

PHR

Pharmacy

PHR 776 SEMINAR IN PHARMACEUTICAL SCIENCES I. (1)

Reports and discussion of pertinent research and literature in the pharmaceutical sciences. Required of all graduate students. Prereq: Graduate standing.

PHR 900 TRANSITIONS IN PHARMACY. (1)

This introductory course is designed to prospectively introduce and instruct new pharmacy students to fundamental concepts in basic and clinical sciences including physiology and pharmacology through the use of a common core disease state (CCD). Prereq: Admission to the Doctor of Pharmacy degree program.

PHR 910 PATIENT-CENTERED CARE EXPERIENCE 1. (3)

This is the first course in the six-semester Patient-Centered Care Experience (PaCE) course sequence that is part of the pre-APPE curriculum. The PaCE course structure integrates PY1, PY2, and PY3 students into concurrent weekly laboratory sessions and intermittent complementary experiential fieldwork experiences. The course is designed to assist in developing the knowledge, skills, and attitudes needed to fulfill the professional and technical responsibilities necessary to provide patient-centered care and manage the medication use system. Prereq: Acceptance into the UK College of Pharmacy Professional Doctor of Pharmacy degree program. The experiential component requires the student to be registered with the Kentucky Board of Pharmacy as a Pharmacy Intern.

PHR 911 CELLS AND MOLECULES. (3)

This course covers the various tasks performed by cell components and the mechanisms used to integrate their actions. The course also covers the chemistry of biomolecules that are essential for structure and function of prokaryotic and eukaryotic cells including discussions of drug metabolism, energy generation, and information storage and transmission. The course will be taught in a blended or hybrid format that requires that students accept accountability for learning. Prereq: Admission to the first year, College of Pharmacy.

PHR 912 FOUNDATIONS IN PHARMACEUTICAL SCIENCES I. (3)

The goal of this course is to introduce students to the principles that underlie drug design and delivery. The course is divided into three components; 1) introduction to the principles of pharmacokinetics and drug delivery; 2) introduction to the principles of medicinal chemistry (drug design); and 3) introduction to the principles of pharmacology (drug action). Prereq: Admission into the College of Pharmacy.

PHR 913 WELLNESS AND HEALTH PROMOTION I. (3)

A course designed to integrate and apply concepts of patient-centered care that focuses on general health, wellness, and disease prevention and appropriate self-care therapy for commonly encountered conditions and symptoms. Patient assessment and decision-making skills for ambulatory patient triage; appropriate health and wellness interventions for the purpose of general wellbeing and prevention of disease; and the recommendation and appropriation of appropriate non-pharmacologic and pharmacologic non-prescription therapies for common conditions are emphasized. The description of various health promotion concepts and theorem as they relate to the understanding and influence of patient behaviors will also be underscored. Prereq: Enrollment in UK College of Pharmacy PharmD program.

PHR 914 CLINICAL REASONING. (2)

Clinical Reasoning introduces students to: 1) general concepts of thought processes used in problem-solving from novice to expert thinking; 2) the Pharmacists' Patient Care Process as an anchor that students can apply to any drug-related problem throughout the curriculum; 3) develops consistent habits framing the essential questions of a case; 4) concise, professional-level writing and speaking communication skills providing logic-driven solution(s) to a patient's drug related problem; and 5) critical self-assessment and reflection on how one can improve reasoning and communication performance. (Note: course is 12 weeks long.) Prereq: Admission into the College of Pharmacy first year.

PHR 915 PHARMACY AS A PROFESSION. (5)

This course provides an introduction to the profession of pharmacy and its societal context. Legal and ethical standards are introduced along with the historical evolution of the field. Contemporary issues are introduced and selected methods for communicating with patients and other professionals are emphasized. Prereq: Admission to College of Pharmacy year one.

