

COURSE DESCRIPTIONS

College of Pharmacy Course Descriptions

Descriptions below provide an overview of the courses taught in the professional Pharm.D. curriculum. More in-depth descriptions will be provided in the course syllabi. The university adheres to the Integrated Postsecondary Education Data System definition of a credit hour as "a unit of measure representing the equivalent of an hour (50 minutes) of instruction per week over the entire term." Therefore, each single course credit requires a minimum of 700 minutes of continuous and ongoing instructional time. A minimum of one calendar week of instruction with a cumulative total of at least 700 minutes is required for each credit offered. This time excludes breaks and final exams.

Core Courses

Descriptions below provide an overview of the courses taught in the professional Pharm.D. curriculum. More in-depth descriptions will be provided in the course syllabi.

Fall P1

PHMY 600 - Personal and Professional Development for Student Pharmacists I (1 Credit)

The first course in the personal and professional development series imparts to the student pharmacist the knowledge, skills, abilities, behaviors, and attitudes necessary to provide patient education and demonstrate self-awareness and professionalism.

Prerequisites: first professional year standing.

PHMY 602 - Foundations of Pathophysiology and Pharmacology I (2 Credits)

An introduction to the basic principles and concepts of physiology, pathophysiology and pharmacology.

Prerequisites: First professional year standing.

PHMY 607 - Dosage Forms and Drug Delivery Systems (4 Credits)

A study of the physiochemical principles of the formulation, preparation, properties, and performance of the pharmaceutical dosage forms. Clinical application of the various dosage forms in patient care will be discussed.

Prerequisites: First professional year standing.

PHMY 615 - Pharmaceutical Biochemistry (3 Credits)

The course covers the molecular and biochemical basis of human biology and physiology. The properties and functions of biological molecules and biochemical pathways are covered. Emphasis is placed on the molecular basis of human physiology, causes of human diseases and how drugs produce biological effects.

Prerequisites: First professional year standing.

PHMY 621 - Foundations of Medicinal Chemistry I (3 Credits)

This course includes an introduction to the basic principles and concepts of medicinal chemistry and pharmacogenomics including the relationships of molecular structure to drug absorption, distribution, metabolism and excretion. The chemical rationale for drug therapeutic actions and side effects as well as the pharmacogenomics basis for individualized drug therapy is discussed.

Prerequisites: First professional year standing.

PHMY 650 - Introduction to Pharmacy Practice (2 Credits)

Introduction to the professional issues relevant to the practice of pharmacy.

Prerequisites: First professional year standing.

PHMY 656 - Pharmacy Calculations (2 Credits)

This course develops the mathematic skills and knowledge required in various pharmacy practice settings. Problem solving skills will be developed as students become proficient in basic math skills used to solve pharmacy calculations based word problems which are commonly seen in a variety of practice settings, including community, compounding, hospital, and nuclear pharmacy.

Prerequisites: First professional year standing.

PHMY 671 - Pharmacy Skills Lab I: Compounding and Applied Pharmaceutics (1 Credit)

The art, science and technology of pharmacy compounding.

Prerequisites: First professional year standing.

PHMY 680 - Introduction to Drug Information (1 Credit)

Basic principles of access and utilization of drug information resources.

Prerequisites: First professional year standing.

Spring P1

PHMY 601 - Personal and Professional Development for Student Pharmacists II (1 Credit)

The second course in the personal and professional development series imparts to the student pharmacist the knowledge, skills, abilities, behaviors, and attitudes necessary to provide patient education; patient and professional advocacy; collaborative and inclusive patient care; and to demonstrate self-awareness and professionalism.

Prerequisites: first professional year standing.

PHMY 603 - Foundations of Pathophysiology and Pharmacology II (3 Credits)

This is the second course in the series addressing the basic principles and concepts of physiology, pathophysiology and pharmacology.

Prerequisites: PHMY 602; first professional year standing.

