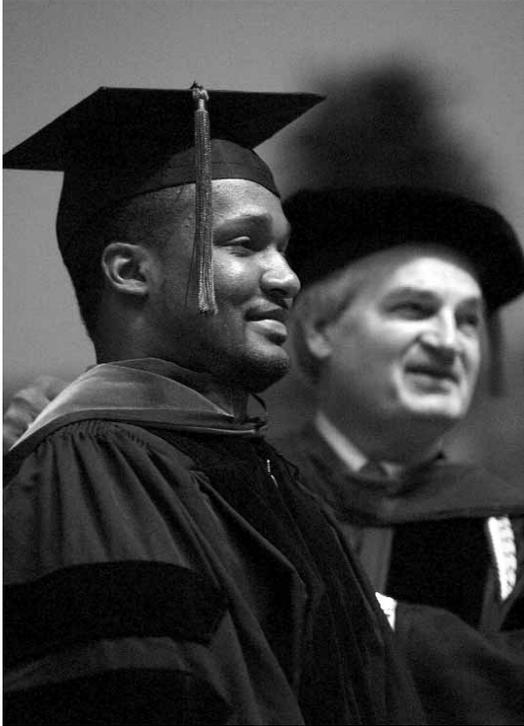


# McWhorter School of Pharmacy



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## Administration

Charles D. Sands, III, Fred E. McWhorter Dean and Professor  
Michael G. Kendrach, Associate Dean for Academic Affairs, Professor  
Susan P. Alverson, Associate Dean for Student and Alumni Affairs, Assistant Professor  
Marshall E. Cates, Assistant Dean for Student Affairs, Professor  
Paula A. Thompson, Interim Chair, Pharmacy Practice, Associate Professor  
Amy E. Broeseker, Interim Chair, Pharmaceutical, Social and Administrative Sciences, Associate Professor  
Michael D. Hogue, Director, Experiential Programs, Associate Professor  
Maisha Kelly Freeman, Director, Global Drug Information Center, Associate Professor  
Mary R. Monk-Tutor, Director of Assessment, Professor  
Patricia B. Naro, Director of Introductory Pharmacy Practice Experience, Assistant Professor

## Faculty

Robert P. Henderson, Professor  
Roger D. Lander, Professor  
Robert M. Riggs, Professor  
Robert H. Schrimsher, Professor  
Pamela J. Sims, Professor  
Kimberley W. Benner, Associate Professor  
Gary W. Bumgarner, Associate Professor  
Valerie T. Prince, Associate Professor  
Condit F. Steil, Associate Professor  
Teresa A. Wilborn, Associate Professor  
Mary A. Worthington, Associate Professor  
John J. Arnold, Assistant Professor  
Jennifer W. Beall, Assistant Professor  
Erika M. Cretton-Scott, Assistant Professor  
Danielle L. Cruthirds, Assistant Professor  
B. DeeAnn Dugan, Assistant Professor  
Maryam Iranikhah, Assistant Professor  
Jeffrey A. Kyle, Assistant Professor  
Andrew J. Lampkins, Assistant Professor  
Michael W. Lee, Assistant Professor  
David R. Luthin, Assistant Professor  
D'Andrea F. Skipwith, Assistant Professor  
Stephen R. Stricker, Assistant Professor  
Ami M. Teague, Assistant Professor  
Angela D. Thomason, Assistant Professor  
Bruce A. Waldrop, Assistant Professor  
Terri M. Wensel, Assistant Professor  
C. Whitney White, Assistant Professor  
Mark W. Todd, Affiliate Professor  
Hossein Dovlatbadi, Affiliate Assistant Professor  
Gregory S. Gorman, Affiliate Assistant Professor  
Xuan-Dao T. Pham, Affiliate Assistant Professor  
Bo Xu, Affiliate 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 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 persons within a Christian environment to be exemplary pharmacists and to improve health worldwide through innovative pharmacy practice, scholarship, and service.

The vision of the pharmacy school is to empower pharmacy professionals to improve health worldwide by exhibiting the highest standards of quality in education, scholarship, practice, and service, and to be a leader among schools of pharmacy in meeting the challenges of health care in the future.

The pharmacy school supports the Joint Commission of Pharmacy Practitioners (JCPP) statement of a unified vision for the future of pharmacy practice that states that "Pharmacists will be the health care professionals responsible for providing patient care that ensures optimal medication therapy outcomes."

## Curriculum Outcome

A doctor of pharmacy graduate from the McWhorter School of Pharmacy is one who is prepared to:

- Render exemplary pharmaceutical care
- Succeed in a postgraduate training or degree program
- Pursue life-long learning
- Advance the practice and profession of pharmacy

## Ability-Based Outcomes

- **Communication:** The student will demonstrate effective written and verbal communication skills.
- **Professionalism:** The student will demonstrate professional behavior in all school-related activities.
- **Evidence-Based Practice:** The student will demonstrate competency in using drug information skills to promote evidence-based practice.
- **Practice Management:** The student will be able to apply management principles to the practice of pharmacy.
- **Critical Thinking:** The student will effectively evaluate information and critically think through issues to provide appropriate solutions to drug-related problems.
- **Pharmaceutical Care:** The student will exercise appropriate clinical judgments to provide optimal pharmaceutical care to patients with common disease states.

## Accreditation

The McWhorter School of Pharmacy is accredited by the Accreditation Council for Pharmacy 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).

## McWhorter School of Pharmacy Organizations

Academy of Managed Care Pharmacy  
 American Pharmacists Association Academy of Student Pharmacists  
 Christian Pharmacy Fellowship  
 Kappa Psi Pharmaceutical Fraternity  
 National Community Pharmacists Association  
 Phi Lambda Sigma (Leadership Society)  
 Rho Chi Society (Academic Honor Society)  
 Student Society of Health-System Pharmacy  
 Student National Pharmaceutical Association

## Academic Program and Requirements

### Degree

Doctor of Pharmacy (Pharm.D.)

### Admission Policies

For the most up-to-date information on admissions policies, please visit our Web site at <http://pharmacy.samford.edu>.

All communications regarding admission should be directed to the director of external relations and pharmacy admissions in the McWhorter School of Pharmacy (MSOP). Applications are considered on a competitive basis by the MSOP 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. Applicants to the pharmacy school 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. A prior baccalaureate degree is preferred. 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.

For an applicant to be considered for admission, all admission materials must be submitted by **February 1**. This deadline may be extended if the entering class is not filled. To make application to the MSOP, the applicant must complete the national online application at [www.PharmCAS.org](http://www.PharmCAS.org). References are processed through PharmCAS. This online process allows the applicant to apply to approximately 74 pharmacy schools throughout the nation. Official transcripts, essay, and PCAT scores are sent to PharmCAS and then forwarded to every pharmacy school the applicant designates. The link to the online supplemental application is located at our Web site: <http://pharmacy.samford.edu>. The PCAT and ACT or SAT scores are required. The ACT/SAT score should be sent directly to the MSOP and **not** PharmCAS. Waiver of the ACT/SAT is granted to the applicant who has earned a prior B.S. or B.A. degree, is over 30 years of age, or has English as the applicant's second language and the applicant did not attend high school in the U.S. (See page four of the supplemental application for more information.) After an applicant is notified of acceptance, but before he or she enrolls in the pharmacy school, official transcripts must be sent directly to Samford University. Applicants are welcome 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 admission consideration.

Final decisions regarding admission are made by May 15. 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 pharmacy school 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 MSOP may be denied admission 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, (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.

After notification of admission to the pharmacy school, 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.

## Pre-Pharmacy Curriculum

The doctor of pharmacy degree at Samford University requires a minimum of six years of college work consistent with the standards set by the Accreditation Council for Pharmacy Education (ACPE). 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 this page 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 MSOP 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 advisor 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 MSOP 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 MSOP. 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 30 years of age, and students with physical disabilities may petition for special consideration concerning physical education requirements. You may also refer to the Transfer Guide from our Web site at <http://pharmacy.samford.edu>.