PHR

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PHR 920 PATIENT-CENTERED CARE EXPERIENCE 2. (3)

This is the second course in the six-semester Patient-Centered Care Experience (PaCE) course sequence that is part of the pre-APPE curriculum. The PaCE course structure integrates PY1, PY2, and PY3 students into concurrent weekly laboratory sessions and intermittent complementary experiential fieldwork experiences. The course is designed to assist in developing the knowledge, skills, and attitudes needed to fulfill the professional and technical responsibilities necessary to provide patient-centered care and manage the medication use system. Prereq: PaCE1 (PHR 910). Coreq: PHR 923, PHR 926, PHR 927. The experiential component requires the student to be registered with the Kentucky Board of Pharmacy as a Pharmacy Intern.

PHR 921 KINETICS AND DYNAMICS. (4)

Pharmacokinetics is the study of drug movement from its site of administration, to its distribution in the body and its elimination (via excretion and metabolism) from the body. Pharmacodynamics is the study of timecourse of drug response and those factors associated with the clinical outcome. This course provides the mathematical foundation for describing physiological processes in the body that allow the prediction of how individual variations, concurrent therapy, disease states, non-linear handling and other factors can and do affect steady state drug and metabolite levels, drug dosing, dosing intervals and dosing rates in patients. Prereq: Completion of fall semester of first year Pharmacy. Functional knowledge of physiology and algebra/calculus.

PHR 922 FOUNDATIONS IN PHARMACEUTICAL SCIENCE II: PHARMACEUTICS AND BIOPHARMACEUTICS. (3)

The goal of this course is to introduce students to the principles that underlie drug delivery. The course is divided into three components: 1) basics of drug preformulation, including solubility and stability; 2) dosage form design and properties; and 3) formulation and manufacturing of dosage forms.

PHR 923 WELLNESS AND HEALTH PROMOTION II. (3)

To develop pharmacists who can develop patient-centered care that focuses on general health, wellness, and disease prevention and who can recommend appropriate self-care therapy for commonly encountered conditions and symptoms. Prereq: Completion of PY1 fall semester.

PHR 926 INTEGRATED DRUGS AND DISEASE 1: INFECTIOUS DISEASES. (4)

This course will describe the pharmacology, medicinal chemistry, pathophysiology, and therapeutics associated with of commonly encountered infectious diseases so that students can design and manage drug-related care plans for patients with these disease states. Prereq: Completion of the first semester of coursework at the College of Pharmacy.

PHR 927 INTEGRATED DRUGS AND DISEASE 1: GI AND NUTRITION. (2)

Course will describe the pharmacology, medicinal chemistry, pathophysiology, and therapeutics associated with of commonly encountered gastrointestinal and nutritional disorders so that students can design and manage drug-related care plans for patients with these disease states. Prereq: Successful completion of fall semester PY1 courses in the PharmD program.

PHR 928 INTRODUCTORY PHARMACY PRACTICE EXPERIENCE I (AMBULATORY CARE). (2)

This is the first concentrated course in the Experiential Education program designed to provide students a structured, supervised program of participation in the practice of pharmacy and the clinical use of drugs in an ambulatory care setting. The primary goal is to provide early exposure to the philosophy and practice of ambulatory pharmacy and clinical use of drugs within a community pharmacy. During this rotation, each student will participate in all aspects of pharmacy practice within the community pharmacy, including medication use systems and direct patient care. They will gain experience in problem solving and application of didactic information learned in the classroom and patient care laboratory. Prereq: Successful completion of PY1 year.

***PHR 929 INTRODUCTORY PHARMACY PRACTICE EXPERIENCE I (INSTITUTIONAL). (3)**

This is the first concentrated course in the Experiential Education program designed to provide students a structured, supervised program of participation in the practice of pharmacy and the clinical use of drugs in an institutional setting. The primary goal is to provide early exposure to the philosophy and practice of institutional pharmacy and clinical use of drugs within a hospital pharmacy. During this rotation, each student will participate in all aspects of pharmacy practice within the hospital pharmacy, including medication use systems and direct patient care. They will gain experience in problem solving and application of didactic information learned in the classroom and patient care laboratory. Prereq: Successful completion of PY1 year.