PHMY 618 - Genomics, Pharmacogenomics, and Personalized Medicine (3 Credits)

The course focuses on nucleic acids as the core theme and examines the pathways used for transmission and expression of genetic information. Topics also include the cell cycle (mitosis) and gametogenesis (meiosis). Students will learn to apply knowledge of human genetic variation that influences drug therapy decision making. Recombinant DNA technology is covered as applied to the study of human health such as personalized medicine, genetic testing, stem cell therapy, gene therapy, RNA silencing, and production of biopharmaceuticals. Antibodies are discussed from the perspective of their use in diagnostic testing, as well as the utilization of antibodies as therapeutics.

Prerequisites: First professional year standing.

PHMY 624 - Foundations of Medicinal Chemistry II (3 Credits)

In an integrated approach to first year pharmacy education, Foundations in Medicinal Chemistry II will serve as a complementary course to PHMY 618 Genomics, Pharmacogenomics, and Personalized Medicine. We will utilize the principles and concepts learned in general and organic chemistry and PHMY621 to introduce the general molecular properties of pharmaceutical agents. The course will consist of a survey of the medicinal chemistry of the remaining major drug classes not covered in PHMY 621. Pharmacogenomic information will be emphasized where known and applicable to help explain variations in both therapeutic and side effects due to receptor structure, metabolism and/or other pharmacokinetic properties.

Prerequisites: PHMY 621; first professional year standing.

PHMY 657 - Medical Terminology (1 Credit)

A thorough knowledge of medical terminology is an essential building block in pharmacy education. This web-based course will aid the student in learning the language and terminology used in other pharmacy courses and all areas of pharmacy practice.

Prerequisites: First professional year standing.

PHMY 661 - Clinical Applications II (1 Credit)

Case-based discussions that integrate and demonstrate applicability of other course material.

Prerequisites: First professional year standing.

PHMY 662 - Patient Care Fundamentals (1 Credit)

This course introduces basic patient care fundamentals such as interpreting laboratory values, patient care planning processes, and clinical documentation. The course integrates basic sciences concepts, such as pharmacogenomics, with patient care. It also affords the student opportunities to practice medical literature searches, literature evaluation, and to recognize the social determinants of health in order to diminish disparities and inequities in access to quality care.

Prerequisites: first professional year standing.

PHMY 670 - Pharmacy Skill Lab II: Introduction to Community Pharmacy (1 Credit)

Interactive laboratory session designed to provide students with a thorough understanding of community pharmacy practice skills, to include the knowledge of prescription and drug order processing necessary to function in community pharmacy practice at a basic level.

Prerequisites: First professional year standing.

PHMY 690 - Transforming Healthcare (1 Credit)

The course goal is to lay the foundations for beginning health professions students to understand the complexities of the health care system and the role of interprofessional collaboration to improve the system. Through an interprofessional context, students will explore the art and science of teamwork and communication skills, cultural competency, ethical issues, healthcare disparities and social determinants of health, as well as develop ways to improve healthcare systems and patient safety.

Prerequisites: First professional year standing.

PHMY 750 - Self-Care and Complementary Medicines (4 Credits)

A review of indications, contraindications, and cautions involved with the recommendation and dispensing of nonprescription (OTC) drug items and complementary medicines.

Prerequisites: First professional year standing.

Summer P1**PHMY 699 - Introductory Community Practice Pharmacy Experience (4 Credits)**

Introduction to the practice of the pharmacy in the community pharmacy setting. Forty hours of directed experience per week for four weeks.

Prerequisites: First professional year standing.

Fall P2**PHMY 610 - Microbiology/Immunology (4 Credits)**

Introduction to the role of immunology in human disease and the properties, resistance patterns, diagnostic tools and clinical pearls of common (and not so common) bacterial, viral, fungal and parasitic infectious agents.

Prerequisites: Second professional year standing.

PHMY 700 - Personal and Professional Development for Student Pharmacists III (1 Credit)

The third course in the personal and professional development series which imparts to the student pharmacist the knowledge, skills, abilities, behaviors, and attitudes necessary to provide patient education and demonstrate self-awareness and professionalism.

