Department of Pharmacy Practice

Pharmacy Practice Graduate Program
The Department of Pharmacy practice furthers the mission of the School of Pharmacy by striving for excellence in teaching, research, scholarly activity, service, and patient care.

The faculty provide professional educational opportunities for undergraduate, graduate, and postgraduate students and practitioners to enable them to practice pharmaceutical care, adapt to changing professional roles, use new technologies, assume leadership roles in a dynamic health-care environment, and contribute new knowledge to the profession.

Facilities
Facilities of the pharmacy department at the University of Kansas Medical Center (http://www.kumc.edu) in Kansas City are used in the residency portion of the program.

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Courses

PHPR 506. Precision Medicine. 1 Hour.
This course will address the role of precision medicine in pharmacy practice and is designed to extend the students’ understanding of the basis for interindividual variation in drug response and the evolving role of the pharmacist. The course will include required readings, lectures, cases and in-class discussions that focus on the evidence and practicality of precision medicine in pharmacy practice. Using selected examples, students will learn about patient factors that drive variability in drug response and how these factors drive drug selection and dosing. With the current focus on the use of genomic data to drive individualized therapy, students will learn about current pharmagenomic-based practice guidelines and clinical practice references. Students will prepare a 2-page writing assignment and an in-class presentation on the impact of precision medicine on pharmacy practice. Prerequisite: Must be admitted to the School of Pharmacy. LEC.

PHPR 507. Advanced Community Practice. 1 Hour.
The objective of this course is to prepare pharmacy students to practice as advanced pharmacists in a community setting. The course will cover patient care as well as the business and insurance aspects surrounding community pharmacy practice. We will cover a variety of topics including reimbursement, legal issues, Medication Therapy Management (MTM), communication, ethics, and the future of Community Pharmacy practice. Prerequisite: 3rd professional year standing in the School of Pharmacy. LEC.

PHPR 508. Oncology Elective. 1 Hour.
This course is designed to extend the students’ understanding of Oncology diseases and treatments beyond what is covered in the Pharmacotherapy series in the School of Pharmacy. Prerequisite: PHPR 646. LEC.

PHPR 509. Medicare Part D. 1 Hour.
This elective course will focus on the understanding and active enrollment of patients into Medicare prescription drug benefit (Part D). Students will mainly focus on the understanding of Medicare eligibility, benefits, formulary requirements, and the administration of benefits. Students will also participate in community outreach which may focus on underserved patients. Prerequisite: 2nd or 3rd professional year standing in the School of Pharmacy. LEC.

PHPR 510. Medical Terminology Elective. 1 Hour.
This course provides the fundamentals for developing a medical vocabulary. The student will develop the ability to understand, define and utilize medical terminology and abbreviations used in patient care. LEC.

PHPR 511. Service-Learning Elective. 1 Hour.
Students will work at a health-related community center and participate in structured learning exercises. The objectives are to: 1) enable students to learn appropriate strategies to communicate and provide services to people with varying languages, cultures, social, and economic backgrounds, disabilities, illnesses, or impairments, 2) increase social interaction and citizenship, 3) heighten social awareness and understanding of ethical issues, and 4) acknowledge social responsibility and realize personal values. FLD.

PHPR 512. Nuclear Pharmacy. 1 Hour.
This course is designed for students interested in learning about nuclear pharmacy practice as a specialty practice in pharmacy. Students will learn about the application of radiopharmaceuticals used in the diagnosis of various diseases or identifying patient therapeutic issues. The course will cover principles of radiation, radiation safety, preparation of and handling of radiopharmaceuticals, their appropriate use, and the training requirements for a nuclear pharmacist. At the conclusion of the course the student will have an insight into this specialty practice in nuclear pharmacy as a potential career. Prerequisite: Students must be admitted to the School of Pharmacy. LEC.

PHPR 513. Chemical Dependency Elective. 1 Hour.
This elective course will enhance the pharmacy student's knowledge and understanding of the current theories behind the addiction process, frequently abused drugs and/or chemicals and the treatment and recovery process. Prerequisite: Must be accepted to the Pharmacy Program. LEC.