PHR 930 PATIENT-CENTERED CARE EXPERIENCE 3. (3)

This is the third course in the six-semester Patient-Centered Care Experience (PaCE) course sequence that is part of the pre-APPE curriculum. The PaCE course structure integrates PY1, PY2, and PY3 students into concurrent weekly laboratory sessions and intermittent complementary experiential fieldwork experiences. The course is designed to assist in developing the knowledge, skills, and attitudes needed to fulfill the professional and technical responsibilities necessary to provide patient-centered care and manage the medication use system. Prereq: PaCE 2 (PHR 920). Coreq: PHR 936, PHR 937, PHR 938. The experiential component requires the student to be registered with the Kentucky Board of Pharmacy as a Pharmacy Intern.

PHR 933 PHARMACEUTICAL OUTCOMES, POLICY AND PUBLIC HEALTH. (3)

This course provides an overview of the interaction between pharmaceuticals/pharmacists and two disciplines: public health and public policy. The course will begin with an introduction to public health, including an overview of public health metrics and research methods. The rest of the course is devoted to public policy formulation, implementation and analysis. The impact of various health-related policies will be explored from local, state, national and global perspectives. The course is designed to develop knowledge and skills related to population health and health policy, with specific emphasis on policies associated with pharmaceuticals. A variety of educational methods will be employed, including “live” and electronic didactic lectures, care-based projects, and simulated health policy development/analysis activities. Prereq: PHR 913 Wellness and Health 1, PHR 914 Clinical Reasoning, PHR 915 Pharmacy as a Profession.

PHR 936 INTEGRATED DRUGS AND DISEASES 2: NEUROLOGY. (4)

This course integrates knowledge from distinct scientific disciplines (pharmacology, medicinal chemistry, pathophysiology and therapeutics) to progressively lead students toward understanding, mastering and designing patient care plans for patients with commonly encountered neurological diseases. The method of teaching and learning employed in this course will challenge the student to develop independent thought processes and self-directed learning skills. Prereq: Successful completion of PY1 and Fall PY2 courses in the PharmD program.

PHR 937 INTEGRATED DRUGS AND DISEASES 2: RHEUMATOLOGY. (2)

[This course meets for 4 weeks – 1/4 semester.] This course will describe the pathophysiology, pharmacology, medicinal chemistry, therapeutics and non-drug therapies associated with rheumatic diseases so that students can assess the specific disease, design and manage both lab assays and other indicative tests and drug- as well as non-drug related care plans for patients with these disease states. Prereq: Completion of the PY1 year.

PHR 938 INTEGRATED DRUGS AND DISEASES 2: ENDOCRINE DISEASES. (4)

[This course meets for 8 weeks – 1/2 semester.] This course will describe the pharmacology, medicinal chemistry, pathophysiology, and therapeutics associated with commonly encountered endocrine diseases so that students can design and manage drug-related care plans for patients with these disease states. Prereq: Successful completion of the PY1 curriculum.

PHR 940 PATIENT-CENTERED CARE EXPERIENCE 4. (3)

This is the fourth course in the six-semester Patient-Centered Care Experience (PaCE) course sequence that is part of the pre-APPE curriculum. The PaCE course structure integrates PY1, PY2, and PY3 students into concurrent weekly laboratory sessions and intermittent complementary experiential fieldwork experiences. The course is designed to assist in developing the knowledge, skills, and attitudes needed to fulfill the professional and technical responsibilities necessary to provide patient-centered care and manage the medication use system. Prereq: PaCE 3 (PHR930). Coreq: PHR 946, PHR 947, PHR 948. The experiential component requires the student to be registered with the Kentucky Board of Pharmacy as a Pharmacy Intern.

PHR 945 LEADERSHIP IN PHARMACY. (3)

This course will include multiple modes of instruction (didactic lecture, group assignment, student presentations, and in-class discussion) to introduce the key concepts of effective leadership. Student participation will be paramount to the success of the course and to the students’ experience. This 3 credit course provides an introduction to leadership in pharmacy practice. It includes an introduction to leadership, leadership fundamentals, leadership skills in various settings and discussions with professional leaders as well as assignments requiring interaction with pharmacy leaders. Prereq: Successful entry into the spring semester of the second professional year (PY2).