Prerequisites: second professional year standing.

PHMY 710 - Biopharmaceutics and Pharmacokinetics (3 Credits)

Study of the pharmacokinetics of drug absorption, distribution, and elimination (metabolism and excretion). Introductory application of pharmacokinetics to drug interactions and dosage regimen design and adjustment, selected disease states and special populations.

Prerequisites: PHMY 607; second professional year standing.

PHMY 722 - Pathophysiology and Pharmacology I (3 Credits)

The first course in a series that applies pathophysiology and pharmacology principles introduced in the foundations courses in the first year in an organ-based approach. The course is designed to integrate organ system pathophysiology and pharmacology with pharmacotherapy.

Prerequisites: Second professional year standing.

PHMY 751 - Patient Care Applications I (1 Credit)

This course develops critical thinking skills required for pharmacy practice through case-based discussions and care plan development designed to integrate and demonstrate applicability of current coursework and previous knowledge gained from prior course material in patient centered care.

Prerequisites: second professional year standing.

PHMY 760 - Clinical Applications III (1 Credit)

Case-based discussions that integrate and demonstrate applicability of other course material in patient care.

Prerequisites: Second professional year standing.

PHMY 772 - Pharmacotherapy I (4 Credits)

This course is the first in a 4-semester sequence of courses providing an organ-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. This course is coordinated with Pathophysiology and Pharmacology I.

Prerequisites: Second professional year standing.

PHMY 790 - Pharmacy Skills Lab III: Introduction to Health-Systems Pharmacy (1 Credit)

Exposes students to the practice of pharmacy while also illustrating how theoretical concepts from the basic pharmaceutical sciences relate to daily pharmacy practice, especially in institutional settings. This lab focuses on understanding of medical chart evaluation with emphasis on drug therapy monitoring and developing skills in different aspects of hospital pharmacy (sterile product preparation, unit dose, prepackaging and compounding, order entry and cart-fill).

Prerequisites: Second professional year standing.

Spring P2**PHMY 701 - Personal and Professional Development for Student Pharmacists IV (1 Credit)**

The fourth course in the personal and professional development series imparts to the student pharmacist the knowledge, skills, abilities, behaviors, and attitudes necessary to provide patient education; patient and professional advocacy; collaborative and inclusive patient care; and to demonstrate self-awareness and professionalism.

Prerequisites: second professional year standing.

PHMY 723 - Pathophysiology and Pharmacology II (2 Credits)

The second course in a series that applies pathophysiology and pharmacology concepts introduced in the foundations courses in the first year in an organ-based approach. The course is designed to integrate organ system pathophysiology and pharmacology with pharmacotherapy.

Prerequisites: PHMY 722; second professional year standing.

PHMY 752 - Patient Care Applications II (1 Credit)

This course further develops critical thinking skills required for pharmacy practice through case-based discussions and care plan development designed to integrate and demonstrate applicability of current coursework and previous knowledge gained from prior course material in patient centered care.

Prerequisites: second professional year standing.

PHMY 761 - Clinical Applications IV (1 Credit)

Case-based discussions that integrate and demonstrate applicability of other course material in patient care.

Prerequisites: Second professional year standing.

PHMY 773 - Pharmacotherapy II (5 Credits)

This course is the second in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. This course is coordinated with Pathophysiology and Pharmacology II.

Prerequisites: PHMY 772; second professional year standing.

PHMY 780 - Outcomes Design and Assessment (3 Credits)

Common statistical methods and study designs used in pharmacoepidemiology and outcomes research, as well as to issues related to the measurement, analysis, and interpretation of results of clinical trials and outcomes studies.

Prerequisites: Second professional year standing.

PHMY 791 - Pharmacy Skills Lab IV: Applied Health-Systems Pharmacy (1 Credit)

Exposes students to the practice of pharmacy while also illustrating how theoretical concepts from the basic pharmaceutical sciences relate to daily pharmacy practice, especially in the institutional setting. Students must successfully complete media fill IV preparation.