PHPR 514. Communication and Counseling. 1 Hour.
An elective course designed to help students improve professional communication skills. Prerequisite: PHAR 500. LEC.

PHPR 515. The Aging Patient. 1 Hour.
This elective course is designed for the learner to explore many of the clinical considerations employed when caring for the aging patient within our health care system. The course will be devoted to exploring generational perceptions, learning how the aging process can impact
patient care, and identifying the role of the pharmacist in enhancing this care. Prerequisite: 4th or 5th professional year (P2 or P3) standing in the School of Pharmacy. LEC.

PHPR 516. Pharmacy in Public Health. 1 Hour.
Public health is more than providing treatment for an illness; it is a concern for the health of an entire population. The ideal is to ensure the health of all. This course will focus on providing students with a solid foundational understanding of what public health is and how pharmacists play a role as a public health provider. The course will cover the concepts and tools used in public health including issues such as: determining health, cultural competence, health promotion, disease prevention, epidemiology and disease, describing populations and community health. Lastly, the course will provide students with specific pharmacist models of public health. Successful models include tobacco cessation programs, community vaccination programs, obesity prevention, tuberculosis monitoring, emergency preparedness and domestic violence. Prerequisite: Must be accepted to the Pharmacy Program. LEC.

PHPR 517. Medication Safety and Error Prevention. 1 Hour.
This course introduces the student to medication safety and the technology as well as the tools used in error prevention. The student will also learn about adverse drug events including both medication errors and adverse drug reactions in hospital and retail pharmacy settings. Prerequisite: 4th or 5th professional year (P2 or P3) standing in the School of Pharmacy. LEC.

PHPR 518. Cultural Competency in Pharmacy Practice. 1 Hour.
The United States becomes more culturally diverse every year. This course is designed to help student pharmacists excel in today's multicultural environment by improving their cultural competency skills. Students will explore their own culture and those belonging to other diverse cultures. Students are expected to learn of the beliefs, needs and tendencies of those with cultures much different than themselves. Prerequisite: Must be admitted to the School of Pharmacy. LEC.

PHPR 519. Business Planning for Pharmacy. 1 Hour.
This course is designed for students interested in developing a business plan. Most pharmacists will have an opportunity to develop a new service, product line or even start a new business venture in their careers. Students need to know how to create a formal business plan and how to present the plan to decision makers. The course will cover the basic components and rationale of creating a formal business plan. When finished students will be expected to have created a written business plan and will present their creation to the class. In this manner, students will gain experience in developing an idea into a plan. Prerequisite: Students must be admitted to the school of Pharmacy. LEC.

PHPR 521. Practical Pediatrics. 1 Hour.
This course will expose students to conditions frequently encountered in pediatric care. Students will further develop knowledge and skills necessary to provide appropriate pediatric care in institutional, ambulatory, and community practice settings. The course will involve interactive lectures followed by case-based learning to promote student application of knowledge to relevant clinical situations. Prerequisite: Students must be admitted to the School of Pharmacy and must be in their 3rd professional year. LEC.

PHPR 541. Foundations of Interprofessional Collaboration I. 0 Hours.
This TeamSTEPPS Level 1 experience will introduce interprofessional students to the basic concepts of interprofessional collaboration including values and ethics, roles and responsibilities of healthcare team members, and interprofessional communication tools using the evidence-based national curriculum of TeamSTEPPS. Upon completion of this training experience students will be able to 1) demonstrate a work ethic with individuals of other professions to maintain a climate of mutual respect and shared values; 2) define the role of health professions (including your own) within the healthcare system; 3) identify opportunities to seek expertise of health professionals to improve communication and healthcare; and 4) acquire basic TeamSTEPPS communication tools to effectively use with healthcare teams. Graded on a satisfactory/unsatisfactory basis. Prerequisite: P1 standing. LEC.

