

# Didactic Electives Offerings for McWhorter School of Pharmacy P2 Students Spring 2025

The McWhorter School of Pharmacy Doctor of Pharmacy Practice-and-Team-Ready (PHAR) curriculum requires **one (1) didactic elective course** to be completed prior to beginning Advanced Pharmacy Practice Experiences (APPEs). Students can enroll into a didactic elective during P2 fall, P2 spring, and/or P3 fall semester. Students also are required to complete one (1) didactic elective in the P4 spring semester after completing their APPEs. All electives are 2-credit hours. Didactic electives are to be selected from the courses listed below, provided prerequisites are fulfilled. Course descriptions also are presented below.

Students enrolled in the McWhorter School of Pharmacy/Samford University **joint-programs** (MBA, MPH, Informatics, Health Law and Policy, Nutrition, Healthcare Administration) can count joint-degree program courses to meet their pharmacy didactic elective course requirements. However, these students can still enroll in pharmacy didactic elective courses if they desire. The school is collaborating with other Samford University College of Health Sciences (CHS) faculty to create additional interprofessional didactic electives. Once approved, these will be added to this list.

Each didactic elective course coordinator(s) created a video describing the course (about 3-6 minutes each). These videos are posted in the **Class of 2027 Professional Development Canvas** page. These videos are provided to provide course information that can answer student questions. Course descriptions for each elective are provided in this document after the tables displaying electives for each semester.

Students can complete more than one (1) pre-APPE didactic elective course if they choose. Extra tuition will NOT be charged to complete extra pre-APPE didactic electives (but cannot exceed 21 credit hours in the semester).

The following table displays the didactic electives offered to the **P2s** in **SPRING 2025** semester. All these electives begin at 8:00am and finish at 9:50am.

<b>PHAR<sup>a</sup></b>	<b>Course Name</b>	<b>Course Coordinator(s)</b>
457	Managed Care Pharmacy	Dr. West
462	Health-Systems Pharmacy Practice	Drs. Benner
463	Complementary and Alternative Medicine	Dr. Cruthirds
473	Advanced Topics in Extemporaneous Compounding	Dr. Arnold
475	Research-I	Drs. Wang, Arnold, et al
476	Research-II	Drs. Wang, Arnold, et al
479	Spanish for Pharmacy Communication	Yeon Mi Lee

a = Each elective has a minimum number of students that need to be enrolled for the elective to be scheduled.

The following table displays the didactic electives anticipated to be offered in **Summer 2025** semester.

<b>PHAR<sup>a</sup></b>	<b>Course Name</b>	<b>Details</b>	<b>Course Coordinator(s)</b>
453	Pharmacy and Healthcare in Great Britain	Study abroad	Drs. Hendrickson & White
454	Pharmacy and Healthcare in Spain	Study abroad	Drs. Sheaffer & Kyle

a = Each elective has a minimum number of students that need to be enrolled for the elective to be scheduled.

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In addition to the electives that are offered in Spring 2025, the following table displays the didactic electives anticipated to be offered in **Fall 2025** semester. The specific day and time for these electives will be announced at a later date.

PHAR <sup>a</sup>	Course Name	Course Coordinator(s)
451	Introduction to Careers in Pharmacy Academia <sup>b</sup>	Dr. Sheaffer
452	Independent Pharmacy Business Plan Development	Dr. Brown
455	Drug Discovery and Development <sup>b</sup>	Drs. Gorman & Luthin
456	History of Pharmacy <sup>b</sup>	Dr. Wensel
458	Topics in Pharmaceutical Sciences Research <sup>b</sup>	Dr. Jumbo
464	Leadership in Pharmacy Practice <sup>b</sup>	Dr. Crouch
482	Toxicology	Drs. Benner & Pescatore
483	Pediatric Pharmacotherapy	Drs. Benner & Worthington
484	Infectious Diseases	Dr. Kyle
486	Advanced Pharmacoeconomics	Dr. Adunlin
487	Journal Club	Dr. Kendrach
475	Research-I <sup>b</sup>	Drs. Wang, Gorman, et al
476	Research-II <sup>b</sup>	Drs. Wang, Gorman, et al
477	Research-III	Drs. Wand, Gorman, et al

a = Each elective has a minimum number of students that need to be enrolled for the elective to be scheduled.

b = P2s also may be enrolled in this elective

## DIDACTIC ELECTIVE COURSE DESCRIPTIONS

### **PHAR 451 – Introduction to Careers in Pharmacy Academia**

This elective orients students to terminology, teaching, and assessment strategies related to faculty positions at schools/colleges of pharmacy. Professional communication and professional development will be highlighted throughout the course.