Prerequisites: PHMY 790; second professional year standing.

PHMY 890 - Clinical Pharmacokinetics (3 Credits)

Clinical application of basic pharmacokinetic principles to safe and effective patient management with emphasis on design of dosage regimens, therapeutic monitoring, and adjustment of therapy. Application illustrated and practiced through discussions and case examples.

Prerequisites: PHMY 710; second professional year standing.

Summer P2**PHMY 798 - Introductory Institutional Practice Pharmacy Experience (4 Credits)**

Introduction to the practice of the pharmacy in the institutional setting. Forty hours of directed experience per week for four weeks.

Prerequisites: Second professional year standing.

Fall P3**PHMY 771 - Pharmacy Skills Lab V: Applied Community Pharmacy (2 Credits)**

Provide students with an advanced knowledge of prescription and drug order processing, and assist them in the development of appropriate skills necessary for provision of pharmaceutical care to patients in the community setting, through the use of medication profiles, patient counseling, personal interviews, and appropriate prescription and non-prescription drug information.

Prerequisites: PHMY 670; third professional year standing.

PHMY 800 - Personal and Professional Development for Student Pharmacists V (1 Credit)

The fifth course in the personal and professional development series which imparts to the student pharmacist the knowledge, skills, abilities, behaviors, and attitudes necessary to provide patient education and demonstrate self-awareness and professionalism.

Prerequisites: third professional year standing.

PHMY 822 - Pathophysiology and Pharmacology III (3 Credits)

This is the third in a 4-semester sequence of courses aimed at integrating the discussion of specific disease states and the mechanism of action of the pharmacologic agents used to treat those disease states. This knowledge will be integrated, utilized and applied in a parallel sequence of courses in Pharmacotherapy using an organ-system based approach emphasizing pharmaceutical care and disease management.

Prerequisites: PHMY 722, PHMY 723; third year professional standing.

PHMY 850 - Health Care Systems and Management (4 Credits)

This course provides insight and understanding of the U.S. health care system and pharmacy's role within that system. Managerial skills and concepts are taught to allow pharmacists to maximize their contribution to this health care system and to the patients it serves.

Prerequisites: Third professional year standing.

PHMY 860 - Clinical Applications V (1 Credit)

Case-based discussions that integrate and demonstrate applicability of other course material in patient care.

Prerequisites: Third professional year standing.

PHMY 862 - Patient Care Integration (1 Credit)

This course will primarily be a case-based class designed to enhance basic pharmaceutical science principles in which students clinically apply knowledge learned from current and past coursework in the University of South Carolina College of Pharmacy curriculum. Students will be required to develop assessments and plans for provided cases. SOAP notes will be required as specified. Each case will be fully discussed in each class period to enhance understanding of the topic. In addition to case-based discussions, students will be introduced to clinical practice exercises, including but not limited to a formulary review assignment, in preparation for the transition to Advanced Pharmacy Practice Experiences (APPEs) following the third professional year. Finally, students will be required to engage in peer evaluations throughout the course.

Prerequisites: third professional year standing.

PHMY 873 - Pharmacotherapy III (4 Credits)

This course is the third in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. This course is coordinated with PHMY 822, Pathophysiology and Pharmacology III.

Prerequisites: PHMY 772, PHMY 773; third professional year standing.

PHMY 880 - Advanced Drug Information (2 Credits)

This course is designed to provide students with advanced drug information practice and critical literature evaluation skills. This course provides students with the requisite skills to facilitate life-long learning.

Prerequisites: PHMY 680; third professional year standing.

Spring P3**PHMY 823 - Pathophysiology and Pharmacology IV (2 Credits)**

This is the fourth in a 4-semester sequence of courses aimed at integrating the discussion of specific disease states and the mechanism of action of the pharmacologic agents used to treat those disease states. This knowledge will be integrated, utilized and applied in a parallel sequence of courses in Pharmacotherapy using an organ-system based approach emphasizing pharmaceutical care and disease management.

