall and Spring.*

**PHRD 622 Advanced Drug Information (4)**

An APE providing the student an opportunity to develop his/her knowledge and skills in the operation of a Drug Information Center, formulary programs, DUE/DUR, managed care, Continuous Quality Improvement, and antibiotic management programs. *Prerequisite: PHRD 606. Offered: Fall and Spring.*

**PHRD 624 Poison Information/Toxicology (4)**

A clinical APE providing the student an opportunity to enhance knowledge and skills in assessing and managing drug-induced toxicity and poisoning. *Offered: Fall and Spring.*

**PHRD 626 Metabolic Support (4)**

A clinical APE providing the student an opportunity to enhance fundamental knowledge in the provision of metabolic (nutritional) support through parenteral and enteral routes. *Offered: Fall and Spring.*

**PHRD 628 Advanced Adult Medicine (4)**

An advanced clinical APE providing the student an opportunity to enhance his/her skills in the application of pharmaceutical knowledge to adult patients. *Prerequisite: PHRD 607, PHRD 608, and PHRD 610. Offered: Fall and Spring.*

**PHRD 629 Medicine Subspecialty (4)**

An APE providing the student an opportunity to develop his/her knowledge and skills in serving the unique drug therapy needs of patients in a medicine subspecialty setting. *Offered: Fall and Spring.*

**PHRD 630 Advanced Ambulatory Care (4)**

An advanced clinical APE designed to provide in-depth experiences in the provision of clinical pharmacy services to ambulatory patients in a community pharmacy setting and/or selected in-patients of a general medicine/family practice ambulatory care service. *Prerequisite: PHRD 605. Offered: Fall and Spring.*

**PHRD 631 Medical Critical Care (4)**

An APE designed to enhance knowledge and skill in providing clinical pharmacy services to critically ill adult populations. *Offered: Fall and Spring.*

**PHRD 632 Advanced Geriatric Pharmacy (4)**

An advanced clinical APE providing the student an opportunity to enhance his/her skills in the application of pharmaceutical knowledge to geriatric patients. *Prerequisite: PHRD 618. Offered: Fall and Spring.*

**PHRD 633 Surgical Critical Care (4)**

An APE designed to enhance knowledge and skill in providing clinical pharmacy services to critically ill adult populations. *Offered: Fall and Spring.*

**PHRD 634 Advanced Pediatric Pharmacy (4)**

An advanced clinical APE providing the student an opportunity to enhance his/her skills in the application of pharmaceutical knowledge to pediatric patients. *Prerequisite: PHRD 620. Offered: Fall and Spring.*

**PHRD 635 Cardiac Critical Care (4)**

An APE designed to enhance knowledge and skill in providing clinical pharmacy services to critically ill adult populations. *Offered: Fall and Spring.*

**PHRD 636 Pharmacokinetics (4)**

An APE designed to enhance knowledge and skill in the direct application of pharmacokinetic principles to patient drug therapy management. *Offered: Fall and Spring.*

**PHRD 637 Neurological Critical Care (4)**

An APE designed to enhance knowledge and skill in providing clinical pharmacy services to critically ill adult populations. *Offered: Fall and Spring.*

**PHRD 638 Clinical Pharmacy Research (4)**

This APE provides the opportunity to enhance knowledge and skills in planning and conducting research. Students will be introduced to research design, protocol development, regulatory requirements, data collection, and data analysis. *Offered: Fall and Spring.*

**PHRD 640 Managed-Care Pharmacy (4)**

This APE provides the opportunity to enhance knowledge and skill in managed-care pharmacy while assisting in the development of higher-order thinking skills in the

student through real time analysis and application in a managed-care environment. Enrollment may be limited by availability of training sites and preceptors. *Offered: Fall and Spring.*

**PHRD 642 Community Pharmacy (4)**

A clinical APE designed to provide experience in providing clinical pharmacy services to patients in a community pharmacy. *Offered: Fall and Spring.*