### Technical Standards for Admission to MSOP

In order to comply and proceed with the mission of MSOP, noted earlier in this section, technical standards for admission are a necessity, which ensures the education of pharmacists who facilitate competent patient care and professional services in all facets of healthcare. Students admitted to MSOP must possess the intellectual, emotional, and physical abilities, with reasonable accommodations as needed for those with disabilities, to acquire the knowledge, behaviors, and skills needed to complete the curriculum. These standards are essential to ensure the competencies of graduates of MSOP. Each applicant of MSOP will be assessed in the academic and technical standards set forth by the admissions committee, notwithstanding reasonable accommodations, prior to matriculation.

The doctor of pharmacy (Pharm.D.) degree identifies persons who have completed the curriculum necessary to perform the functions of a pharmacist; thus, graduates must convey and demonstrate abilities to preserve the safety and protection of public interests. Moreover, applicants for the Pharm.D. degree must be able, with or without reasonable accommodations, to perform specific essential functions that the faculty deem requisite for the practice of pharmacy. These functions fall into several categories including: communicative, physical abilities, conceptual, interpretative, quantitative, behavioral, and social. Applicants must also have the physical and emotional stamina to perform in a competent manner in practice settings that involve heavy workloads and/or stressful stimuli. Furthermore, MSOP has determined that those individuals currently impaired by alcohol or substance abuse cannot meet the technical standards.

**I. Communication:** Candidates must be able to speak, hear, and observe patients in a practice setting. They must be able to record information accurately and clearly, speak fluent English, and communicate effectively and sensitively with patients. Candidates must also be able to communicate effectively, and accurately, with other members of the healthcare team in oral and written form, and in patient care settings in which decisions based upon those communications must be made rapidly.

**II. Physical Abilities:** Candidates must possess sufficient visual, auditory, tactile and motor abilities to allow them to gather data from written reference material, from oral presentations, by observing demonstrations and experiments, by studying various types of medical illustrations, by observing a patient and his/her environment, by observing clinical procedures performed by others, by reading digital or analog representations of physiologic phenomena, and by per-

Pre-Pharmacy Curriculum for Samford Students* Required Courses	Course Credits	Total Required Credits
<b>Fall Semester I</b>		<b>19</b>
CHEM 205 Foundations of Chemistry	4	
CHEM 206 Foundations of Chemistry Laboratory	1	
MATH 150 Precalculus	4	
UCCA 101 Communication Arts I	4	
UCCP 101 Cultural Perspectives I	4	
UCFH 120 Concepts in Fitness and Health	2	
<b>Spring Semester I</b>		<b>16</b>
BIOL 217 Principles of Human Anatomy	4	
CHEM 215 Fundamentals of Organic Chemistry	3	
CHEM 216 Fundamentals of Organic Chemistry Lab	1	
UCCA 102 Communication Arts II	4	
UCCP 102 Cultural Perspectives II	4	
<b>Summer Term</b>		<b>4</b>
Liberal Arts**	4	
<b>Fall Semester II</b>		<b>16</b>
BIOL 225 Microbiology	4	
CHEM 315 Organic Reactions & Mechanisms	3	
CHEM 316 Organic Reactions & Mechanisms Lab	1	
MATH 240 Calculus I	4	
UCBP 101 Biblical Perspectives	4	
<b>Spring Semester II</b>		<b>16</b>
BIOL 218 Principles of Human Physiology	4	
CHEM 325 Quantitative Analysis	3	
CHEM 326 Quantitative Analysis Laboratory	1	
MATH 210 Elementary Statistics	4	
Liberal Arts**	4	
<b>Total Required Credits</b>		<b>71</b>

\* Dual-enrollment courses, those courses taken while in high school for both college and high school credit, may not be accepted by Samford if you enter the University as a freshman. Contact the Undergraduate Admission Office for clarification.

\*\* 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.

Pre-Pharmacy Curriculum for Transfer Students Required Courses	Course Credits	Total Required Credits
<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>
Calculus I**	3	
Anatomy and Physiology**	8	
Microbiology with Lab***	4	
General Chemistry	8	
Organic Chemistry	8	
Statistics (Math Dept)	3	
<b>Social Sciences</b>		<b>6-9</b>
Public Speaking	3	
World History (3) or Western Civilization (3) or U. S. History (6)	3-6	
<b>Liberal Arts</b>		<b>12</b>
Sociology or Psychology	3	
Other Liberal Arts †	9	
<b>Physical Activity</b>		<b>2</b>
Two physical activity courses	2	
<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 credit may be applied to the liberal arts requirement.

\*\* A prerequisite course may be required by most colleges.

\*\*\* Some schools offer only three hours of credit.

† 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 three credits may be in appreciation courses).

forming basic physical examination techniques on a patient. Candidates must have sufficient motor function to elicit information from patients by palpation, auscultation, percussion and other diagnostic maneuvers necessary to assess a patient. Candidates must have the physical ability and manual dexterity to compound sterile and non-sterile products in an environment and manner compliant with existing regulations.

**III. Interpretative, Conceptual, and Quantitative:** Candidates must have effective and efficient learning techniques and habits that allow mastery of the complex curriculum. They must be able to learn through a variety of modalities including, but not limited to, classroom instruction, small group activities, individual study, preparation and presentation of reports, and use of computer technology. They must be able to memorize, measure, calculate, reason, analyze, synthesize, transcribe verbal messages accurately, and interpret written prescriptions accurately. Candidates must be able to read, comprehend and respond to serial information related to a medical situation or patient.

**IV. Behavioral, Social and Emotional Attributes:** Candidates must understand the legal and ethical aspects of the practice of pharmacy and function within the guidelines established by the law and by the ethical standards of the pharmacy profession. They must be able to relate to patients and their families, colleagues, and other members of the healthcare team with courtesy, maturity, and respect for the dignity of individuals. This requires that they place the welfare of their patients foremost, and demonstrate honesty, integrity, dedication, compassion and nondiscrimination in the care of their patients. Candidates must, at all times, demonstrate the emotional stability to be able to exercise good judgment, and carry out prompt completion of all responsibilities attendant to the care of their patients in a sensitive and effective manner. This sensitivity includes self-examination of personal attitudes, perceptions, and stereotypes in order to avoid potential negative impact on relationships and patient care. Applicants must be of sufficient emotional health to adapt to changing environments, display flexibility and professional responsibility to their patients, and learn to function in an environment of uncertainty, in which changes may occur rapidly and without warning. An individual with a diagnosed disability may function as a pharmacy student as long as the above technical standards are fulfilled.

**V. Stamina:** The study and ongoing practice of pharmacy may involve taxing workloads and stressful situations. A pharmacy student must have the physical and emotional stamina to maintain a high level of function in the face of such working conditions. In the event of a deteriorating behavioral, social or emotional function, it is essential that a pharmacy student be willing to engage in dialogue with MSOP officials as soon as there is evidence that the student is not meeting the technical standards.

A pharmacy student whose actions or decisions pose a danger to self, patients and/or colleagues will not be allowed to continue in the program unless the student agrees to accept professional help under conditions acceptable to MSOP.

### Required Health Data

All MSOP students are required to have health insurance and must provide proof of insurance to the experiential program office within two weeks of the first day of class. Students must also be able to provide proof of insurance on demand during any experiential course if requested by the experiential education site. All pharmacy students accepted into the program will receive a Samford University Physical Examination Form and Immunization Record. Both forms must be completed and returned to Student Health Services before registering for classes, and a duplicate copy of both forms must be provided to the experiential program office of the department of pharmacy practice within two weeks of the first day of class. Physical exams must be conducted within the 12 months immediately preceding notification of admission, must be performed by a physician or mid-level provider (nurse practitioner or physician's assistant), and can only be submitted on the form provided. Immunization history should be comprehensive. Failure to submit both documents to Student Health Services within two weeks of the first day of class will result in a \$150 fine and a registration hold on the student's record. Students who fail to submit both forms to the experiential program office of the department of pharmacy practice within two weeks of the first day of class will be unable to begin required experiential coursework and will jeopardize their enrollment in the MSOP.