Prerequisites: PHMY 822; third year professional standing.

PHMY 861 - Clinical Applications VI (1 Credit)

A capstone course, where case studies of complex patients and additional application exercises will bring together concepts learned throughout the previous semesters in the professional program.

Prerequisites: Third professional year standing.

PHMY 864 - Advanced Pharmacy Practice Experience Readiness (1 Credit)

This course is a capstone course that will primarily be an application of current and past coursework in the College of Pharmacy curriculum to enhance knowledge learned and prepare students for Advanced Pharmacy Practice Experiences (APPEs). Assignments, presentations, exams, and patient cases will allow students to apply previously learned knowledge and demonstrate mastery of skills. Students will be required to work both individually and in groups to complete course assignments.

Prerequisites: third professional year standing.

PHMY 801 - Personal and Professional Development for Student Pharmacists VI (1 Credit)

The final course in the personal and professional development series which imparts to the student pharmacist the knowledge, skills, abilities, behaviors, and attitudes necessary to demonstrate patient education; patient and professional advocacy, collaborative and inclusive patient care; leadership; innovation and entrepreneurship; self-awareness and professionalism.

Prerequisites: third professional year standing.

PHMY 874 - Pharmacotherapy IV (5 Credits)

This course is the fourth in a 4-semester sequence of courses providing a systems-based approach to pharmaceutical care and disease management. Students will learn about disease prevention and health promotion, as well as the drug and non-drug therapy of acute and chronic diseases seen in both hospitalized and ambulatory patients. Emphasis is placed on preventing, identifying, and solving drug-related problems. This course is coordinated with PHMY 823, Pathophysiology and Pharmacology IV.

Prerequisites: PHMY 873; third professional year standing.

PHMY 885 - Pharmacy Law and Ethics (3 Credits)

Federal and state laws and regulations governing the practice of pharmacy and introduction to the professional and ethical issues relevant to the practice of pharmacy.

Prerequisites: Third professional year standing.

PHMY 895 - Clinical Assessment (3 Credits)

Development of clinical assessment skills necessary in the provision of pharmaceutical care to patients with a variety of disease states.

Prerequisites: Third professional year standing.

Advanced Pharmacy Practice Experiences

Descriptions below provide an overview of the APPEs available in the professional Pharm.D. curriculum. Individual course syllabi should be referred to for site-specific expectations.

P4 APPEs**PHMY 963 - Acute/General Medicine Pharmacy Practice Experience I (4 Credits)**

This required advanced pharmacy practice experience (APPE) provides clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution.

Prerequisites: Fourth professional year standing.

PHMY 964 - Acute/General Medicine Pharmacy Practice Experience II (4 Credits)

This required advanced pharmacy practice experience (APPE) provides clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution.

Prerequisites: fourth professional year standing.

PHMY 965 - Acute/General Medicine Pharmacy Practice Experience III (4 Credits)

This required advanced pharmacy practice experience (APPE) provides clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution.

Prerequisites: fourth professional year standing.

PHMY 966 - Acute/General Medicine Pharmacy Practice Experience IV (4 Credits)

This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution.

Prerequisites: fourth professional year standing.

PHMY 967 - Acute/General Medicine Pharmacy Practice Experience V (4 Credits)

This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution.

Prerequisites: fourth professional year standing.

PHMY 968 - Acute/General Medicine Pharmacy Practice Experience VI (4 Credits)

This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution.

Prerequisites: fourth professional year standing.

PHMY 969 - Acute/General Medicine Pharmacy Practice Experience VII (4 Credits)

This advanced pharmacy practice experience (APPE) provides additional clinical pharmacy activity on a variety of adult and pediatric medicine inpatient services including cardiology, critical care, emergency medicine, geriatrics, gastrointestinal, infectious disease, nephrology, OB-GYN, oncology, psychiatry, pulmonary and transplant. The APPE provides an exposure to a variety of disease states that allows the student to gain experience monitoring drug therapy and to participate in the therapeutic decision making process. Additional competencies to be achieved during this APPE include: (1) how to develop a problem list, (2) how to present a patient, (3) how to develop and implement a monitoring plan, (4) how to take a medication history, (5) how to respond to a drug information request, and (6) review the policies and procedures at the institution.