**PHRD 643 Advanced Community Pharmacy II (4)**

An APE designed to enhance knowledge and skill in providing clinical pharmacy services to patients in a community pharmacy. *Prerequisite: PHRD 642.*

**PHRD 644 Home Infusion Therapy (4)**

An APE designed to provide experience in preparing intravenous preparations including chemotherapy, antimicrobials, and total parenteral nutrition. Students will also provide drug information, patient counseling, and in some cases, visit patients in the home. *Offered: Fall and Spring.*

**PHRD 646 Psychiatric Pharmacy (4)**

This APE provides the opportunity to enhance knowledge and skill in the delivery of pharmaceutical care in the psychiatric setting. It is designed to assist in the development of higher-order thinking skills. Enrollment may be limited by availability of training sites and preceptors. *Offered: Fall and Spring.*

**PHRD 648 Pharmacy Management (4)**

This APE experience provides the opportunity to enhance knowledge and skills in pharmacy management including such topics as financial planning and analysis, budgeting, pricing, capital investment, inventory control, organizational design, personnel development and administration, and legal aspects of pharmacy management. Enrollment may be limited by availability of training sites and qualified preceptors. *Offered: Fall and Spring.*

**PHRD 650 Renal Medicine (4)**

An APE that will give the student an opportunity to gain experience and skills in the provision of pharmaceutical care to adult patients with renal disease. *Offered: Fall and Spring.*

**PHRD 651 Neurology (4)**

An APE designed to enhance knowledge and skill in providing clinical pharmacy services to patients with neurological diseases. *Offered: Fall and Spring.*

**PHRD 652 Hematology and Oncology (4)**

An APE that will expose students to the care of patients with malignant disorders. The student will gain experience in optimizing the pharmacotherapy of patients with malignant diseases. *Offered: Fall and Spring.*

**PHRD 653 Infectious Disease (4)**

An APE designed to enhance knowledge and skill in providing clinical pharmacy services to patients with infectious diseases. *Offered: Fall and Spring.*

**PHRD 654 Cardiology (4)**

A clinical APE designed to advance the student's knowledge in caring for critically ill adult patients with particular emphasis in cardiology. *Offered: Fall and Spring.*

**PHRD 656 Neonatology (4)**

An APE designed to provide the student with basic skills and the knowledge base needed to provide pharmaceutical care to the neonate. *Offered: Fall and Spring.*

**PHRD 660 Pedagogics (4)**

An APE designed to develop knowledge and skill in various aspects of teaching. Students will have the opportunity to be exposed to and participate in didactic teaching, including active-learning techniques and experiential teaching. *Offered: Fall and Spring.*

**PHRD 690 Nuclear Pharmacy (4)**

An APE providing the student with the opportunity to expand knowledge and skills in the area of radiopharmaceuticals. *Offered: Fall and Spring.*

## Professional Electives\*

The Doctor of Pharmacy curriculum requires two [2] credits of electives to be completed during the third professional year of study. Didactic electives may be selected from the courses listed below, provided prerequisites are fulfilled. Courses taken prior to enrollment in the McWhorter School of Pharmacy cannot be counted toward elective requirements in the professional curriculum.

PHRD 325 Contemporary Topics in Pharmacy (2)
PHRD 409 Immunology and Vaccines in Pharmacy Practice (2)
PHRD 422 Establishing and Developing a Professional Community Practice (2)
PHRD 423 Radiopharmaceuticals (2)
PHRD 426 Managed-Care Pharmacy (2)
PHRD 430 Research (2)
PHRD 431 Research (3)
PHRD 528 Current Topics in Pediatric Pharmacotherapy (2)
PHRD 529 Chemical Dependency (2)

\*These electives may be offered in Fall or Spring, based on availability of the instructor and students' request of each course.