### **PHAR 452 – Independent Pharmacy Business Plan Development**

Project-oriented elective that focuses on the fundamentals of independent pharmacy ownership and practice management. Participants will work in groups to write business plans and explore ownership concepts. 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.

### **PHAR 453 –Pharmacy and Healthcare in Great Britain**

This elective course is a 2-week immersive experience in London, England. This course provides students with the opportunity to learn about the role of the pharmacist in the healthcare system of Great Britain. In addition to preparatory meetings at Samford-McWhorter prior to the trip, the course requires international travel to London, England. The course also involves local travel within London to multiple health care, educational, cultural, and historical sites. A minimum number of students are required to enroll into this elective course and additional course fees apply.

### **PHAR 454 –Pharmacy and Healthcare in Spain**

This elective course is a 2-week immersive experience in Spain. In conjunction with Studies in Spain, students travel to the city of Granada, Spain and will stay at a local hotel for two weeks. While in country, students are provided with a variety of opportunities to learn about the healthcare system in Europe and specifically how it is delivered in Spain. Additionally, students will learn about pharmacy education and how pharmacists maintain competence to practice. Students will take part in various site visits including community pharmacies, hospital, university, professional association, and some historic and cultural sites. A minimum number of students are required to enroll into this elective course and additional course fees apply.

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**PHAR 455 – Drug Discovery and Development**

This elective course is designed to provide pharmacy students with more in-depth training and understanding of the process of drug discovery and development and about careers in the pharmaceutical industry. The course is designed to help to develop professional communication skills and to improve analysis and practice of verbal, non-verbal, and written communication strategies that promote effective interpersonal dialog and understanding.

**PHAR 456 – History of Pharmacy**

This elective course seeks to explore the development of the profession of pharmacy from it's earliest beginnings to current day. Particular insight will be given to exploring not only traditional Western practice, but Native American practices and Eastern practices such as Ayurveda, Traditional Chinese Medicine, and Shamanism. Additionally, the impact of changing regulations, education requirements, and the development of the pharmaceutical industry will be considered.

**PHAR 457 – Managed Care Pharmacy**

This elective 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.

**PHAR 458 – Topics in Pharmaceutical Sciences Research**

This elective will introduce students to the research methodology in various fields of pharmaceutical sciences and pharmacy practice including biochemistry, immunology, medicinal chemistry, drug repurposing, pharmaceuticals, and clinical pharmacology. The course includes both class sessions and hands-on research activities and is strongly recommended for students considering taking a Pharmacy Research elective or an Advanced Pharmacy Practice Experience (APPE) in pharmaceutical sciences research with a member of the PSAS department.

**PHAR 462 – Health-Systems Pharmacy Practice**

This elective course is an introductory elective that offers the students the opportunity to learn more about specific health-system pharmacy practices that ensure patient safety and involve interprofessional care services. Through lectures, individual assignments and discussion, students will be introduced to the variety of practices a pharmacist can have in a health-system, discussing processes for identification and prevention of medication errors, patient profile systems, and prescription processing technology.

**PHAR 463 – Complementary and Alternative Medicine**

This elective course is designed to provide pharmacy students with more specific education regarding efficacy and safety of herbal/natural products and other practices of complementary and alternative medicine. Topics in this course include products and complementary therapies commonly utilized by the general population with frequent inquiries to the practicing pharmacist.

**PHAR 464 – Leadership in Pharmacy Practice**

This didactic elective course is designed to focus on, further develop, and enhance leadership skills needed for the pharmacy profession. Even though a pharmacist may not have a leadership title, all pharmacists need leadership skills and apply these to their daily responsibilities (e.g., lead technicians, students, and co-workers).

**PHAR 473 – Advanced Topics in Extemporaneous Compounding**

This elective course explores advanced topics related to non-sterile and sterile extemporaneous compounding through a case-based approach. Topics include compounding techniques, regulations, and requirements, as well as pharmacy business models. Compounding laboratory sessions will simulate real-world scenarios in preparing and dispensing compounded products.