Prerequisites: fourth professional year standing.

PHMY 970 - Ambulatory Care Pharmacy Practice Experience I (4 Credits)

This required advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients.

Prerequisites: fourth professional year standing.

PHMY 971 - Ambulatory Care Pharmacy Practice Experience II (4 Credits)

This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients.

Prerequisites: fourth professional year standing.

PHMY 972 - Ambulatory Care Pharmacy Practice Experience III (4 Credits)

This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients.

Prerequisites: fourth professional year standing.

PHMY 973 - Ambulatory Care Pharmacy Practice Experience IV (4 Credits)

This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients.

Prerequisites: fourth professional year standing.

PHMY 974 - Ambulatory Care Pharmacy Practice Experience V (4 Credits)

This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients.

Prerequisites: fourth professional year standing.

PHMY 975 - Ambulatory Care Pharmacy Practice Experience VI (4 Credits)

This advanced pharmacy practice experience (APPE) involves the student in the daily provision of clinical pharmacy services in the ambulatory care setting including anticoagulation, geriatrics, HIV, Indian Health Services, oncology, pain management, and primary care. Responsibilities include providing drug therapy for disease states commonly encountered in the outpatient setting, providing drug regimen reviews, physical assessment and interviewing patients to elicit drug histories, health status, and adherence to therapy. A significant aspect of this rotation pertains to the long-term management of chronically ill patients.

Prerequisites: fourth professional year standing.

PHMY 976 - Community Pharmacy Practice I (4 Credits)

This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding.

Prerequisites: fourth professional year standing.

PHMY 977 - Community Pharmacy Practice II (4 Credits)

This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides additional pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding.

Prerequisites: fourth professional year standing.

PHMY 978 - Community Pharmacy Practice III (4 Credits)

This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides additional pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding.

Prerequisites: fourth professional year standing.

PHMY 979 - Community Pharmacy Practice IV (4 Credits)

This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in community pharmacy. This APPE provides additional pharmacy experience in a variety of community settings including chain, clinic, compounding and independent. The emphasis is placed on patient counseling, immunizations, medication therapy management, and/or compounding.

Prerequisites: fourth professional year standing.

PHMY 980 - Hospital/Health System Pharmacy Practice Experience I (4 Credits)

This required advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in a hospital/health system setting. This APPE provides pharmacy experience in a variety of hospital/health system practice areas including regulatory compliance, human resources, patient care, informatics, and drug distribution process.

Prerequisites: fourth professional year standing.

PHMY 981 - Hospital/Health System Pharmacy Practice Experience II (4 Credits)

This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in a hospital/health system setting. This additional APPE provides pharmacy experience in a variety of hospital/health system practice areas including regulatory compliance, human resources, patient care, informatics, and drug distribution process.

Prerequisites: fourth professional year standing.

PHMY 982 - Hospital/Health System Pharmacy Practice Experience III (4 Credits)

This advanced pharmacy practice experience (APPE) builds upon the introductory pharmacy practice experience in a hospital/health system setting. This APPE provides pharmacy experience in a variety of hospital/health system practice areas including regulatory compliance, human resources, patient care, informatics, and drug distribution process.

Prerequisites: fourth professional year standing.

PHMY 983 - Elective Pharmacy Practice Experience I (4 Credits)

Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine.

Prerequisites: fourth professional year standing.

PHMY 984 - Elective Pharmacy Practice Experience II (4 Credits)

Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine.

Prerequisites: fourth professional year standing.

PHMY 985 - Elective Pharmacy Practice Experience III (4 Credits)

Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine.

Prerequisites: fourth professional year standing.

PHMY 986 - Elective Pharmacy Practice Experience IV (4 Credits)

Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine.