The MSOP has the following additional specific requirements related to immunizations and health screenings:

- **Tetanus Diphtheria Pertussis (Tdap)** – All students are required to be immunized with adult Tdap vaccine due to the risk of transmitting pertussis. Based upon guidelines from the Centers for Disease Control and Prevention for receipt of adult Tdap vaccine, if you have received a tetanus antigen-containing vaccine (e.g. Td) within the past two (2) years, you are not required to receive the Tdap vaccine at this time. However, if it has been greater than two years since you received the Td vaccine and you have not yet received a dose of adult Tdap vaccine then you are required to receive one dose of this vaccine before beginning any experiential coursework. Further, some sites require proof of immunization against Tdap (or Td vaccine within the previous two years immediately prior to beginning your experiential training). Students who provide medical documentation from a physician of current uncontrolled seizure disorders are exempt from this requirement. A Tdap booster lasts for 10 years and will not need to be repeated if you have already received a dose of this vaccine.
- **Measles, Mumps, Rubella (MMR)** – All students born on or after January 1, 1957 must provide documentation of either a) written documentation of two (2) live measles-antigen containing vaccines given no less than one month apart, and on or after the first birthday, or b) written documentation of immunity by blood test (titer) demonstrating protective antibody levels to measles, mumps, and rubella.
- **Tuberculosis (TB) Screening** – All students must provide written evidence of two-step TB skin test within the past twelve (12) months of any experiential course; i.e., after the initial TB skin test another TB skin test will be performed within two (2) to three (3) weeks. If the second TB skin test is positive, a baseline chest X-ray will be required and a letter from a physician addressing the health status of the student. TB skin testing is required annually throughout the Pharm.D. program.
- **Hepatitis B** – All students must provide written documentation of having completed the series of three (3) injections. The first dose must be administered prior to the second week of class attendance. Completion of the full series is required by the end of the spring semester of the first year (P1). Documentation of immunity by blood test (titer) is acceptable in lieu of vaccine administration dates.
- **Varicella (Chickenpox)** – All students must provide documentation of two doses of vaccine at least 4 weeks (28 days) apart. The first dose must be administered prior to the second week of class attendance. Documentation of immunity by blood test (titer) is acceptable in lieu of vaccine administration dates.
- **Random Drug Urine Screening** – All students enrolled in the MSOP will be subject to random drug urine screening until graduation from the program. The current policies and procedures for random drug urine screening are available in the Pharmacy Student Handbook. All fees associated with random drug urine screening are the sole responsibility of the student.
- **Criminal Background Checks** – All students are required to complete a criminal background check as part of the admissions process. Any violations involving drugs, either illicit or prescription, will be reported to the Alabama State Board of Pharmacy and may prevent enrollment in or result in suspension from the MSOP. All fees associated with criminal background checks are the sole responsibility of the student.
- **Fingerprinting** – All students are required to be fingerprinted before the completion of the spring semester of the P1 year. Fingerprinting will be conducted during a specified period, and students will be notified in advance of the specific requirements. All fees associated with fingerprinting are the sole responsibility of the student.
- **Health Insurance Portability & Accountability Act (HIPAA) Training** – All students enrolled in the MSOP will be required to complete an online training program for protection of patient-sensitive health information as required by HIPAA. Students will be notified on the first day of class of the details for completion of this training, and will be given two weeks from the first day of class to complete this training. Failure to do so will result in being unable to complete required experiential courses and will jeopardize enrollment in the MSOP.

Professional Pharmacy Curriculum Required Courses Summary-All Years	Total Required Credits
Year I, Total Required Credits	36
Year II, Total Required Credits	32-34
Year III, Total Required Credits	34-36
Year IV, Total Required Credits	37
<b>Total Required Credits for All Years</b>	<b>141</b>

Note: See table at right for a detailed curriculum.

### Alabama State 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.

### Tuition and Financial Aid

Students may apply for federal and private financial aid through the University's financial aid office. The MSOP has additional but limited funds available for loans and scholarships. Two small loan programs are available: a short-term emergency loan administered by the school; and a no-interest, revolving-loan fund (The Bernice Cohron Pharmacy Student Loan Fund). A number of pharmacy scholarships are available and awarded on the basis of both merit and need. Applications for all MSOP scholarships are available in the spring.

Students who wish to take non-PHRX 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. Students will not be allowed to take courses which interfere with pharmacy coursework.

### Student Athletes and ROTC Candidates

The MSOP will cooperate with student athletes and ROTC candidates to accommodate class scheduling to the fullest extent possible. The MSOP cannot, however, alter its program schedule for these students and the pharmacy school schedule takes precedence with any scheduling conflicts.

## Professional Pharmacy Curriculum

The information in this catalog describes the MSOP doctor of pharmacy curriculum implemented Fall 2009. Students entering prior to Fall 2009 and faculty should refer to previously published catalog editions for information pertaining to the prior curriculum, since these details are not repeated in this catalog.

Our curriculum is designed to provide practical and innovative educational experiences for our students. The name of our curriculum describes this endeavor: **"Coordinated Topics with Integrated Applications: A Patient-Centered Approach Focusing on Drug-Related Problems and Pharmacy Applications."** One of our goals is to coordinate and integrate material for students to apply their knowledge.

As an overview, there are 141 total credit hours in this professional program. The first three years combine classroom instruction with direct patient interaction. The Introductory Pharmacy Practice Experiences occurring almost every semester during these years are planned to augment learning that takes place through coursework as well as offer opportunities for students to put their knowledge to practical use to help patients. The fourth year includes Advanced Pharmacy Practice Experiences in addition to a culminating project to provide students with a variety of environments in which to synthesize and apply their educational preparation.

As a means to coordinate and integrate content, the Integrated Pharmacy Applications course each semester will link information both across courses in a given semester as well as between years in the curriculum. Students enrolled in the same courses will have opportunities to see how content from these various classes can benefit patients. Additionally, students in all four years will meet together periodically to discuss aspects of patient care that reflect their particular knowledge levels. This horizontally and vertically integrated approach is intended to make learning interesting and relevant for our students.

Professional Pharmacy Curriculum Required Courses	Course Credits	Total Required Credits
<b>Year I, Fall</b>		<b>17</b>
PHRX 301 Intro Pharm Practice Experience (IPPE) I	1	
PHRX 304 Basics of Pharmacy Calculations	1	
PHRX 306 Cellular and Molecular Biochemistry	4	
PHRX 307 Basics of Drug Information	1	
PHRX 308 Physiologic Basis of Disease I	4	
PHRX 310 Drug Delivery Systems I	3	
PHRX 315 Introduction to Patient Care Systems	2	
PHRX 320 Integrated Pharmacy Applications (IPA) I	1	
<b>Year I, Spring</b>		<b>19</b>
PHRX 302 IPPE II	1	
PHRX 303 IPPE III	1	
PHRX 305 Introduction to Pharmaceutical Sciences	4	
PHRX 309 Physiologic Basis of Disease II	4	
PHRX 311 Drug Delivery Systems II	3	
PHRX 312 Sterile Compounding	2	
PHRX 316 Population Health	3	
PHRX 321 IPA II	1	
<b>Year I, Total Required Credits</b>		<b>36</b>
<b>Year II, Fall</b>		<b>16-18</b>
PHRX 401 IPPE IV*	2	
PHRX 403 Pharmacotherapy I	4	
PHRX 405 Pharmaceutical Sciences I	4	
PHRX 407 Biopharmaceutics/Pharmacokinetics	4	
PHRX 415 Financial Management	3	
PHRX 420 IPA III	1	
<b>Year II, Spring</b>		<b>14-18</b>
PHRX 401 IPPE IV*	2	
PHRX 404 Pharmacotherapy II	4	
PHRX 406 Pharmaceutical Sciences II	4	
PHRX 410 Patient Self-Care and Monitoring I	3	
PHRX 416 Ethics in Christianity and Health Care	2	
PHRX 421 IPA IV	1	
PHRX 450-499 Elective**	2	
<b>Year II, Total Required Credits</b>		<b>32-34</b>
<b>Year III, Fall</b>		<b>16-18</b>
PHRX 500 Introduction to Capstone Project	1	
PHRX 501 IPPE V	1	
PHRX 503 Pharmacotherapy III	4	
PHRX 505 Pharmaceutical Sciences III	4	
PHRX 510 Patient Self-Care and Monitoring II	2	
PHRX 515 Human Resource Management	3	
PHRX 520 IPA V	1	
PHRX 450-499 Elective**	2	
<b>Year III, Spring</b>		<b>16-18</b>
PHRX 502 IPPE VI	1	
PHRX 504 Pharmacotherapy IV	4	
PHRX 513 Preparation for Patient Care	4	
PHRX 516 Pharmacy Law	3	
PHRX 521 IPA VI	1	
PHRX 527 Drug Literature Evaluation	2	
PHRX 550 Capstone Project I	1	
PHRX 450-499 Elective**	2	
<b>Year III, Total Required Credits</b>		<b>34-36</b>
<b>Year IV, June-May***</b>		
<b>Capstone Project</b>		<b>1</b>
PHRX 600 Capstone Project II	1	
<b>Required Advanced Pharmacy Practice Experiences (APPE)</b>		<b>20</b>
PHRX 601 Ambulatory Care I	4	
PHRX 610 Drug Information I	4	
PHRX 620 Adult Medicine I	4	
PHRX 650 Community Pharmacy I	4	
PHRX 660 Institutional Pharmacy I	4	
<b>Selective (1)/Elective (3) APPE</b>		<b>16</b>
600-level Selective APPE	4	
600-level Elective APPE	4	
600-level Elective APPE	4	
600-level Elective APPE	4	
<b>Year IV, Total Required Credits</b>		<b>37</b>
<b>Total Required Credits</b>		<b>141</b>