PHPR 542. Foundations of Interprofessional Collaboration II. 0 Hours.
This TeamSTEPPS Level 2 experience will provide interprofessional students opportunities to apply key knowledge and skills gained in FIPC I, through role-play and case-based learning. Students will apply their knowledge of roles and responsibilities of healthcare team members and interprofessional communication tools and continue learning with, from, and about students from other professions. Upon completion of this training experience students will be able to: 1) engage diverse healthcare professionals who complement one's own professional expertise, as well as associated resources, to develop strategies to meet specific patient care needs; 2) choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function; and 3) engage other health professionals appropriate to the specific care situation--in shared patient-centered problem-solving. Graded on a satisfactory/unsatisfactory basis. Prerequisite: P2 standing. LEC.

PHPR 543. Foundations of Interprofessional Collaboration III. 0 Hours.
This TeamSTEPPS Level 3 experience will provide interprofessional students opportunities to demonstrate key knowledge and skills gained in FIPC I and II, through simulation. Students will demonstrate their interprofessional communication skills, including specific opportunities to utilize TeamSTEPPS tools. Students will also demonstrate their teamwork abilities by working with interprofessional students during the simulation. Upon completion of this training experience students will be able to: 1) demonstrate communicating effectively with other health professionals about a patient case; 2) exhibit teamwork skills with an interprofessional healthcare team; and 3) utilize key TeamSTEPPS tools with an interprofessional healthcare team. Graded on a satisfactory/unsatisfactory basis. Prerequisite: P3 standing. LEC.

PHPR 599. Clinical Application of Basic Science. 1 Hour.
This course is an inter-departmental, team-based, technology-centric elective course. Concomitantly, instructors from the basic and clinical science departments within the school of pharmacy will promote deeper student understanding of the path a drug takes from discovery, development and ultimately clinical use. Instructors will collaborate in course content development to integrate basic and clinical science concepts. The course will utilize a blended learning method, incorporating out of class podcasts, online group collaborative projects, and readiness quizzes and exams. Prerequisite: 4th or 5th professional year standing (P2/P3) in the school of pharmacy and concomitant enrollment in either PTX 599, MDCM 599, or PHCH 599 is required. LEC.

PHPR 601. Advanced Pharmacy Practice Experience 1. 4 Hours.
The final year of the Doctor of Pharmacy program is spent participating in pharmacy practice rotations. These consist of nine, one-month rotations, in various health care settings. Such practice settings may include a variety of acute care, ambulatory care, managed care, hospital and community practice sites. Each rotation provides an academically structured environment that enables the student to gain practical experience under the guidance of a practicing health care professional. The purpose of providing pharmacy students with a pharmacist role model is to foster the development of both professional confidence as well as competence. These practice-based experience settings encourage
the student to apply their didactic education to clinical problem solving. Both clinical and distributive pharmacy services will be integrated in these experiences for optimal learning. This course is graded using an “Excellent”, “Satisfactory”, or “Unsatisfactory” grading basis. FLD.

**PHPR 602. Advanced Pharmacy Practice Experience 2. 4 Hours.**

The final year of the Doctor of Pharmacy program is spent participating in pharmacy practice experience rotations. These consist of nine, one-month rotations, in various health care settings. Such practice settings may include a variety of acute care, ambulatory care, managed care, hospital and community practice sites. Each rotation provides an academically structured environment that enables the student to gain practical experience under the guidance of a practicing health care professional. The purpose of providing pharmacy students with a pharmacist role model is to foster the development of both professional confidence as well as competence. These practice-based experience settings encourage the student to apply their didactic education to clinical problem solving. Both clinical and distributive pharmacy services will be integrated in these experiences for optimal learning. This course is graded using an “Excellent”, “Satisfactory”, or “Unsatisfactory” grading basis. FLD.

**PHPR 603. Advanced Pharmacy Practice Experience 3. 4 Hours.**

The final year of the Doctor of Pharmacy program is spent participating in pharmacy practice experience rotations. These consist of nine, one-month rotations, in various health care settings. Such practice settings may include a variety of acute care, ambulatory care, managed care, hospital and community practice sites. Each rotation provides an academically structured environment that enables the student to gain practical experience under the guidance of a practicing health care professional. The purpose of providing pharmacy students with a pharmacist role model is to foster the development of both professional confidence as well as competence. These practice-based experience settings encourage the student to apply their didactic education to clinical problem solving. Both clinical and distributive pharmacy services will be integrated in these experiences for optimal learning. This course is graded using an “Excellent”, “Satisfactory”, or “Unsatisfactory” grading basis. FLD.