Prerequisites: fourth professional year standing.

PHMY 987 - Elective Pharmacy Practice Experience V (4 Credits)

Elective pharmacy practice experiences provide students with the opportunity to explore a variety of pharmacy practice settings outside of the four core curricular categories (acute/general medicine, ambulatory care, community, and hospital/health system). These elective experiences are typically in non-traditional pharmacy settings and include, but are not limited to, academia, administration, drug information, industry, informatics, international, investigational drug services, long term care, mail order, managed care, nuclear, poison center, research and veterinary medicine.

Prerequisites: fourth professional year standing.

PHMY 999 - Clinical Seminar (1 Credit)

Regularly scheduled, formal, oral presentations with audiovisuals on controversial or new areas of pharmacotherapeutics, pharmacoconomics, pharmaceuticals, medicinal chemistry or pharmacy practice. A follow-up question and answer period examines the student's ability to substantiate his/her conclusions. Content and presentation technique will be critiqued.

Prerequisites: fourth professional year standing.

Elective Courses

Elective courses are offered based on faculty availability, space availability, and sufficient enrollment.

P2

PHMY 786 - Pediatric Pharmacotherapy (2 Credits)

This challenging course is designed to provide the student with increased exposure to disease states, medication issues, and clinical decision-making skills specific to the pediatric population. Pediatrics is an integral component to most pharmacy careers, and gaining a greater understanding of the patient population's challenges and nuances is necessary to become a confident and well-rounded practitioner. This elective also seeds to provide exposure to the pediatric pharmacy community, including experts in the subspecialty areas and organizations.

Prerequisites: second professional year standing.

PHMY 792 - Advanced Pharmacy Compounding I (1 Credit)

This course will build upon the knowledge acquired in the first professional year courses Dosage Forms/Drug Delivery Systems and Compounding/Applied Pharmaceutics lab. The course will provide emphasis on practical application in the evaluation of unique dosage forms, pharmacotherapy, and special pharmaceutical needs of various patient populations. This course is self-paced and delivered in an online format utilizing prerecorded lectures.

Prerequisites: second professional year standing.

PHMY 793 - Advanced Topics in Pharmacy Compounding II (1 Credit)

This course is an elective course that provides additional insight and understanding into a variety of pharmacy compounding topics, which include nutrient depletion, drug-induced nutrient depletion, metabolic demands of athletes, men's health, and family medicine. This course is self-paced and delivered in an online format utilizing prerecorded lectures.

Prerequisites: second professional year standing.

PHMY 794 - Pharmacist Entrepreneurship (3 Credits)

This course provides an entrepreneurship overview, including, but not limited to 1) the characteristics, behaviors, and attitudes of successful entrepreneurs, 2) current topics in entrepreneurship, e.g., the lean startup methodology, 3) examination of how to create an entrepreneurial mindset, 4) entrepreneurship as it applies to pharmacy ownership and innovative patient care initiatives, 5) application of relevant business skills, e.g., accounting, marketing, and finance, 6) business planning and creation of a business proposition.

Prerequisites: second professional year standing; recommended that student has completed an accounting course.

P3**PHMY 776 - Developing a Medication Therapy Management Service (2 Credits)**

This course will prepare students to develop and implement a pharmaceutical care service into a community pharmacy setting. The focus will be on designing a Medication Therapy Management service; however other clinical pharmacy services will be discussed. Students will apply basic principles of small business administration and development to the creation of a pharmacy service. Students will participate in interactive lectures, written assignments, and formal presentations.

Prerequisites: third professional year standing.

PHMY 851 - Acute Care Therapeutics (2 Credits)

A disease-oriented and organ-integrated approach to the care of patients with acute illnesses managed in the in-patient hospital setting. Students will learn common disease processes that affect the acutely ill hospitalized patient and the appropriate pharmacotherapy to treat these patients. This course focuses on developing critical thinking and problem solving skills, and integrating material from this course and previous courses in a case-based format.

Prerequisites: third professional year standing.