\* Half of the Year II students take PHRX 401 in the fall while the other half take the course in the spring.

\*\*Students must complete a total of 4 credits of electives (two, 2-cred electives) during two of the following semester options: Year II Spring, Year III Fall, Year III Spring.

\*\*\*Students are required to take nine (9) APPEs in ten possible time periods offered during the fourth year.

## Delivery of Curriculum

The Department of Pharmacy Practice is composed of 25 faculty and five staff personnel. The mission of the department is to educate, develop, and mentor students and pharmacists for the advancement of the practice of pharmaceutical care to assure the optimal use of drugs in society. The department collaborates with various health care facilities and community pharmacies in providing the delivery of all the pharmacy experiential education. In addition, the department is responsible for delivering the didactic education related to the clinical use of drugs in patients. The focus of all this teaching is the provision of optimal patient care based on sound therapeutic principles and evidence-based data and the promotion of health improvement, wellness, and disease prevention. The department also carries out a rigorous program of clinical and educational research designed to improve the use of drugs in patients and enhance student learning.

The Department of Pharmaceutical, Social and Administrative Sciences consists of 15 faculty and three staff. The faculty of the department, with expertise in a variety of disciplines including pharmacology, medicinal chemistry, pharmaceuticals, pharmacokinetics, pharmacy administration, and higher education, are responsible for providing the science foundation for the students' education in the professional curriculum. In addition, many of the faculty provide practical, research, and experiential education for the students.

In addition to teaching, the MSOP faculty serves the School and University as advisors to professional, social, and honorary organizations encouraging student involvement in those organizations and developing professionalism and leadership among the students. The faculty exemplify leadership and professionalism through service in leadership roles in professional and scientific organizations. Furthermore, the faculty are engaged in a number of scholarly activities including research, writing, presentation, and publication.

The professional pharmacy curriculum is designed to impart 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 requires basic educational preparation essential to provide pharmaceutical care and perform managerial functions.

The MSOP uses active learning (AL) concepts in many of its courses, with the percentage of time devoted to AL dependent upon the adaptability of the course material to these learning methodologies. Certain courses utilize a minimum of AL activity, while other courses are extensively delivered by AL methodologies. Students in each professional year are divided into groups of five to nine students, and group work is periodically assigned. The percentage of the final grade for the course from group work is clearly stated in the syllabus for each course.

The professional curriculum includes 98 semester credits of didactic and laboratory instruction and approximately 43 semester credits (1740 contact hours) of experiential training in various practice settings. All courses in the professional curriculum, including required experiential courses, are to be completed at Samford University.

The professional curriculum requires 36 credits of Advanced Pharmacy Practice Experiences (APPE), beginning in June or immediately following the successful completion of all required coursework prior to the fourth professional year in the pharmacy curriculum. Nine (9) APPEs must be completed by all students, including PHRX 601 (Ambulatory Care I), PHRX 620 (Adult Medicine I), PHRX 621 (Adult Medicine II) or an equivalent PHRX 600-level course, PHRX 610 (Drug Information I), PHRX 650 (Community Pharmacy I), PHRX 660 (Institutional Pharmacy I), and four additional PHRX 600-level APPE courses. Students will be allowed to provide input into their preferences for non-specified PHRX 600-level APPE courses; however, the director of experiential programs will have the final say in which specific courses the student will be registered based upon site availability and academic needs.

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 Information section of this catalog.

The professional pharmacy curriculum of the MSOP follows the pharmacy calendar listed in this section of the catalog. The School incorporates January in its spring semester. Therefore, students enrolled in the professional pharmacy curriculum cannot take courses offered in the University's Jan Term. 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.

## Academic Policies

The following policies for students are also published in the McWhorter School of Pharmacy (MSOP) Student Handbook. Additional academic policies addressing Introductory Pharmacy Practice Experience (IPPE) and Advanced Pharmacy Practice Experience (APPE) courses are published in the master syllabus and program requirements for Introductory and Advanced Practice Experiential Courses.

1. In order to receive a degree, candidates must satisfy all requirements of the MSOP and other applicable requirements of Samford University. A student must successfully complete the entire prescribed curriculum within six academic years from the original date of matriculation, and have a final GPA of at least 2.00 in order to be eligible for the degree. A student's academic standing is monitored by the associate dean of academic affairs and the Academic Standards Committee. The associate dean advises any student who experiences academic difficulty. However, it is the responsibility of the individual student to ensure that all requirements have been met.
2. Satisfactory academic progress is required of all students to remain in the pharmacy school. Academic standing is determined by the GPA and/or the number of failed courses. MSOP students must pass all prerequisite and co-requisite courses to proceed in the curriculum. The prerequisite of all courses in the upcoming term is the successful completion of all required courses in the current term. Therefore, if a student fails a required course, the student will not take any MSOP courses until the failed MSOP course is offered again. Students must complete all courses in the PHRX 300-500 level and achieve at least a 2.00 GPA in the professional curriculum before entering the APPE courses in the fourth professional year.
3. Unless otherwise stated in the course syllabus, grades are assigned by instructors in the school according to the following scale:

92-100 = A	88-89 = B+	78-79 = C+	67-69 = D
90-91 = A-	82-87 = B	70-77 = C	< 67 = F
	80-81 = B-		

Only grades earned in PHRX courses are used to calculate the professional GPA. The MSOP does not "round" the GPA. Other letter grades that may be assigned and the quality point system utilized by the University are described in the current University Catalog.

4. A student may not repeat a pharmacy course unless there is a failure in the course. The minimum passing grade of "C" is required in APPE courses, and the minimum passing grade in all other pharmacy coursework is a "D". All coursework must be completed at the MSOP. Availability of courses is limited to that published in the University Catalog and offered during the specified semesters.
5. A student who fails a single course or whose cumulative professional GPA is below 2.0 in any academic term will be placed on academic probation. If academic probation is the result of failed coursework, then the student is cautioned that additional failed coursework will result in dismissal from the pharmacy school, either by academic suspension or expulsion, as delineated below. If academic probation is the result of the GPA being less than 2.00, then the student is cautioned that failure to achieve and maintain a cumulative GPA of at least 2.00 at the end of the remaining academic terms will result in academic suspension.
6. A student who fails two courses or whose cumulative GPA is below 2.0 for any two academic terms will be suspended, which results in dismissal from the pharmacy school. A student on academic suspension must apply in writing to the Admissions Committee for readmission. The letter should explain the reasons for his/her academic difficulty and what measures have been taken to ensure his/her ability to raise the GPA. Should readmission be granted, the student is cautioned against further academic difficulties. If academic suspension is the result of failed coursework, then the student is cautioned that additional failed coursework will result in dismissal from the pharmacy school via academic expulsion. If academic suspension is the result of the GPA being less than 2.00, then the student is cautioned that failure to achieve and maintain a cumulative GPA of at least 2.00 at the end of all remaining academic terms will result in dismissal from the pharmacy school via academic expulsion.

