

SCHOOL OF PHARMACY PROFESSIONAL ELECTIVES FALL TERM 2261

DISCLAIMER: THIS LIST REPRESENTS THE COURSES WITHIN THE SCHOOL OF PHARMACY THAT ARE SCHEDULED IN THE FALL 2025 SEMESTER. FOR APPROVED ELECTIVES OUTSIDE OF THE SCHOOL OF PHARMACY, PLEASE SEARCH FOR CLASS AVAILABILITY IN PEOPLESOF. INSTRUCTIONS ARE HERE — [HTTPS://PI.TT/STUDENTCENTER](https://pi.tt/studentcenter)

PHARM 3009 Advances in Pharmaceutical Sciences Journal Club

Credits: 1

CLASS NUMBER: 13005

Coordinator: Drs. X. Ma & W. Xie

Enrollment Cap: 3 students

Students will rotate to present recently published scientific papers from reputable journals that are typically chosen by the students with the approval of the course coordinators. This course, structured as a journal club, will introduce topics including but not limited to drug development, drug delivery, biochemical and clinical pharmacology, toxicology, and molecular medicine. The course is intended primarily for first and second year graduate students enrolled in the pharmaceutical sciences program.

PHARM 3069 Pharmacometrics

Credits: 3

CLASS NUMBER: 32136

Coordinator: Dr. J. Wang

Enrollment Cap: 35 students

This course will provide training in the fundamentals of pharmacometrics & systems pharmacology (PSP) modeling and their applications to study drug actions through multiscale modeling and simulations [mechanism-driven] and data analysis [data-driven]. Theoretical concepts pertaining to PSP, such as population pharmacokinetics/pharmacodynamics (pop PK/PD) modelling both from mechanistic and statistical points of view, physiologically-based pharmacokinetics (PBPK) data analysis, will be taught. The course covers the advanced pharmacokinetics/pharmacodynamics (PK/PD) topics, such as drug-drug interactions, disease progression, as well as multi-scaling PK/PD modeling of drug actions for selected diseases, including cancers, type 2 diabetes, etc. The course also offers hands-on training on using mainstream population PK/PD and PBPK modeling and simulation software. This is a mandatory course to be taken for the PSP program.

PHARM 3070 Genomics & Cancer Therapeutics Journal Club

Credits: 1

CLASS NUMBER: 22502

Coordinator: Drs. Yang/Zhang

Enrollment Cap: 5

This course, structured as a journal club, is designed to provide an opportunity for students to informally learn and discuss concepts and applications in the area of genomics and cancer therapeutics. Restrictions: Co-enrollment in the second or third professional year pharmacy school courses and in good academic standing.

PHARM 3075 Topics in PGx and Precision Medicine

Credits: 1

CLASS NUMBER: 25170

Coordinator: Dr. P. Empey

Enrollment Cap: 5

This course is a journal club for students interested the application of pharmacogenomics and precision medicine. The course will cover specific topics related to pharmacogenomics implementation, genotype-phenotype discovery, informatics, data science, and implementation science as they relate to pharmacogenomics and precision medicine. Restrictions: Co-enrollment in the second or third professional year pharmacy school courses and in good academic standing.

PHARM 3302 Conducting Research with Large Biomedical Databases Credits: 1**CLASS NUMBER: 25871****Coordinator:** Dr. Boyce**Enrollment Cap:** 35 students

This course serves as an introduction to core data science methods for querying large-scale datasets, primarily focusing on relational databases. The course is entirely online via short videos and web-based homework assignments. Students will develop skills understanding data found in clinical information systems, biomedical data standards and terminologies, and strategies for managing and storing biomedical data. Knowledge of data manipulation in some platform (STATA, SAS, Python, R, Tableau); basic statistics course and introductory to programming experience are preferred prior to course enrollment.

PHARM 5801 Pharmaceutical Care to Underserved Populations**CLASS NUMBER: 13022****Credits: 3****Coordinator:** Dr. Connor**Enrollment Cap:** 8 students

A sequence of courses that address issues related to providing pharmaceutical care to underserved populations. Topic areas that will be addressed include: Psychosocial Factors Impacting Health, Political and Economic Influences on Health Care Access, Community Advocacy and Resources, Patient Assessment, Clinical Problem Solving Skills, Pharmacotherapy Management, and Patient Education. Students will have opportunities for interdisciplinary care and educational sessions. **Enrollment preference will be given to Global Health ARCO students.**

PHARM 5806 Pediatric Pharmaceutical Care**CLASS NUMBER: 19474****Credits: 2****Coordinator:** Dr. Howrie**Enrollment Cap:** 20 students

Provides students with opportunities to acquire the knowledge and skills necessary to provide pharmaceutical care to pediatric patients of all ages.

