

# Didactic Electives Offerings for McWhorter School of Pharmacy Students Spring 2023

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. Courses taken prior to enrollment in the McWhorter School of Pharmacy cannot be counted toward elective requirements in the Doctor of Pharmacy curriculum.

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.

Students can complete more than one (1) pre-APPE didactic elective courses 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).

PHAR <sup>a</sup>	Course Name	Time & Day
458	Topics in Pharmaceutical Science Research	Wednesdays 8:00-9:50am
463	Complementary and Alternative Medicine*	Wednesdays 8:00-9:50am
471	Cases in Oncology*	Wednesdays 8:00-9:50am
473	Advanced Topics in Extemporaneous Compounding*	Wednesdays 8:00-9:50am
455	Drug Discovery and Development*	Thursdays 8:00-9:50am
462	Health-Systems Pharmacy Practice*	Thursdays 8:00-9:50am
457	Managed Care Pharmacy*	Thursdays 8:00-9:50am
456	History of Pharmacy	Online
478	Men's and Women's Health	Online
475	Research-I	TBD
476	Research-II	TBD

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

\*P3 students also maybe enrolled in this course.

The following table displays the didactic electives planned to be offered in summer 2023 semester.

PHAR <sup>a</sup>	Course Name	Time & Day
453	Pharmacy and Healthcare in Great Britain	Study abroad
454	Pharmacy and Healthcare in Spain	Study abroad

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

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The following table displays the didactic electives planned to be offered in fall 2023 semester. The specific day and time for these electives has not yet been determined.

<b>PHAR <sup>a</sup></b>	<b>Course Name</b>	<b>Course Coordinator</b>
451	Introduction to Careers in Pharmacy Academia	Dr. Sheaffer
452	Independent Pharmacy Business Plan Development	Dr. Brown
458	Topics in Pharmaceutical Science Research	Dr. Jumbo
466	Mental Illness and Treatment in the Movies	Dr. Cates
482	Toxicology	Drs. Benner & Slattery
483	Pediatric Pharmacotherapy	Drs. Benner & Worthington
484	Infectious Diseases	Drs. Covington & Kyle
486	Advanced Pharmacoeconomics	Dr. Adunlin
487	Journal Club	Dr. Kendrach
475	Research-I	Drs. Wang & Gorman, et al
476	Research-II	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.

## **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 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 its 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.

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**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 466 – Mental Illness and Treatment in the Movies**

This elective is designed to evaluate the description and treatment of mental illness as portrayed in the movies. Students watch movies as pre-class assignments and then participate in class discussions regarding mental disorders and treatments portrayed in those movies. Specific movie scenes will be used to illustrate important points regarding symptomatology, effects of the mental disorder on the characters' lives, attitudes of characters toward the mental disorder and its treatment, portrayal of health care workers, depiction of treatment, etc.

**PHAR 471 – Cases in Oncology**

This elective course is designed to offer students the opportunity to study oncology pharmacy more in depth than covered in the required pharmacy curricular courses. Through individual presentations and group work, students will learn how to identify diagnostic criteria and treatment regimens for oncological disease states plus compound, administer, and monitor patients receiving hazardous medications and chemotherapy.

**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.

**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.

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### **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 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.

### **PHAR 484 – Infectious Diseases**

This 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.