7. A student who fails three or more courses or who fails the same course twice or whose cumulative GPA falls below 2.0 for any three full-time academic terms, either sequential or non-sequential, will be expelled, which results in permanent dismissal from the pharmacy school. Expulsion from the pharmacy school is without recourse. Expelled pharmacy students desiring to remain at Samford University will become subject to University policies on academic progression and retention.
8. Since the level of a student's academic difficulty, i.e., academic probation, suspension, and expulsion may be determined by the quantity of failed coursework, multiple failed courses in a given academic term may preclude the need for academic probation or suspension. In any regard, Samford University rules on continued enrollment at the University prevail.
9. Students on academic probation and students suspended from the pharmacy school shall not be allowed to serve as officers or committee members in any campus organization, participate in any extracurricular activity sponsored by the University or pharmacy organizations which involves the expenditure of an appreciable amount of time, or be employed by any department on the University campus. Outside employment for such students is also discouraged.
10. Students must adhere to the Code of Ethical/Professional Conduct, as well as plagiarism and copyright laws, as outlined in the MSOP Student Handbook and the University Catalog. Failure to do so can result in consequences that range from a verbal reprimand to expulsion from the academic program and university. This decision is made by the pharmacy school's Student Affairs Committee and/or the University Values Council.
11. Students enrolled at Samford University or other accredited institutions cannot audit courses in the pharmacy curriculum.

## Resources

**World Wide Web** – Students are invited to visit the McWhorter School of Pharmacy Web site (<http://pharmacy.samford.edu>) for additional information regarding faculty, admissions, curriculum and other useful student information.

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

**Drug Information Center** – The Drug Information 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 electronic reference materials are available. The University's Davis Library also provides online reference services.

**Student Computer Facilities** – The MSOP is equipped with computers that contain various drug information databases for course work and research. Wireless computer access is available in the MSOP and across the University. The University also has several computer labs on campus. The Curriculum Materials and Technology Center is also equipped to produce many kinds of visual materials.

## Professional Electives\*

The doctor of pharmacy curriculum requires two, 2-credit electives (for a total of 4 credits) to be completed during two of the following semester options: Year II Spring, Year III Fall, Year III Spring. 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. Completion of the fall semester in the second professional year is a prerequisite for all electives.

Course Number/Name	Credit Hrs
PHRX 450 Contemporary Topics in Pharmacy	2
PHRX 452 Independent Pharmacy Business Plan Development	2
PHRX 453 Radiopharmaceuticals	2
PHRX 456 Managed Care Pharmacy	2
PHRX 458 Current Topics in Pediatric Pharmacotherapy	2
PHRX 459 Chemical Dependency in Health Care Professionals	2
PHRX 460 Research	2
PHRX 470 Pharmacy and Healthcare in Great Britain	2

## Advanced Pharmacy Practice Experiences (APPE)

Enrollment in 600-level APPE 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 the APPE Manual for additional information.

Course Number/Name	Credit Hrs
PHRX 601 Ambulatory Care I	4
PHRX 602 Ambulatory Care II	4
PHRX 610 Drug Information I	4
PHRX 611 Drug Information II	4
PHRX 612 Poison Information/Toxicology	4
PHRX 620 Adult Medicine I	4
PHRX 621 Adult Medicine II	4
PHRX 622 Adult Medicine III	4
PHRX 623 Geriatric Pharmacy I	4
PHRX 624 Geriatric Pharmacy II	4
PHRX 625 Pediatric Pharmacy I	4
PHRX 626 Pediatric Pharmacy II	4
PHRX 627 Neonatology	4
PHRX 628 Psychiatric Pharmacy	4
PHRX 629 Cardiology	4
PHRX 630 Hematology and Oncology	4
PHRX 631 Neurology	4
PHRX 632 Nephrology	4
PHRX 633 Metabolic Support	4
PHRX 634 Infectious Disease	4
PHRX 635 Cardiac Critical Care	4
PHRX 636 Surgical Critical Care	4
PHRX 637 Medical Critical Care	4
PHRX 650 Community Pharmacy I	4
PHRX 651 Community Pharmacy II	4
PHRX 652 Community Pharmacy III	4
PHRX 660 Institutional Pharmacy I	4
PHRX 661 Institutional Pharmacy II	4
PHRX 670 Home Infusion Therapy	4
PHRX 671 Nuclear Pharmacy	4
PHRX 672 Managed Care Pharmacy	4
PHRX 673 Pharmacy Management	4
PHRX 674 Association Management	4
PHRX 675 Pharmacokinetics	4
PHRX 676 Specialty Pharmacy	4
PHRX 677 Pharmacy Research	4
PHRX 678 International Pharmacy I	4
PHRX 679 International Pharmacy II	4
PHRX 680 Pedagogy in Pharmacy	4

## Courses

NOTE: Beginning 2009-2010, the MSOP began a new professional pharmacy curriculum. All courses in the new curriculum bear the PHRX prefix. Students following the professional pharmacy curriculum from 2008-2009 and earlier can find descriptions for PHRD courses in the 2008-2009 Samford Catalog.

### PHARMACY

#### **PHRX 301, 302, and 303 Introductory Pharmacy Practice Experience (IPPE) I-II-III (1 each course)**

Three-course sequence designed to complement, within a pharmacy practice setting, the academic content in the first professional year didactic courses. Each sequence is slightly more involved as a foundational experience in the practice of pharmacy and serves as preparation for the Advanced Pharmacy Practice Experiences in the fourth professional year. Offered: Fall (301); Spring (302 and 303).

#### **PHRX 304 Basics of Pharmacy Calculations (1)**

Presentation of the basic elements of applied pharmaceutical mathematics including weights and measures, proper prescription interpretation, concentrations, conversions, dosing, and mathematics of various dosage forms. Offered: Fall.

#### **PHRX 305 Introduction to Pharmaceutical Sciences (4)**

Introduction to the core concepts underlying pharmacology, pharmacokinetics, pharmacogenomics, and medicinal chemistry. Includes the basic pharmaceutical properties of various classes of antibiotics and their use in the treatment of infectious diseases. Topics covered serve as foundation for the Pharmaceutical Sciences course sequence in subsequent years of the curriculum. Offered: Spring.

#### **PHRX 306 Cellular and Molecular Biochemistry (4)**

Topics addressed include DNA/RNA/protein structure and synthesis, signal transduction pathways, gene regulation, organelle function and regulation, enzyme kinetics, energy catalysis, and bacterial/viral biology. Foundation for understanding the cellular and biochemical actions of drugs. Offered: Fall.

#### **PHRX 307 Basics of Drug Information (1)**

Exploration to gain understanding of basic drug information sources and the different types of drug literature. Afternoon lab sessions are mandatory to practice these skills. Concepts applied will be reinforced throughout the curriculum. Offered: Fall.

#### **PHRX 308 and 309 Physiologic Basis of Disease I-II (4 each course)**

Two-course sequence addresses the basics of physiologic processes in the body as they relate to various diseases. Provides basis for the Pharmaceutical Sciences and Pharmacotherapy courses in subsequent years of the program. Offered: Fall (308); Spring (309).

#### **PHRX 310 and 311 Drug Delivery Systems I-II (3 each course)**

Two-course sequence focusing on technology related to drug delivery systems and pharmaceutical dosage forms. Topics to include novel dosage forms and delivery systems, administration techniques, storage and stability, and basic extemporaneous compounding. Offered: Fall (310); Spring (311).

#### **PHRX 312 Sterile Compounding (2)**

Introduction to aseptic technique and the compounding of sterile products. Includes theory of sterile compounding, discussion of USP 797 regulations for a sterile compounding environment, special procedures, and quality control as well as a review of state pharmacy regulations. Addresses sterile compounding of anti-neoplastic agents, use of relevant references, applicable calculations, and production of total parenteral nutrition mixtures in addition to parenteral administration and equipment. Offered: Spring.