**PHPR 604. Advanced Pharmacy Practice Experience 4. 4 Hours.**

The final year of the Doctor of Pharmacy program is spent participating in pharmacy practice experience rotations. These consist of nine, one-month rotations, in various health care settings. Such practice settings may include a variety of acute care, ambulatory care, managed care, hospital and community practice sites. Each rotation provides an academically structured environment that enables the student to gain practical experience under the guidance of a practicing health care professional. The purpose of providing pharmacy students with a pharmacist role model is to foster the development of both professional confidence as well as competence. These practice-based experience settings encourage the student to apply their didactic education to clinical problem solving. Both clinical and distributive pharmacy services will be integrated in these experiences for optimal learning. This course is graded using an “Excellent”, “Satisfactory”, or “Unsatisfactory” grading basis. FLD.

**PHPR 605. Advanced Pharmacy Practice Experience 5. 4 Hours.**

The final year of the Doctor of Pharmacy program is spent participating in pharmacy practice experience rotations. These consist of nine, one-month rotations, in various health care settings. Such practice settings may include a variety of acute care, ambulatory care, managed care, hospital and community practice sites. Each rotation provides an academically structured environment that enables the student to gain practical experience under the guidance of a practicing health care professional. The purpose of providing pharmacy students with a pharmacist role model is to foster the development of both professional confidence as well as competence. These practice-based experience settings encourage the student to apply their didactic education to clinical problem solving. Both clinical and distributive pharmacy services will be integrated in these experiences for optimal learning. This course is graded using an “Excellent”, “Satisfactory”, or “Unsatisfactory” grading basis. FLD.

**PHPR 606. Advanced Pharmacy Practice Experience 6. 4 Hours.**

The final year of the Doctor of Pharmacy program is spent participating in pharmacy practice experience rotations. These consist of nine, one-month rotations, in various health care settings. Such practice settings may include a variety of acute care, ambulatory care, managed care, hospital and community practice sites. Each rotation provides an academically structured environment that enables the student to gain practical experience under the guidance of a practicing health care professional. The purpose of providing pharmacy students with a pharmacist role model is to foster the development of both professional confidence as well as competence. These practice-based experience settings encourage the student to apply their didactic education to clinical problem solving. Both clinical and distributive pharmacy services will be integrated in these experiences for optimal learning. This course is graded using an “Excellent”, “Satisfactory”, or “Unsatisfactory” grading basis. FLD.

**PHPR 607. Advanced Pharmacy Practice Experience 7. 4 Hours.**

The final year of the Doctor of Pharmacy program is spent participating in pharmacy practice experience rotations. These consist of nine, one-month rotations, in various health care settings. Such practice settings may include a variety of acute care, ambulatory care, managed care, hospital and community practice sites. Each rotation provides an academically structured environment that enables the student to gain practical experience under the guidance of a practicing health care professional. The purpose of providing pharmacy students with a pharmacist role model is to foster the development of both professional confidence as well as competence. These practice-based experience settings encourage the student to apply their didactic education to clinical problem solving. Both clinical and distributive pharmacy services will be integrated in these experiences for optimal learning. This course is graded using an “Excellent”, “Satisfactory”, or “Unsatisfactory” grading basis. FLD.

**PHPR 608. Advanced Pharmacy Practice Experience 8. 4 Hours.**

The final year of the Doctor of Pharmacy program is spent participating in pharmacy practice experience rotations. These consist of nine, one-month rotations, in various health care settings. Such practice settings may include a variety of acute care, ambulatory care, managed care, hospital and community practice sites. Each rotation provides an academically structured environment that enables the student to gain practical experience under the guidance of a practicing health care professional. The purpose of providing pharmacy students with a pharmacist role model is to foster the development of both professional confidence as well as competence. These practice-based experience settings encourage the student to apply their didactic education to clinical problem solving. Both clinical and distributive pharmacy services will be integrated in these experiences for optimal learning. This course is graded using an “Excellent”, “Satisfactory”, or “Unsatisfactory” grading basis. FLD.