## Pharmacy Electives

### PHRD 325 Contemporary Topics in Pharmacy (2)

These elective courses provide the student with the opportunity to discuss contemporary topics of interest in the profession of pharmacy. Multiple or single topics may be considered. *Offered: Fall or Spring.*

### PHRD 409 Immunology and Vaccines in Pharmacy Practice (2)

This elective course examines principles of immunology and gives in-depth coverage to vaccines and vaccine-preventable diseases. The student will learn of the pharmacist's role in vaccine-preventable disease prevention. Intramuscular and subcutaneous injection technique will be taught as well. Particular emphasis is placed on implementing a vaccine service into pharmacy practice. *Offered: Fall or Spring.*

### PHRD 422 Establishing and Developing a Professional Community Practice (2)

This elective project-oriented course focuses on the establishment and development of a professional community practice. Consideration is given initially to the pros and cons of choosing an existing practice versus establishing a new practice. Records establishment and maintenance, cost-to-dispense determination, marketing aspects, and use of other areas of health care to complement a prescription practice are also considered. *Prerequisite: PHRD 524. Offered: Spring only.*

### PHRD 423 Radiopharmaceuticals (2)

This elective course provides an introduction to radiopharmaceuticals and the practice of nuclear pharmacy. Consideration is given to the properties, methods of measurement and detection, preparation, storage, administration, and diagnostic and therapeutic applications of radioactive pharmaceuticals. *Prerequisite: PHRD 405. Offered: Fall or Spring.*

### PHRD 426 Managed-Care Pharmacy (2)

This elective course is designed to provide for the development of fundamental knowledge and skill in the delivery of pharmaceutical care in a managed-health care environment, primarily serving ambulatory patients. Emphasis is placed upon drug benefit management from a fiscal and clinical perspective. *Prerequisite: Completion of second professional year of study or permission of course coordinator. Offered: Fall or Spring.*

### PHRD 430 Research (2)

An elective course designed to apply literature and laboratory techniques or other methods of scientific investigation to pharmaceutical problems. The student may

choose to study and investigate a suitable problem with any of the departments in the School of Pharmacy. *Prerequisites: Consent of instructor directing the research and a professional GPA of at least 2.50. Offered: Fall or Spring.*

### PHRD 431 Research (3)

See PHRD 430 for description. *Offered: Fall or Spring.*

### PHRD 528 Current Topics in Pediatric Pharmacotherapy (2)

This elective course provides a basic overview of pediatric pharmacotherapy. The course will focus on treatment and therapeutic monitoring of the more common pediatric diseases. *Prerequisite: Completion of second professional year of study or permission of course coordinator. Offered: Fall or Spring.*

### PHRD 529 Chemical Dependency (2)

This course is designed to facilitate learning by pharmacy students in the field of addiction. Through participation in class-directed activities, the student will learn about multiple aspects of the disease of chemical dependency with an emphasis on the impact of addiction on the health care professions. *Offered: Fall or Spring.*



## McWhorter School of Pharmacy Calendar for Academic Year 2003-2004

### Fall Semester 2003

<b>June 2</b>	Advanced Practice Experiences [APE] begin for fourth-year students.
<b>June 25</b>	Last day for fourth-year students to completely withdraw from semester without academic penalty.
<b>July 4</b>	Independence Day Holiday
<b>August 18-20</b>	Faculty in residence for the academic session.
<b>August 21-22</b>	Orientation for first-year students
<b>August 25</b>	Classes begin for first-, second-, and third-year students.
<b>August 26</b>	University Convocation
<b>September 1</b>	Labor Day - All classes meet; no holiday.
<b>October 3</b>	Last day to withdraw from a course(s) without academic penalty.
<b>October 13-14</b>	Fall Break, no classes meet.
<b>Oct 21 - Nov 14</b>	Registration for Spring Semester
<b>November 13</b>	Last day to completely withdraw from semester without academic penalty.
<b>November 26-28</b>	Thanksgiving Holidays, no classes meet.
<b>December 5</b>	Classes end.
<b>December 8-11</b>	Final Examinations
<b>December 13</b>	Commencement