PHARM 5815 Concepts of Managed Care Pharmacy**CLASS NUMBER: 15839****Credits: 2****Coordinator:** Dr. Campbell**Enrollment Cap:** 20 students

The purpose of this course is to understand the fundamental concepts in managed care pharmacy and the relation to the healthcare system. This course supports the school's mission by enabling students to better navigate and understand the healthcare system from the perspective of different stakeholders to help optimize pharmaceutical care. **Restricted to P3 students. Instructor's permission is required. Please submit a one paragraph e-mail to Dr. Campbell, campbellvj2@upmc.edu, to explain your interest in managed care and why you want to enroll in the class.**

PHARM 5837 Intro to Psychopharmacology & Psychiatric Disorders Credits: 3**CLASS NUMBER: 24038****Coordinator:** Dr. Fabian**Enrollment Cap:** 20 students

This course will serve as an introduction to psychopharmacology and the management of common psychiatric disorders including substance use disorders. This course is designed to familiarize students with the fundamentals of pharmacological as well as non-pharmacological treatment from a historical, sociological and practice perspective. This course aims to increase mental health literacy and enhance practitioner competency while elucidating the roles of healthcare providers within an interprofessional team framework. This is an introductory course. No prerequisites are required.

PHARM 5838 Improvisation for Clinicians
CLASS NUMBER: 25286

Credits: 1
Coordinator: Dr. Pater
Enrollment Cap: 10 students

Principles of improvisation are surprisingly applicable in clinical settings. The central tenant of improv is acceptance. Using the core philosophy of “Yes, and”, improvisers learn to listen, accept, and empathize. Clinicians must also use these same skills to communicate with their patients and empathize with them. Improvisers use teamwork and spontaneity to build scenes. Clinicians must collaborate learn to calmly handle unexpected scenarios. Improvisers use techniques and exercises to hone these skills, which, for clinicians, can lead to better patient interactions, collaboration, presentation skills, and even lower stress. We will learn about the principles of improv, exercises used to develop skills, and how improv training has been applied in clinical settings. **Restricted to P2 and P3 students.**

PHARM 5844 Queerness and Healthcare
CLASS NUMBER: 28001

Credits: 1
Coordinator: Dr. Grieve
Enrollment Cap: 15 students

This course will prepare the student to assess and guide comprehensive medical treatment for queer individuals. This includes gender affirmation, healthcare considerations for queer-specific risk factors, and general primary care not associated with gender and sex. Core concepts to be addressed include cultural competency and inclusive language, screening and diagnosis, gender affirming hormone therapy, gender affirming surgeries, psychotherapy, primary and preventative care, and empathy with the queer experience.

PHARM 5845 Community Pharmacy Leadership and Management
CLASS NUMBER: 33441

Credits: 1
Coordinator: Dr. S. Herbert
Enrollment Cap: 20

This is an elective course offered to students interested in management and leadership in community pharmacy practice. This course will provide the foundation to manage the responsibilities of pharmacy managers and pharmacy business owners and leaders, with a focus on application of concepts in community pharmacy practice. Content covered will include leadership principles and management concepts such as community pharmacy financials, pharmacy workflow optimization, management and billing for clinical services, and technology in community pharmacy. Throughout this course, students will be challenged to become active self-directed learners, recognizing their personal educational needs, selecting appropriate learning resources, and evaluating their own progress. This course will incorporate a series of guest content experts to complement contributing faculty expertise. The purpose of this course is to provide students with foundational knowledge for entry into leadership and management roles in community pharmacy practice.

Independent/Directed Study Options:

PHARM 1097 Mentored Research

CLASS NUMBER: 28002

Time: As arranged with faculty

The course provides undergraduates and PharmD students the opportunity to participate in systematic, hypothesis-driven research bridging bench to bedside in pharmaceutical or pharmacy-focused research. Students are guided through the research process under direct mentorship from an expert in development of problem-solving and other skills in research. **Coordinator's permission is required.**

Credits: 1-3

Coordinator: Dr. K. Empey

Enrollment Cap: 20

PHARM 5843 Internship for Advancing Practice

CLASS NUMBERS: 27975

Time: As arranged with faculty

Students enrolled in this course will have the opportunity to reflect on the relationship of their outside-the-classroom pharmacy-related internship with their development of PITT Pharmacy curricular outcomes and on their pursuit of a career in pharmacy. **Coordinator's permission is required.**

Credits: 0.5

Coordinator: Dr. Jonkman

Enrollment Cap: 3

PHARM 5851 – 5858 Special Topics 1 – 8

CLASS NUMBERS: TBD

Time: As arranged with faculty

Student has the opportunity to explore a pharmaceutical research or pharmaceutical care topic on an individual or small group basis with the oversight of a faculty member. Generally, the successful completion of a project is required. **Student must apply using the Special Topics Web App. More information can be found in the PharmD Handbook under Special Topics -**

<http://pages.pharmacy.pitt.edu/pharmdhandbook/special-topics-courses/>.

Credits: 1 - 3

Coordinator: Varies

Enrollment Cap: Varies