**PHPR 609. Advanced Pharmacy Practice Experience 9. 4 Hours.**

The final year of the Doctor of Pharmacy program is spent participating in pharmacy practice experience rotations. These consist of nine, one-month rotations, in various health care settings. Such practice settings may include a variety of acute care, ambulatory care, managed care, hospital and community practice sites. Each rotation provides an academically structured environment that enables the student to gain practical experience under the guidance of a practicing health care professional. The purpose of providing pharmacy students with a pharmacist role model is to foster the development of both professional confidence as well as competence. These practice-based experience settings encourage the student to apply their didactic education to clinical problem solving. Both clinical and distributive pharmacy services will be integrated in these experiences for optimal learning. This course is graded using an “Excellent”, “Satisfactory”, or “Unsatisfactory” grading basis. FLD.
the student to apply their didactic education to clinical problem solving. Both clinical and distributive pharmacy services will be integrated in these experiences for optimal learning. This course is graded using an "Excellent", "Satisfactory", or "Unsatisfactory" grading basis. FLD.

**PHPR 610. Advanced Pharmacy Practice Experience 10. 4 Hours.**

The final year of the Doctor of Pharmacy program is spent participating in nine pharmacy practice experience rotations (PHPR 601-609). PHPR 610 is reserved for students requiring a remedial experiential rotation. This course is graded using an "Excellent", "Satisfactory", or "Unsatisfactory" grading basis. FLD.

**PHPR 613. Pharmacoeconomics and Health Outcomes. 2 Hours.**

A course to foster an understanding of economic, financial and outcome principles that drive the demand and supply of medical care in the US. Economic logic behind decisions made by patients, physicians, hospitals, managed care organizations, and governments will be covered. Students completing this course should be able to identify the drivers of the health economy, identify different types of pharmacoeconomic evaluations, critically analyze pharmacoeconomic and outcome literature, and apply economic principles to pharmaceutical care. Prerequisite: Students must be admitted to the school of Pharmacy to enroll in this class. LEC.

**PHPR 614. Pharmacy Management. 3 Hours.**

A course designed to provide knowledge and skills to effect efficient and effective pharmacy management. This will include foundations in financial management, inventory control, purchasing, cost-effective drug utilization, quality management, pharmacoeconomics, and human resource management. LEC.

**PHPR 615. Nuclear Pharmacy Practice. 2 Hours.**

This introductory course in nuclear pharmacy practice provides a basic understanding of radiation, radiation dosimetry, radiopharmaceuticals, and clinical application of radiopharmaceuticals in diagnosis and treatment. The course includes both didactic material as well as laboratory experience. LEC.

**PHPR 619. Health Care Systems and Informatics. 3 Hours.**

This course is an introduction to the organization, financing, and delivery of health care services with a focus on the U.S. health care system. Course content addresses the following questions: how do we evaluate the health care sector, where is health care provided, how is health care financed, what are the characteristics of health care providers (individuals and institutions), what influences the performance of the health care sector, and what lies in the future for health care delivery. The purpose of the course is to prepare pharmacy students for non-clinical aspects of their practice sites. Enrollment limited to pharmacy majors. LEC.

**PHPR 620. Ethical, Legal, and Cultural Issues in Patient Care. 2 Hours.**

This course provides an introduction to the fundamentals of law and ethics as they apply to the practice of pharmacy. Course sessions will focus on ethical expectations of the profession, principles and issues in medical and pharmacy ethics, and laws that govern medication dispensing. LEC.

**PHPR 621. Pharmacy Law. 2 Hours.**

A course developed to increase students' knowledge and understanding of laws that regulate the pharmacy profession. Prerequisite: Fifth year standing (P3 student). LEC.