PHR 946 INTEGRATED DRUGS AND DISEASES 3: CARDIOLOGY. (6)

This course will describe the physiology, pharmacology, medicinal chemistry, pathophysiology, and therapeutics associated with commonly encountered disease states in cardiology so that students can design and manage drug-related care plans for patients with these disease states. Prereq: Successful completion of ALL required courses in the Doctor of Pharmacy degree program sequence leading up to IDD 3: Cardiology.

PHR 947 INTEGRATED DRUGS AND DISEASES 3: GENITOURINARY. (2)

[This course meets for 8 weeks – 1/2 semester.] This course will describe the pharmacology, medicinal chemistry, pathophysiology, and therapeutics associated with commonly encountered genitourinary (GU) disorders so that students can design and manage drug-related care plans for patients with these disease states. Prereq: Successful completion of PY1 courses in the PharmD program.

PHR 948 INTEGRATED DRUGS AND DISEASES 3: PULMONARY. (3)

[This course will meet twice per week for 12 weeks.] A cornerstone of good pharmaceutical care is advanced pharmacotherapy competency. The successful practitioner must critically analyze knowledge from the areas of epidemiology, pathology, pathophysiology, pharmacology, drug therapy, and monitoring to assure optimal drug efficacy and safety in conjunction with cost-effectiveness. Integration of pathology, pharmacology, and pharmacokinetic/dynamic principles is necessary in order to design a rational treatment approach to pulmonary disease states. This course enables Doctor of Pharmacy candidates to obtain a comprehensive and intensive overview of these core areas for commonly encountered pulmonary diseases. Students will be able to use the acquired knowledge to develop and implement patient-specific therapeutic plans. Prereq: Successful completion of all previous IDD courses; in overall good standing.

PHR 950 PATIENT-CENTERED CARE EXPERIENCE 5. (4)

This is the fifth course in the six-semester Patient-Centered Care Experience (PaCE) course sequence that is part of the pre-APPE curriculum. The PaCE course structure integrates PY1, PY2, and PY3 students into concurrent weekly laboratory sessions and intermittent complementary experiential fieldwork experiences. The course is designed to assist in developing the knowledge, skills, and attitudes needed to fulfill the professional and technical responsibilities necessary to provide patient-centered care and manage the medication use system. Prereq: PaCE4 (PHR 940). Coreq: PHR 956, PHR 957, PHR 954. The experiential component requires the student to be registered with the Kentucky Board of Pharmacy as a Pharmacy Intern.

#PHR 951 SCHOLARSHIP I. (3)

This course is the first of a series of two courses that will advance students' understanding of scholarship and the scholarly process by providing them a systematic approach to build problem-solving skills. The material covered in Scholarship I aims to achieve three major objectives towards the synthesis of a complete research plan: (1) the definition of common elements of problem solving and scholarship, (2) understanding and use of descriptive statistics, and (3) the creation of appropriate research design(s) and research-based questions. The course will consist of instructional mini-lectures and student group active learning activities building on materials learned in Clinical Reasoning. Prereq: PHR 914 Clinical Reasoning.

#PHR 954 DIFFERENTIAL DIAGNOSIS IN PRIMARY CARE. (2)

The primary goal of this course is to prepare pharmacy students to accurately assess patient status, identify potential problems and diagnoses based upon symptomatic complaints, and recommend the most appropriate course of action. Emphasis will be placed on clinical problem identification and therapeutic decision-making. Students will develop proficiency in systems screening, differential interviewing strategies, risk factors, and red-flag recognition. Pattern recognition and algorithmic approaches/diagnostic schematic approaches to clinical problem solving will be presented and practiced using case presentations. Emphasis will also be placed on the development of more advanced interviewing and observational skills through the reinforcement of medical history taking, physical exam skills, and laboratory interpretation. Prereq: Anatomy, physiology, and pathophysiology; basic physical exam skills; basic patient interviewing and medical history skills; medical terminology; clinical reasoning. Coreq: Pharmacology; pharmacotherapy; evidence-based medicine/primary literature research and review; introductory clinical experiences.