#### **PHRX 315 Introduction to Patient Care Systems (2)**

Introduction to the "big picture" of health care in this country. Aspects of patient care addressed include societal, financial, legal, and governmental influences. The pharmacist's role emphasized as students begin to understand the opportunities and responsibilities of taking care of patients. Assessment of current level of professionalism in pharmacy education. Offered: Fall.

#### **PHRX 316 Population Health (3)**

Encompasses communication with patients, health care professionals, and insurers including Medicare, Medicaid, and managed care. Introduction of broad concepts related to Medication Therapy Management, pharmacoepidemiology, pharmacoconomics, public health, health care outcomes, health literacy and education, and cultural competence as they relate to the pharmacist as a change agent. Offered: Spring.

#### **PHRX 320 and 321 Integrated Pharmacy Applications (IPA) I-II (1 each course)**

Designed to integrate content within the first professional year as well as between years in the curriculum. Involves a combination of learning strategies such as labs and case discussions to augment student learning. Foundational content integrating students' knowledge of pharmacy courses completed in the first academic year. Offered: Fall (320); Spring (321).

#### **PHRX 401 Introductory Pharmacy Practice Experiences (IPPE) IV (2)**

Designed to complement, within a pharmacy practice setting, the academic content in the second professional year didactic courses. Provides deeper insights into patient care and serves as preparation for the Advanced Pharmacy Practice Experiences in the fourth professional year. Offered: Fall or Spring.

#### **PHRX 403, 404, 503 and 504 Pharmacotherapy I-II-III-IV (4 each course)**

Four-course sequence designed to incorporate knowledge of drug therapy and its management concerning acute and chronic disease states. These courses will build on content addressed in other courses and will include evidence-based practice analysis to properly formulate therapeutic decisions. Offered: Fall (403 and 503); Spring (404 and 504).

#### **PHRX 405, 406, and 505 Pharmaceutical Sciences I-II-III (4 each course)**

Three-course sequence developed to provide an understanding of the pharmacological and chemical properties of individual agents and various drug classes. These properties include mechanism of action, pharmacokinetics, indications, adverse effects, drug interactions, dosage forms, and contraindications. Designed to apply understanding of pharmaceutical sciences to make rational decisions in the management of medication therapy. Topics covered in Pharmaceutical Sciences will serve as the foundation for the treatment of disease states outlined in the Pharmacotherapy course sequence. Offered: Fall (405 and 505); Spring (406).

#### **PHRX 407 Biopharmaceutics/Pharmacokinetics (4)**

Encompasses foundational aspects of biopharmaceutics and pharmacokinetics. Designed to gain an understanding of the mathematical modeling of drug absorption, distribution, metabolism, and excretion. Addresses the impact of the dosage regimen and drug formulation on the ensuing therapeutic drug plasma concentrations. Offered: Fall.

#### **PHRX 410 and 510 Patient Self-Care and Monitoring I-II (3 and 2 respectively)**

Two-course sequence designed to prepare the pharmacist to effectively assist patients in making self-care decisions. Particular emphasis given to the therapeutic use and monitoring of non-prescription medications and dietary supplements. Offered: Spring (410); Fall (510).

#### **PHRX 415 Financial Management (3)**

Addresses concepts related to the fiscal management of pharmacy services at the systems, pharmacy, and patient level in various practice settings. Emphasizes decision-making related to the evaluation, procurement, and utilization of financial resources in order to maximize the value of the organization and to optimize patient care. Offered: Fall.

**PHRX 416 Ethics in Christianity and Health Care (2)**

Based around six character traits of ethical persons. Provides various biblical and health care perspectives on each of these traits by both faculty and students. Lectures are supplemented by small-group discussions during which current ethical issues and viable options are addressed. Reflects on the individual's moral character. Facilitated by faculty trained in pharmacy, nursing, and religion. Offered: Spring.

**PHRX 420 and 421 Integrated Pharmacy Applications (IPA) III-IV (1 each course)**

Designed to integrate content within the second professional year as well as between years in the curriculum. Built on the previous Integrated Pharmacy Applications courses (PHRX 320 and 321) and involves a combination of learning strategies such as labs and case discussions to augment student learning. More in-depth progression of content to integrate students' knowledge of all pharmacy courses in the second professional year. Offered: Fall (420); Spring (421).

**PHRX 500 Introduction to Capstone Project (1)**

Designed to provide the student with the opportunity to demonstrate a general knowledge of (1) the fundamentals of research, (2) how to develop a capstone project, (3) ways to collect appropriate data based on the project, (4) how to write and prepare a manuscript, possibly for publication, (5) ways to present project results in an appropriate and professional manner, (6) how to communicate effectively with various audiences, and (7) the appropriate forms for the IRB approval process. Offered: Fall.

**PHRX 501 and 502 Introductory Pharmacy Practice Experiences (IPPE) V-VI (1 each course)**

Two-course sequence designed to complement, within a pharmacy practice setting, the academic content in the third professional year didactic courses. Involves more complex patient care situations and serves as preparation for the Advanced Pharmacy Practice Experiences in the fourth professional year. Offered: Fall (501); Spring (502).

**PHRX 513 Preparation for Patient Care (4)**

Designed to provide students with skills and information necessary to fulfill roles as patient care providers and self-directed learners during the Advanced Pharmacy Practice Experiences. Students will learn to assess a patient, present assessments to other health care professionals, and refine other clinical skills to optimize patient care. Offered: Spring.

**PHRX 515 Human Resource Management (3)**

Designed to equip students with essential personnel management and leadership skills necessary for practice in various pharmacy settings. Offered: Fall.

**PHRX 516 Pharmacy Law (3)**

Presents legal basis of pharmacy practice through examination of federal and state laws, administrative laws, and regulations. Other topics will include court decisions dealing with drug manufacturing and distribution, professional liability, and handling of medicinals, poisons, and controlled substances. Offered: Spring.

**PHRX 520 and 521 Integrated Pharmacy Application (IPA) V-VI (1 each course)**

Designed to integrate course content within the third year as well as between years in the curriculum. Built on the previous Integrated Pharmacy Applications courses and will involve a combination of learning strategies such as labs and case discussions to augment student learning. Content will become much more advanced as we integrate students' knowledge of all pharmacy courses in the third professional year and prior years. Offered: Fall (520); Spring (521).

**PHRX 527 Drug Literature Evaluation (2)**

Provides students with the tools and skills for appropriately evaluating literature concerning drug therapy. The basics of this evaluation will be delivered in the Pharmacotherapy I course so that students have some background regarding this discipline at the beginning of that course sequence. Offered: Spring.

**PHRX 550 Capstone Project I (1)**

Building on knowledge and skills learned in Introduction to Capstone Project, this independent study course will enable a student to work with a faculty facilitator to design a capstone project. The student will be expected to demonstrate acceptable professional written communication skills. The capstone project will involve the basic, clinical, educational, social, or administrative sciences in an area related to the field of pharmacy. Topics may include original research or a different project related to: 1) education, 2) clinical specialty practice, 3) program or tool evaluation, 4) health care finance, 5) evidence-based practice, or 6) another area, with faculty approval. Offered: Spring.

**PHRX 600 Capstone Project II (1)**

Building on progress made in Capstone Project I, this independent study course will promote critical thinking as the student will be expected to demonstrate acceptable professional written and verbal communication skills. These skills will be assessed through completion and presentation of a capstone project in the basic, clinical, educational, social, or administrative sciences in an area related to the field of pharmacy. Topics may include original research or a different project related to: 1) education, 2) clinical specialty practice, 3) program or tool evaluation, 4) health care finance, 5) evidence-based practice, or 6) another area, with faculty approval. Offered: Fall.

**PHRX 601 Ambulatory Care I (4)**

APPE designed to grant 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.

**PHRX 602 Ambulatory Care II (4)**

APPE 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. Prereq: PHRX 601. Offered: Fall and Spring.

**PHRX 610 Drug Information I (4)**

APPE designed to enhance knowledge and skills in preparing for the pharmacist's role as a pharmacotherapy advisor and consultant. Offered: Fall and Spring.

