

# SCHOOL OF PHARMACY PROFESSIONAL ELECTIVES

## FALL TERM 2241

**DISCLAIMER: THIS LIST REPRESENTS THE COURSES WITHIN THE SCHOOL OF PHARMACY THAT ARE SCHEDULED IN THE FALL 2023 SEMESTER. FOR APPROVED ELECTIVES OUTSIDE OF THE SCHOOL OF PHARMACY, PLEASE SEARCH FOR CLASS**

**AVAILABILITY IN PEOPLESOF -**

[https://prd.ps.pitt.edu/psc/pitcsprd/EMPLOYEE/SA/s/WEBLIB\\_HCX\\_GN.H\\_SPRINGBOARD.FieldFormula.IScript\\_Main](https://prd.ps.pitt.edu/psc/pitcsprd/EMPLOYEE/SA/s/WEBLIB_HCX_GN.H_SPRINGBOARD.FieldFormula.IScript_Main)

### **PHARM 3034 Topics in Translational Research**

**CLASS NUMBER:**

**Credits: 1**

**Coordinator:** Dr. P. Empey

**Enrollment Cap:** 10 students

This course is structured as a journal club focused on translational investigations and is being offered jointly with the universities of Minnesota, North Carolina, and Pittsburgh for 1st and 2nd year graduate students from all three programs who will participate in discussions by live video teleconferencing. Articles emphasizing methods which allow for translation from preclinical to clinical investigation will be discussed in several different therapeutic areas with emphasis on pharmacometrics, genomics, biomarker validation, and drug discovery. **Instructor's permission is required. Please submit a one paragraph e-mail to Dr. Empey, [PEMPEY@PITT.EDU](mailto:PEMPEY@PITT.EDU) to explain your interest in translational research and why you want to enroll in the class.**

### **PHARM 3069 Pharmacometrics**

**CLASS NUMBER:** 31916

**Credits: 3**

**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 3302 Conducting Research with Large Biomedical Databases Credits: 1**

**CLASS NUMBER:** 28076

**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:** 13214

**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:** 20538

**Credits:** 2  
**Coordinator:** Dr. Howrie  
**Enrollment Cap:** 15 students

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

**PHARM 5812 Healthcare Innovations 1**  
**CLASS NUMBER:** 13218

**Credits:** 1.5  
**Coordinator:** Dr. Pringle  
**Enrollment Cap:** 16 students

Students will be able to effectively participate in a healthcare innovation application team as either a leader or participant that results in the application of an evidence-based healthcare innovation, which leads to improved patient care. Students will be able to develop detailed and effective strategic frameworks from which they can outline and track their progress in implementing a healthcare innovation.

**PHARM 5815 Concepts of Managed Care Pharmacy**  
**CLASS NUMBER:** 16310

**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](mailto:campbellvj2@upmc.edu), to explain your interest in managed care and why you want to enroll in the class.**

**PHARM 5818 Medical Parasitology**  
**CLASS NUMBER:** 20791

**Credits:** 1  
**Coordinator:** Dr. P. Schiff  
**Enrollment Cap:** 12 students

Course offers a concise presentation of the protozoan and helminthic parasites of medical importance, with an emphasis on parasitic morphology and life cycle, disease transmission, pathogenesis, prophylaxis, therapy and epidemiology.

**PHARM 5820 Pharmacy Innovation 1**  
**CLASS NUMBER:** 19465

**Credits:** 1  
**Coordinator:** Dr. R. Patel  
**Enrollment Cap:** 30 students

Course provides basic insights into issues that affect the care of patients in the community through discussions of contemporary topics and further develops the student's skills in research by continuing the analysis and reporting of projects from community pharmacy health service research 2. Specifically, students will enhance their critical thinking skills by examining the drivers for specific contemporary issues (e.g. pharmacist role in an accountable-care organization) and by learning to ask testable scientific questions.

**PHARM 5837 Intro to Psychopharmacology & Psychiatric Disorders**  
**CLASS NUMBER:** 25848

**Credits:** 3  
**Coordinator:** Dr. Fabian  
**Enrollment Cap:** 24 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:** 27473**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:** 31917**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.

**Independent/Directed Study Options:****PHARM 1097 Mentored Research****CLASS NUMBER:** 31918**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:** 31876**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