### Spring Semester 2004

<b>January 5</b>	Early Practice Experience [EPE] begins for second-year students. Advanced Practice Experiences [APE] begin for fourth-year students. Classes begin for first- and third-year students.
<b>January 19</b>	Martin Luther King, Jr. Holiday, no classes meet.
<b>January 26</b>	EPE ends for second-year students.
<b>January 28</b>	Classes begin for second-year students.
<b>January 29</b>	University Convocation
<b>March 8</b>	Last day to withdraw from a course(s) without academic penalty.
<b>March 22-26</b>	Spring Holidays; no classes meet.
<b>April 5</b>	Last day for first- and fourth-year students to completely withdraw from semester without academic penalty.
<b>April 6-30</b>	Registration for Fall Semester
<b>April 12</b>	Easter Holiday, no classes meet.
<b>April 16</b>	Classes end for first-year students.
<b>April 19</b>	Study Day for first-year students, no classes and no examinations given.
<b>April 20-23</b>	Final Examinations for first-year students.
<b>April 26</b>	EPE and PHRD 302 begin for first-year students.
<b>April 27</b>	Last day for second- and third-year students to completely withdraw from semester without academic penalty.
<b>May 12</b>	Classes end for second- and third-year students.
<b>May 13</b>	Study Day, no classes meet and no examinations given.
<b>May 14,17-19</b>	Final Examinations for second- and third-year students.
<b>May 20</b>	EPE and PHRD 302 end for first-year students
<b>May 21-22</b>	Commencement Weekend

## McWhorter School of Pharmacy Calendar for Academic Year 2004-2005

### Fall Semester 2004

<b>June 1</b>	APE begin for fourth-year students (Q session)
<b>June 30</b>	Last day for PM4 to withdraw from semester without academic penalty
<b>July 4</b>	Independence Day Holiday
<b>August 23-24</b>	Faculty in residence for the academic session.
<b>August 26-27</b>	Orientation for EP students
<b>August 30</b>	Classes begin for first, second, and third-year students.
<b>August 31</b>	University Convocation
<b>September 6</b>	Labor Day, all classes meet; no holiday.
<b>October 15</b>	Last day to withdraw from a course without academic penalty.
<b>October 25-26</b>	Fall Break, no classes meet.
<b>Oct 27 - Nov 19</b>	Registration for Spring Semester
<b>November 18</b>	Last day to completely withdraw from semester without academic penalty.
<b>November 24-26</b>	Thanksgiving Holidays, no classes meet.
<b>December 10</b>	Classes end.
<b>December 13-16</b>	Final Examinations
<b>December 18</b>	Commencement

### Spring Semester 2005

<b>January 3</b>	Early Practice Experience [EPE] begins for second-year students. APE begin for fourth-year students. Classes begin for first and third-year students.
<b>January 17</b>	Martin Luther King, Jr. Holiday, no classes meet.
<b>January 24</b>	EPE ends for second-year students.
<b>January 26</b>	Classes begin for second-year students.
<b>January 27</b>	University Convocation
<b>February 1</b>	Last day to add or drop a course.
<b>March 14</b>	Last day to withdraw from a course without academic penalty.
<b>March 25</b>	Good Friday Holiday, no classes meet.
<b>March 28-April 1</b>	Spring Break, no classes meet
<b>April 5-29</b>	Registration for Summer Terms and Fall Semesters
<b>April 15</b>	Classes end for first-year students
<b>April 18-21</b>	Final examinations for first-year students
<b>April 25</b>	EPE and PHRD 302 begin for first-year students
<b>April 26</b>	Last day for second and third-year students to completely withdraw from semester without academic penalty.
<b>May 11</b>	Classes end for second and third-year students
<b>May 12</b>	Study Day, no classes meet
<b>May 13, 16-18</b>	Final Examinations
<b>May 19</b>	EPE and PHRD 302 end for first-year students.
<b>May 20-21</b>	Commencement Weekend for School of Pharmacy program