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### **PHAR 475 - Research Elective I**

This elective is the first of three research electives in a series, which are designed to provide the student with directed research experience on a specific topic in pharmaceutical sciences. These topics are generally focused on characterization and evaluation of new or existing therapeutic agents. The student will gain basic understanding on how to initiate, conduct, and complete a hypothesis-driven research project, and how to communicate the outcome of research through oral and written presentations. The student will gain basic knowledge on a subject area of the research and hands-on experiences with specific research methodologies. Offered: P2 Fall, P2 Spring, and P3 Fall.

### **PHAR 476 - Research Elective II**

This elective is the second of three research electives in a series, which are designed to provide the student with directed research experience on a specific topic in pharmaceutical sciences. These topics are generally focused on characterization and evaluation of new or existing therapeutic agents. Built upon what has been achieved in the research project in PHAR 475 (Research Elective I), the student will initiate a new project by proposing a follow-up hypothesis. In this project, the student will work more independently, gain more skill in problem solving, and achieve proficiency in research methodology. Hopefully, the student will be able to present the research in the form of a poster at a local, regional, national, or international scientific conference. Prereq: PHAR 475. Offered: P2 Spring and P3 Fall.

### **PHAR 477 - Research Elective III**

This elective is the third of three research electives in a series, which are designed to provide the student with directed research experience on a specific topic in pharmaceutical sciences. These topics are generally focused on characterization and evaluation of new or existing therapeutic agents. Built upon what has been achieved in the research project in PHAR 475 (Research Elective I) and PHAR 476 (Research Elective II), the student will expand the research project to a significant scope that can form the basis for a significant part of a manuscript for an original research article. The focus will be on in-depth literature search, citation and synthesis, advanced data analysis, evidence-based conclusion-making, and professional manuscript construction. Prereq: PHAR 476. Offered: P3 Fall.

### **PHAR 478 – Men’s and Women’s Health**

This elective course is designed to provide a focused look at disease states specific to the biological sexes. Students will be exposed to the pathophysiology, risk factors, screening / diagnostic tools, and non-pharmacologic and pharmacologic management of each disease state that is presented. Particular emphasis will be given to medication management.

### **PHAR 479 – Spanish for Pharmacy Communications**

This elective course provides acquisition of medical terminology and practice of language skills in Spanish for a range of health sciences, including nursing, nutrition & dietetics, pharmacy, public health, and social work. Students will construct linguistic competencies and abilities (e.g., oral proficiency, written communications, reading and auditory comprehension) along with cultural literacy. Fluent Spanish language is not required.

### **PHAR 482 – Toxicology**

An introductory elective course that provides an overview of common toxins and related antidotes. This elective covers common biologic, chemical, and drug poisonings. Students learn the signs and symptoms, mechanisms of action, and toxicokinetics of various toxicants. This course highlights the “state of the science” treatment modalities. Students also will travel to the local poison control center for an in-person site visit. The primary course instructor is Ann Slattery from The Regional Poison Control Center at the Children’s Hospital in Birmingham.

### **PHAR 483 – Pediatric Pharmacotherapy**

An introductory elective course that provides an overview of pediatric pharmacotherapy with a focus on treatment and therapeutic monitoring of common pediatric diseases.

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**PHAR 484 – Infectious Diseases**

This elective course focuses on commonly encountered infectious diseases in both the inpatient and outpatient settings and is intended to provide students an opportunity to expand their knowledge of infectious diseases. This course includes information on antimicrobials, medical microbiology, and pharmacotherapy of commonly encountered infections. Small group debates are included to enhance the student's health information retrieval and evaluation skills as well as enable the student to defend an antimicrobial selection. Emphasis will be placed on developing critical thinking skills and professional communication skills which can be applied to pharmacy practice in both institutional and community settings.

**PHAR 486 – Advanced Pharmacoeconomics**

This elective course will take a practical approach and put pharmacoeconomic principles, methods, and theories into practice to quantify the value of pharmacy products and pharmaceutical care services used in real-world environments. Course participants will apply key modeling concepts using Microsoft Excel. This will include conceptualizing and structuring a pharmacoeconomics model, adding inputs, running analyses, and interpreting results. Hands-on modeling techniques will include decision trees, Markov models, cost-effectiveness analysis, cost-utility analysis, cost-minimization analysis, cost-benefit analysis, and sensitivity analysis.

**PHAR 487 – Journal Club**

This elective course is designed for students to further enhance their skill at evaluating and critiquing randomized, controlled clinical trials. Selected trials (i.e., landmark and current) will be thoroughly assessed to identify strengths and limitations plus determine appropriate application into practice. The students also will present a journal club during this course to enhance their presentation and literature analysis skills.