**PHRX 611 Drug Information II (4)**

APPE providing the student with an opportunity to develop knowledge and skills in the operation of a Drug Information Center, formulary programs, DUE/DUR, managed care, continuous quality improvement, and antibiotic management programs. Prereq: PHRX 610. Offered: Fall and Spring.

**PHRX 612 Poison Information/Toxicology (4)**

APPE providing the student with an opportunity to enhance knowledge and skills in assessing and managing drug-induced toxicity and poisoning. Offered: Fall and Spring.

**PHRX 620, 621 and 622 Adult Medicine I-II-III (4 each course)**

Three-course sequence designed to enhance knowledge and skills used when providing clinical pharmacy services to adult populations. Prereq for PHRX 621: PHRX 620. Prereq for PHRX 622: PHRX 621. Offered: Fall and Spring.

**PHRX 623 Geriatric Pharmacy I (4)**

APPE providing the student with an opportunity to develop knowledge and skills in serving the unique drug therapy needs of a geriatric population. Offered: Fall and Spring.

**PHRX 624 Geriatric Pharmacy II (4)**

APPE providing the student with an opportunity to enhance skills in the application of pharmaceutical knowledge to geriatric patients. Prereq: PHRX 623. Offered: Fall and Spring.

**PHRX 625 Pediatric Pharmacy I (4)**

APPE providing the student with an opportunity to develop knowledge and skills in serving the unique drug therapy needs of a pediatric population. Offered: Fall and Spring.

**PHRX 626 Pediatric Pharmacy II (4)**

APPE providing the student with an opportunity to enhance skills in the application of pharmaceutical knowledge to pediatric patients. Prereq: PHRX 625. Offered: Fall and Spring.

**PHRX 627 Neonatology (4)**

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

**PHRX 628 Psychiatric Pharmacy (4)**

APPE that provides the opportunity to enhance knowledge and skills in the delivery of pharmaceutical care in the psychiatric setting. Offered: Fall and Spring.

**PHRX 629 Cardiology (4)**

APPE designed to enhance knowledge and skills in caring for patients with cardiovascular disease. Offered: Fall and Spring.

**PHRX 630 Hematology and Oncology (4)**

APPE that will expose students to the care of patients with hematologic and oncologic diseases. Offered: Fall and Spring.

**PHRX 631 Neurology (4)**

APPE designed to enhance knowledge and skills in providing clinical pharmacy services to patients with neurologic diseases. Offered: Fall and Spring.

**PHRX 632 Nephrology (4)**

APPE designed to provide 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.

**PHRX 633 Metabolic Support (4)**

APPE 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.

**PHRX 634 Infectious Disease (4)**

APPE designed to enhance knowledge and skills in providing clinical pharmacy services to patients with infectious diseases. Offered: Fall and Spring.

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

APPE designed to enhance knowledge and skills in providing clinical pharmacy services to critically ill adult populations with cardiac diseases. Offered: Fall and Spring.

**PHRX 636 Surgical Critical Care (4)**

APPE designed to enhance knowledge and skills in providing clinical pharmacy services to critically ill adult populations in a surgical unit. Offered: Fall and Spring.

**PHRX 637 Medical Critical Care (4)**

APPE designed to enhance knowledge and skills in providing clinical pharmacy services to critically ill adult populations. Offered: Fall and Spring.

**PHRX 650 Community Pharmacy I (4)**

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

**PHRX 651 Community Pharmacy II (4)**

APPE designed to provide experience in providing clinical pharmacy services to patients in a community pharmacy. Prereq: PHRX 650. Offered: Fall and Spring.

**PHRX 652 Community Pharmacy III (4)**

APPE designed to enhance knowledge and skills in providing clinical pharmacy services to patients in a community pharmacy. Prereq: PHRX 651. Offered: Fall and Spring.

**PHRX 660 Institutional Pharmacy I (4)**

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

**PHRX 661 Institutional Pharmacy II (4)**

APPE designed to enhance knowledge and skills in institutional pharmacy management and application of such systems in various practice environments. Prereq: PHRX 660. Offered: Fall and Spring.

**PHRX 670 Home Infusion Therapy (4)**

APPE 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.

**PHRX 671 Nuclear Pharmacy (4)**

APPE providing the student with the opportunity to expand knowledge and skills in the area of radiopharmaceutics. Offered: Fall and Spring.

**PHRX 672 Managed Care Pharmacy (4)**

APPE designed to provide the opportunity to enhance knowledge and skills in managed care pharmacy. Offered: Fall and Spring.

**PHRX 673 Pharmacy Management (4)**

APPE designed 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. Offered: Fall and Spring.

**PHRX 674 Association Management (4)**

APPE 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.

**PHRX 675 Pharmacokinetics (4)**

APPE designed to enhance knowledge and skills in the direct application of pharmacokinetic principles to patient drug therapy management. Offered: Fall and Spring.

**PHRX 676 Specialty Pharmacy (4)**

APPE designed to provide the student with the opportunity to develop knowledge of the management of specialty pharmaceuticals and their use in a variety of patient care environments. Offered: Fall and Spring.

**PHRX 677 Pharmacy Research (4)**

APPE that 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.

**PHRX 678 International Pharmacy I (4)**

APPE designed to provide the student with an opportunity to develop knowledge and patient care skills in an international setting. Offered: Fall and Spring.

**PHRX 679 International Pharmacy II (4)**

APPE designed to provide the student with an opportunity to develop advanced knowledge and patient care skills in an international setting. Offered: Fall and Spring.

**PHRX 680 Pedagogy in Pharmacy (4)**

APPE designed to develop knowledge and skills 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.

**PHARMACY ELECTIVES****PHRX 450 Contemporary Topics in Pharmacy (2)**

Encompasses contemporary topics of interest in the pharmacy profession. Multiple or single topics may be considered. Offered: Fall or Spring.

**PHRX 452 Independent Pharmacy Business Plan Development (2)**

Project-oriented elective that focuses on the fundamentals of owning an independent community practice. Participants will work in groups with existing independent pharmacy owners to write business plans and explore ownership concepts in a real world environment. Business ownership concepts are explored in a seminar format. Consideration is given to the pros and cons of choosing an existing practice versus establishing a new practice. Prereq: PHRX 415. Offered: Spring.

**PHRX 453 Radiopharmaceuticals (2)**

Introduces 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. Offered: Fall or Spring.

**PHRX 456 Managed Care Pharmacy (2)**

Explores the fundamental knowledge and skills needed in the delivery of pharmaceutical care in a managed health care environment, primarily serving ambulatory patients. Emphasis on drug benefit management from a fiscal and clinical perspective. Offered: Fall or Spring.

**PHRX 458 Current Topics in Pediatric Pharmacotherapy (2)**

Overview of pediatric pharmacotherapy with a focus on treatment and therapeutic monitoring of common pediatric diseases. Prereq: Completion of second professional year or permission of course coordinator. Offered: Fall or Spring.

**PHRX 459 Chemical Dependency in Health Care Professionals (2)**

Through participation in class-directed activities, students will study the field of addiction and examine multiple aspects of the disease of chemical dependency. Emphasis will be directed at the impact of addiction on health care professionals. Offered: Fall or Spring.

**PHRX 460 Research (2)**

Applies literature and laboratory techniques, or other methods of scientific investigation, to pharmaceutical problems. Students choose to study and investigate a suitable problem with faculty in either department in the McWhorter School of Pharmacy. Prereqs: Consent of instructor directing the research and a professional GPA of at least 2.50. Offered: Fall or Spring.

**PHRX 470 Pharmacy and Healthcare in Great Britain (2)**

Provides students with the opportunity to learn about the role of the pharmacist in the health care system of Great Britain. In addition to preparatory meetings at the McWhorter School of Pharmacy prior to the trip, the course requires international travel to the Samford University Study Centre in London, England (or other housing in London) and travel within Great Britain. It also involves local travel within London to multiple health care, cultural, and historical sites. Limited to a maximum of twenty (20) enrolled students and additional course fees apply. Offered: Spring.

