

SCHOOL OF PHARMACY PROFESSIONAL ELECTIVES

FALL TERM 2271

DISCLAIMER: THIS LIST REPRESENTS THE COURSES WITHIN THE SCHOOL OF PHARMACY THAT ARE SCHEDULED IN THE FALL 2026 SEMESTER. FOR APPROVED ELECTIVES OUTSIDE OF THE SCHOOL OF PHARMACY, PLEASE SEARCH FOR CLASS AVAILABILITY IN PEOPLESOFT. INSTRUCTIONS ARE HERE – [HTTPS://PI.TT/STUDENTCENTER](https://pi.tt/studentcenter)

PHARM 3009 Advances in Pharmaceutical Sciences Journal Club
CLASS NUMBER: 12830

Credits: 1

Coordinators: 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 3068 Computational Systems Pharmacology
CLASS NUMBER: 33529

Credits: 3

Coordinator: Dr. Xie

Enrollment Cap: 35 students

This course will teach the fundamentals of computational systems pharmacology (CSP) modeling and their applications to study drug actions and rational development of new drugs through network analysis, Theoretical concepts pertaining to computational systems pharmacology, such as drug target identification and computer aided drug design (CADD), will be taught. The course also includes hands-on training with the mainstream network analysis and CADD software, such as Symbiology of Matlab, Tetrad, drug discovery package of Schrodinger. This is a mandatory course to be taken for the PSP program.

PHARM 3070 Genomics & Cancer Therapeutics Journal Club
CLASS NUMBER: 21714

Credits: 1

Coordinators: Drs. Yang/Zhang

Enrollment Cap: 5 students

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
CLASS NUMBER: 24208

Credits: 1

Coordinator: Dr. P. Empey

Enrollment Cap: 5 students

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: 24902

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: 12845

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: 18989

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: 15472

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
CLASS NUMBER: 23162

Credits: 3
Coordinator: Dr. Fabian
Enrollment Cap: 30 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: 24321

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: 26817

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 Credits: 1

CLASS NUMBER: 31080

Coordinator: Dr. S. Herbert

Enrollment Cap: 20 students

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.

PHARM 5846 Academic Teaching Experience in Pharmacy Simulatn Credits: 2

CLASS NUMBER: 34165

Coordinators: Drs. Coons/DiBridge

Enrollment Cap: 20 students

This is a 2-credit elective offered for third professional year PharmD students to provide opportunities to develop selected knowledge and skills of effective educators in pharmacy and particularly in simulation in the Pharmacotherapy of Cardiovascular Disease course. Students will examine foundational theories of adult learning, evidence-based instructional design, active learning strategies, feedback and debriefing techniques relevant to pharmacy simulation. Emphasis is placed on applying this knowledge during facilitated formative simulation activities at the School of Pharmacy and the WISER Center. **Restricted to P3 students. Instructor's permission is required. Please submit a one paragraph e-mail to Dr. Coons, JCCOONS@PITT.EDU, to explain your interest in simulation and why you want to enroll in the class.**

PHARM 5910 US Healthcare System

CLASS NUMBER: 34154

Credits: 2

Coordinator: Dr. B. Regan

Enrollment Cap: 10 students

The aim of this course is to provide students with an overview of the U.S. Health care delivery system. This course covers the structure of health care delivery systems and delivery of health care services including personnel and facilities; organization, financing, and quality assessment with special attention to medication distribution and management. **Enrollment preference will be given to Pharmacy Business Administration ARCO students. Instructor's permission is required. Please submit a one paragraph e-mail to Dr. Regan, BRIDGET.REGAN@PITT.EDU, to explain your interest and why you want to enroll in the class.**

PHARM 5911 Healthcare Sales and Marketing

CLASS NUMBER: 31386

Credits: 2

Coordinator: Dr. B. Regan

Enrollment Cap: 10 students

This course educates students on contemporary healthcare sales and marketing as it directly applies to pharmacy. Sales concepts to be covered include understanding management prospects, developing your sales value proposition, finding management and penetrating the no-talk zone, generating leads: marketing to management, generating leads, cold calling management, meeting the prospect for the first time, presenting to prospects ' the executive briefing, preparing a management proposal that works, negotiating with management, selling to targeted key or major accounts, managing your sales cycle and forecasting, managing sales objections; using storytelling as a business sales tool; managing your competition, following up after the sale, and making a difference with business ethics. Health care marketing is undergoing dramatic reinvention and change because of emerging trends, reform uncertainties, the emergence of social marketing and a renewed focus on quality, outcome and prevention. Executives are demanding higher impact and bigger returns from marketing investments and marketing professionals are more closely aligning their efforts with strategic objectives, customer experience and the integration of communications across multiple platforms and channels. This course offers effective approaches to proactive health care marketing with specific action steps, strategies, techniques and tactics to move markets and increase visibility, awareness, understanding, market share and profitability. **Enrollment preference will be given to Pharmacy Business Administration ARCO students. Instructor's permission is required. Please submit a one paragraph e-mail to Dr. Regan, BRIDGET.REGAN@PITT.EDU, to explain your interest and why you want to enroll in the class.**

Independent/Directed Study Options:

PHARM 1097 Mentored Research

CLASS NUMBER: 26818

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. Please submit a one paragraph e-mail to Dr. Empey, KME33@pitt.edu, to explain your interest in research.**

Credits: 1-3

Coordinator: Dr. K. Empey

Enrollment Cap: 20

PHARM 5843 Internship for Advancing Practice

CLASS NUMBERS: 26799

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. Please submit your request and offer letter to Dr. Jonkman, LJF1@pitt.edu, and Ms. Sorensen, CRS149@pitt.edu.**

Credits: 0.5

Coordinator: Dr. Jonkman

Enrollment Cap: 3

PHARM 5861 – 5868 Mentored Inquiry in Pharm Pract 1 – 8

CLASS NUMBERS: TBD

Time: As arranged with faculty

Mentored Inquiry elective courses promote student opportunities to personalize education by engaging in mentored experiences in a particular area of pharmaceutical science, pharmacy practice, or pharmacy education through individual or small group work under the direction of a faculty member. Mentored Inquiry activities take the form of immersion in a project with science, professional or patient care focus as a longitudinal experience co-designed by student and faculty mentor. Mentored Inquiry academic credit hours are determined by time devoted to the activity each week and is dependent upon the nature of the experience, expected commitment of the student, and stated outcomes of the project.

Credits: 1 - 3

Coordinator: Dr. Johnson

Enrollment Cap: Varies