**PHPR 624. Pharmacoepidemiology and Public Health. 2 Hours.**

Pharmacy profession has a unique and critical opportunity and responsibility to contribute to the improvement of population health. Public health is a broader discipline that encompasses population health with a variety of other areas, including but not limited to epidemiology, cultural competence, health promotion, disease prevention, and drug safety. Pharmacoepidemiology is the application of the principles of epidemiology to the study of medications and their effects. Considerations are centered on providing beneficial or adverse effects of medication use in large populations and making relevant inferences from essential analytical research designs used in public health. Using population-based-care approach, students will adopt and fulfill public health roles and activities. This course provides a broad introduction to the principles of pharmacoepidemiology and public health with a focus on applications in the field of pharmacy. Prerequisite: Third professional year standing in the School of Pharmacy. LEC.

**PHPR 629. Research Design and Biostatistics. 2 Hours.**

This course reviews study designs and biostatistical methods commonly used in primary medical literature. Following completion of the course students should be able to read, assess, and apply the results of research articles and clinical practice guidelines to patient care; identify potential statistical or methodological errors; and exhibit foundational analytic and methodological skills needed to conduct simple clinical research. The course establishes the research methods foundation needed for pharmacists to maintain clinical competency throughout their career. LEC.

**PHPR 630. Drug Information and Literature Evaluation. 1 Hour.**

This course will review the fundamental tools used to identify drug information in primary, secondary and tertiary resources. In addition, students will learn to assess published literature, utilize electronic resources, and learn to formulate a response to drug information questions. Following completion of this course, students will be able to understand the strengths and weaknesses of the drug information resources and to apply drug information skills to clinical practice relevant to patient care. Prerequisite: Successful completion of PHPR 629. LEC.

**PHPR 635. Problems in Pharmacy Practice. 1-5 Hours.**

A course designed for the study of special topics in pharmacy practice. A research paper will be required. Prerequisite: Consent of instructor. IND.

**PHPR 647. Pharmacotherapy II. 4 Hours.**

A course dealing with the clinical applications of drug knowledge to patient care. Disease and drug knowledge will be applied to the design and monitoring of therapeutic treatment plans for patients. Incorporates three credit hours of lecture and one credit hour of case studies and off-campus professional experience. This course is graded A,B,C,F. Prerequisite: Fifth year standing and successful completion of Pharmacotherapy I, PHPR 646. LEC.

**PHPR 648. Pharmacotherapy III. 4 Hours.**

A course dealing with the clinical applications of drug knowledge to patient care. Disease and drug knowledge will be applied to the design and monitoring of therapeutic treatment plans for patients. Incorporates three credit hours of lecture and one credit hour of case studies and off-campus professional experience. This course is graded A,B,C,F. Prerequisite: Fifth year standing and successful completion of Pharmacotherapy II, PHPR 647 with a C or above. LEC.

**PHPR 661. Pharmacotherapy I. 4 Hours.**

A course dealing with the clinical applications of drug knowledge to patient care. Drug interactions and patient counseling techniques will be covered. Over-the-counter medications and herbs will also be a significant portion of the course. Prerequisite: First year professional standing in the School of Pharmacy. LEC.

**PHPR 662. Pharmacotherapy II. 4 Hours.**

A course dealing with the clinical applications of drug knowledge to patient care. Disease and drug knowledge will be applied to the design and monitoring of therapeutic treatment plans for patients. Prerequisite: Second year professional standing in the School of Pharmacy and successful completion of Pharmacotherapy I, PHPR 661. LEC.
PHPR 663. Pharmacotherapy III. 4 Hours.
A course dealing with the clinical applications of drug knowledge to patient care. Disease and drug knowledge will be applied to the design and monitoring of therapeutic treatment plans for patients. Prerequisite: Second professional year standing in the School of Pharmacy and successful completion of Pharmacotherapy II, PHPR 662. LEC.

PHPR 664. Pharmacotherapy IV. 4 Hours.
A course dealing with the clinical applications of drug knowledge to patient care. Disease and drug knowledge will be applied to the design and monitoring of therapeutic treatment plans for patients. Prerequisite: Third professional year standing in the School of Pharmacy and successful completion of Pharmacotherapy III, PHPR 663. LEC.