#PHR 956 INTEGRATED DRUGS AND DISEASES 4: PSYCHIATRY. (4)

This course will describe the pharmacology, medicinal chemistry, pathophysiology, and therapeutics associated with commonly encountered psychiatric disorders, so that students can design and manage drug-related care plans for patients with these disease states. Prereq: Successful completion of the second professional year of the PharmD degree program.

#PHR 957 INTEGRATED DRUGS AND DISEASES 4: ONCOLOGY. (4)

This course will describe the pharmacology, medicinal chemistry, pathophysiology, and therapeutics associated with of hematological and oncological illnesses so that students can design and manage drug-related care plans for patients with these disease states. Prereq: Completion of the second-year of the College of Pharmacy curriculum.

PHR 960 PATIENT-CENTERED CARE EXPERIENCE 6. (4)

This is the sixth course in the six-semester Patient-Centered Care Experience (PaCE) course sequence that is part of the pre-APPE curriculum. The PaCE course structure integrates PY1, PY2, and PY3 students into concurrent weekly laboratory sessions and intermittent complementary experiential fieldwork experiences. The course is designed to assist in developing the knowledge, skills, and attitudes needed to fulfill the professional and technical responsibilities necessary to provided patient-centered care and manage the medication use system. Prereq: PaCE5 (PHR 950). Coreq: PHR 966, PHR 967. The experiential component requires the student to be registered with the Kentucky Board of Pharmacy as a Pharmacy Intern.

#PHR 961 SCHOLARSHIP II. (3)

This course is the second of a series of two courses that will advance students understanding of scholarship and the scholarly process by providing them a systematic approach to build problem-solving skills. The material covered in Scholarship II aims to achieve three major objectives towards the synthesis of a complete research plan: (1) the definition of common elements of writing an R21 NIH grant application, (2) the definition of common elements of writing an IRB protocol, and (3) the definition of common elements of writing a research manuscript. The course will consist of instructional online modules, in-class mini-lectures and student group active learning activities building on materials learned in Scholarship I (PHR 951). The students will have the opportunity to choose projects from: (1) business plan development, (2) IRB protocols, and (3) research proposal. Prereq: Scholarship I (PHR 951).

#PHR 964 PHARMACY OPERATIONS AND FINANCIAL MANAGEMENT. (3)

This course provides an introduction to fundamental management and business principles pertaining to pharmacy practice settings. The course covers concepts of operations management, human resources management, and financial management. The purpose of this course is to provide students with requisite business skills and knowledge necessary to function as a professional within a health care organization. Prereq: Successful entry into spring semester of Professional Year 2.

#PHR 965 EVIDENCE-BASED SCIENCE AND PRACTICE. (1)

This course's goal is to develop pharmacists who can critically evaluate, interpret and apply the results of original research to support evidence-based practice. This class seeks to enhance the student's ability to identify original research from the biomedical literature, evaluate its quality, and determine its utility in specific patient-care situations. Prereq: Active enrollment in PharmD program and completion of preceding PY1 and PY2 courses.

#PHR 966 INTEGRATED DRUGS AND DISEASES 5: CRITICAL CARE. (4)

This course will describe the physiology, pharmacology, medicinal chemistry, pathophysiology, and therapeutics associated with commonly encountered disease states requiring admission to an intensive care unit so students can work with a team of providers to design and manage drug-related care plans for patients with these disease states. Prereq: Successful completion of ALL required courses in the PharmD degree program sequence leading up to IDD 5: Critical Care; HIPAA certification; SCM access.

#PHR 967 INTEGRATED DRUGS AND DISEASES 5: PHARMACOTHERAPY APPLICATIONS IN SPECIAL POPULATIONS. (3)

This course will describe the pharmacology, medicinal chemistry, pathophysiology, pharmacogenomics, and therapeutics associated with commonly encountered special populations to facilitate the student design and management of drug-related care plans for patients with these disease states. Prereq: Successful completion of the first and second-year curriculum in the College of Pharmacy.