## McWhorter School of Pharmacy Calendar for Academic Year 2009-2010

**Summer Term 2009 (for repeated courses)**

May 27	Payment due date for students
June 1	Classes begin
July 3	Independence Day Holiday; no classes meet
August 6	Classes end
August 7	Final Examinations

**Fall Semester 2009**

May 27	Payment due date for P4 students
June 1	APPEs begin for P4 students
July 3	Independence Day Holiday; no classes meet
August 10	Payment due date for P1-P3 students
August 11	Orientation for P1 students begins
August 17	Classes begin for P1-P3 students
August 25	Last day for P3 students to add or drop an elective course <b>without FINANCIAL or ACADEMIC penalty</b>
September 7	Labor Day Holiday; no classes meet
September 17	MSOP Picnic
October 2	MSOP White Coat Ceremony
Oct 21 - Nov 20	Registration for Spring Semester
November 12	Last day to <b>completely withdraw from ALL didactic courses in the semester without ACADEMIC penalty</b>
November 23-24	Fall Break for P1-P3 students; no classes meet
November 25-27	Thanksgiving Holidays, no classes meet
December 4	Classes end
December 7-11	Final Examinations
December 12	Commencement

**Spring Semester 2010**

January 4	Payment due date for students who have registered
January 4	Classes begin for all students
January 18	Martin Luther King, Jr. Holiday, no classes meet
January 25	Didactic classes begin for P1-P3 students
January 29	Last day for P3 students to add or drop an elective course <b>without FINANCIAL or ACADEMIC penalty</b>
March 15-19	Spring Break for P1-P3 students; no classes meet
April 1	MSOP Spring Convocation
April 1-23	Registration for Summer and Fall Semesters
April 5	Easter Monday Holiday; no classes meet for P1-P3 students
April 22	Last day to <b>completely withdraw from ALL didactic courses in the semester without ACADEMIC penalty</b>
May 7	Classes end
May 10-13	Final Examinations
May 14	MSOP Graduation

**Legend:**

APPE = Advanced Pharmacy Practice Experiences  
 MSOP = McWhorter School of Pharmacy  
 P1 = 1st-year Pharmacy student  
 P2 = 2nd-year Pharmacy student  
 P3 = 3rd-year Pharmacy student  
 P4 = 4th-year Pharmacy student

**Notes:**

Payment schedule dates for all terms are subject to change.

The MSOP Calendar for Academic Year 2010-2011 was unavailable at press time. Please check the following Web site for an updated calendar:  
<http://www.samford.edu/groups/sturec/acadcalendar.html>.

Inclement weather or other events beyond the control of the University that might cause risk or danger to students, faculty, and staff may occasionally result in changes to normal University operations, including cancellation of classes or events; the calendar schedule may be adjusted.

MCWHORTER SCHOOL OF PHARMACY TUITION AND FEES FOR ACADEMIC YEAR 2009-2010				
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	\$1,083/credit	\$450 deposit upon acceptance and remainder on or before e-bill payment due date
12 to 21 credits	Full-time Pharmacy Students	Deposit nonrefundable See Refund Policies	\$13,330/semester (Fall or Spring)	\$450 deposit upon acceptance and remainder on or before e-bill payment due date
More than 21 credits	Full-time Pharmacy Students	Deposit nonrefundable See Refund Policies	\$1,083/credit	On or before e-bill payment due date
All credits - Summer Terms	P1 Pharmacy Students who are repeating courses	See Refund Policies	\$1,007/credit (Sum 2009)	On or before e-bill payment due date
Joint Degree	Joint Degree Pharmacy Students	See Refund Policies	\$1,083/credit (Sum 2010) By Classification	On or before e-bill payment due date
<b>Residence Hall Fees, Double Occupancy*</b>				
Beeson Woods, West Campus	Pharmacy Students starting June 09	See Refund Policies	\$2,918/Fall semester	On or before e-bill payment due date
Evergreen Hall	Pharmacy Students starting June 09	See Refund Policies	\$2,760/Fall semester	On or before e-bill payment due date
Student Apartments	Pharmacy Students starting June 09	See Refund Policies	\$2,490/Fall semester	On or before e-bill payment due date
Beeson Woods, West Campus	Pharmacy Students starting Aug	See Refund Policies	\$1,778/Fall semester	On or before e-bill payment due date
Evergreen Hall	Pharmacy Students starting Aug	See Refund Policies	\$1,684/Fall semester	On or before e-bill payment due date
Student Apartments	Pharmacy Students starting Aug	See Refund Policies	\$1,350/Fall semester	On or before e-bill payment due date
Beeson Woods, West Campus	Pharmacy Students Spring sem	See Refund Policies	\$1,962/Spring semester	On or before e-bill payment due date
Evergreen Hall	Pharmacy Students Spring sem	See Refund Policies	\$1,868/Spring semester	On or before e-bill payment due date
Student Apartments	Pharmacy Students Spring sem	See Refund Policies	\$1,455/Spring semester	On or before e-bill payment due date
Beeson Woods, West Campus	Pharmacy Students starting June 10	See Refund Policies	\$2,978/Fall semester	On or before e-bill payment due date
Evergreen Hall	Pharmacy Students starting June 10	See Refund Policies	\$2,820/Fall semester	On or before e-bill payment due date
Student Apartments	Pharmacy Students starting June 10	See Refund Policies	\$2,550/Fall semester	On or before e-bill payment due date

Description of Expense	Student Classification	Payment Regulations	Expense	Payment Due Date (1)
<b>Board</b>				
19 meals/week + \$130 declining balance	Pharmacy Students starting June 09	See Refund Policies	\$2,668/Fall semester	On or before e-bill payment due date
12 meals/week + \$130 declining balance	Pharmacy Students starting June 09	See Refund Policies	\$2,310/Fall semester	On or before e-bill payment due date
19 meals/week + \$130 declining balance	Pharmacy Students starting Aug	See Refund Policies	\$1,692/Fall semester	On or before e-bill payment due date
12 meals/week + \$130 declining balance	Pharmacy Students starting Aug	See Refund Policies	\$1,518/Fall semester	On or before e-bill payment due date
7 meals/week + \$130 declining balance	Pharmacy Students starting Aug	See Refund Policies	\$1,075/Fall semester	On or before e-bill payment due date
19 meals/week + \$130 declining balance	Pharmacy Students Spring sem	See Refund Policies	\$1,976/Spring semester	On or before e-bill payment due date
12 meals/week + \$130 declining balance	Pharmacy Students Spring sem	See Refund Policies	\$1,775/Spring semester	On or before e-bill payment due date
7 meals/week + \$130 declining balance	Pharmacy Students Spring sem	See Refund Policies	\$1,267/Spring semester	On or before e-bill payment due date
19 meals/week + \$130 declining balance	Pharmacy Students starting June 10	See Refund Policies	\$2,716/Fall semester	On or before e-bill payment due date
12 meals/week + \$130 declining balance	Pharmacy Students starting June 10	See Refund Policies	\$2,348/Fall semester	On or before e-bill payment due date
<b>London Programs at Daniel House, Samford's London Study Centre, Fees (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	TBD	Due at registration
<b>Fees</b>				
Application Fee for School of Pharmacy Admission	All Pharmacy Students	Nonrefundable	\$50/application	At time of application submission
Books and Supplies	All Pharmacy Students		\$1,600 (estimate)	Cash/check/credit card at time of purchase
Lab Supplies	All Pharmacy Students		\$305/year	On or before e-bill payment due date
Technology Fee - Summer	All Pharmacy Students	See Course Drops and Adds	\$30/term	On or before e-bill payment due date
Technology Fee - Fall, Spring	All Pharmacy Students	See Course Drops and Adds	\$110/semester	On or before e-bill payment due date

\* Double rooms assigned for single occupancy are 200% of the rate for double-occupancy rooms.

NOTE: See p. 34 for a list of General Miscellaneous Fees that apply to ALL students.

SPECIAL NOTE: Fees are subject to change without notice. See the Bursar's Office Web site for the latest tuition and fee info: [www.samford.edu/admin/bursar/fees.html](http://www.samford.edu/admin/bursar/fees.html)

**(1) Charges incurred after the e-bill has been generated for the semester/term are due on or before the e-bill due date (see Payment Schedule on p. 34 for e-bill generation and payment due dates). Charges incurred during the drop/add period are due when incurred. Classes may be canceled for non-payment.**