PHPR 665. Pharmacotherapy V. 4 Hours.
A course dealing with the clinical applications of drug knowledge to patient care. Disease and drug knowledge will be applied to the design and monitoring of therapeutic treatment plans for patients. Prerequisites: Third professional year standing in the School of Pharmacy and successful completion of Pharmacotherapy IV, PHPR 664. LEC.

PHPR 670. Clinical Assessment. 2 Hours.
This laboratory course will allow students to develop clinical assessment skills necessary in the provision of pharmaceutical care to patients with a variety of disease states. Students will combine physical assessment skills, patient counseling skills, and pharmacotherapy knowledge and apply this information to patient care related activities in various clinical settings. Students will apply their skills using various practice models that include medication therapy management, collaborative drug therapy management, and interprofessional healthcare teams. The lab component will require students to meet between 1:00 to 5:00 PM on either Monday, Tuesday, or Wednesdays. In addition, there is a required Thursday discussion section. A detailed schedule of lab meeting dates and times will be provided in the syllabus. Prerequisite: Students must be admitted to the School of Pharmacy to enroll in this class. Students must pass PHPR 664 to be eligible to complete PHPR 670. LAB.

PHPR 690. Research in Pharmacy Practice. 1-5 Hours.
Students will conduct original research in a laboratory, educational, or clinical research setting under the supervision of department faculty. Prerequisite: Students must be admitted to the School of Pharmacy to enroll in this class. RSH.

PHPR 845. Professional Communications and Leadership. 2 Hours.
A course designed to give the graduate student a practical experience in areas of professional communications such as administrative proposals, grants, letters, memos, poster presentations, and written papers. The course focuses on the different kinds of communications required to relate to other health care professionals. Prerequisite: Consent of instructor. LEC.

PHPR 850. Introduction to Pharmacoepidemiology. 3 Hours.
Pharmacoepidemiology is the application of the principles of epidemiology to the study of medications and their effects on health. Evaluating a drug's effects commences when a chemical entity becomes a drug candidate, intensifies through clinical trials, and continues after products reach the market. These studies are critical for supporting the proper use of medications in terms of efficacy, effectiveness, and cost-effectiveness. This course provides a broad introduction to the principles of pharmacoepidemiology with a focus on applications in the medical literature. LEC.

PHPR 855. Economic Evaluation of Health Care Programs and Services. 3 Hours.
The course will provide students with an overview and appraisal of the "state-of-the-art" in the evaluation of health care programs and services (with a special emphasis on pharmaceutical programs, services, and products). The purpose of the course is to provide the student with the tools to conduct economic rather than general evaluation of health care programs and services. There will be some discussion of theoretical concepts, but the major emphasis will be on practical methodological issues in economic evaluation of pharmaceutical programs. The course integrates the perspectives of pharmaceutical and health care technology assessment, managed care, outcomes research, and public health. The main topics covered in the course include: cost, cost-minimization, cost-effectiveness, cost-utility, and cost-benefit analyses. LEC.

PHPR 860. Seminar in Pharmacy Practice. 1 Hour.
Research reports, reviews, and/or presentations on the current status of various aspects of pharmacy practice. Prerequisite: Consent of instructor. LEC.

PHPR 865. Advanced Institutional Pharmacy Services. 3 Hours.
A course dealing with the planning, justification, implementation, management, and coordination of a progressive, comprehensive institutional pharmacy service. Seminar presentations and case studies are used to analyze recent advances and to apply data from the research literature. Prerequisite: Consent of instructor. LEC.

PHPR 875. Health Care Delivery Systems. 3 Hours.
A continuation of PHPR 865 dealing with the current status of health care delivery systems and the impact of changes in this area on pharmacy practice. Prerequisite: PHPR 865 and consent of instructor. LEC.

PHPR 885. Human Resource Management in Institutional Pharmacy Practice. 3 Hours.
A course dealing with recruitment, training, motivation, monitoring of performance, and disciplining of personnel. Seminars, case studies, and role playing are used to apply the information to specific human resource management situations in institutional pharmacy practice. Prerequisite: PHPR 865 and consent of instructor. LEC.

PHPR 899. Research in Pharmacy Practice. 1-6 Hours.
Original investigation in the area of pharmacy practice. Prerequisite: Consent of instructor. RSH.