PHMY 857 - Community Pharmacy Practice and Operations (2 Credits)

This course is intended to provide a practical look at independent community pharmacy. The goal of the course is to expose students to the many aspects involved in starting, owning and running a business. Each session will focus on a unique aspect of independent pharmacy ownership or pharmacist driven business, along with management skills required to effectively operate the business. Students will learn to critically appraise and discuss independent store ownership/management or pharmacy related business through lectures, readings, discussions and projects.

Prerequisites: third professional year standing.

PHMY 858 - Drug Interactions (2 Credits)

This course is designed to prepare students to appropriately recognize, predict, assess, and manage drug interactions that are encountered in pharmacy practice.

Prerequisites: third professional year standing.

PHMY 859 - Design and Conduct of Clinical Research Studies (2 Credits)

This course is designed to provide students with exposure to clinical research. The demand for pharmacist researchers in a variety of settings continues to increase, and clinical pharmacists are often called upon to engage in some research activities. Residency training provides practical application of research; however, most residents lack an in-depth exposure to the varied aspects of research prior to graduation. This class will provide students with information related to various types of research, discuss the ethical considerations related to clinical research, and provide students with the opportunity to develop and present a clinical research protocol. This course will help prepare students for post-graduate (residency, fellowship, or PhD) research endeavors.

Prerequisites: third professional year standing.

PHMY 863 - Medication Safety Management (2 Credits)

This course is designed to teach students proper medication safety practices. As medications are prescribed, prepared, dispensed and administered safely and appropriately, patients' lives are ultimately improved. However, health care providers are human and thereby fallible by nature. Knowledge of ways in which medication errors commonly occur and the modalities in place to prevent such errors is important to the practice of pharmacy. This course will allow students to learn the history of medication safety, institutional policies, and technological advances in medication safety.

Prerequisites: third professional year standing.

PHMY 879 - Patient-Centered Approach to Medication Therapy Management (2 Credits)

This elective prepares students to care for patients participating in medication therapy management. The focus will be on communicating with a patient during a MTM session to identify the patient's current medication therapy problems and prevent future medication therapy problems. Students will apply therapeutic principles learned in the curriculum to improve the patient's overall care, as related to the patient's medication therapies.

Prerequisites: third professional year standing.

PHMY 881 - Senior Care Pharmacy Practice (2 Credits)

This course will introduce students to various topics related to the care of older patients in any setting. Course content will complement the PHMY curriculum in regard to geriatric pathophysiology, pharmacology, socioeconomics, regulations, and pharmacotherapeutics. In addition, it will expand upon the various practices of senior care pharmacy. Practicing consultants and other topic experts will serve as lecturers. In addition to class discussions and lectures, students will participate in a consultant pharmacist shadowing experience and will conduct an interview with a senior patient.

Prerequisites: third professional year standing.

PHMY 884 - Delivering MTM Services (2 Credits)

This course will utilize the "Delivering MTM Services in the Community" certificate training program developed by APhA and ASCP to provide students the essential skills necessary to become a successful MTM practitioner. Students will learn how to evaluate complicated medication regimens, identify medication-related problems, and make recommendations. Aspects of business development and management will also be discussed. Students will participate in interactive lectures, reading and writing assignments, critical thinking exercises, and patient counseling sessions.

Prerequisites: third professional year standing.

PHMY 886 - Pharmacotherapy Cases (2 Credits)

This challenging course is designed to provide the student with the opportunity to gather, analyze, and synthesize medical information from complex patient cases into complete pharmacotherapeutic treatment plans designed to improve patient outcomes. This process will enhance the student's ability to be an independent and active learner, foster the student's individual and group problem solving abilities, promote the critical examination of medical problems, and develop student's clinical skills and decision-making abilities.

Prerequisites: third professional year standing.

PHMY 887 - Advanced Endocrinology (2 Credits)

This elective course is designed to provide the student with increased exposure to disease states and medications in the specialty of endocrinology. In addition, the student will have the opportunity to refine clinical knowledge, decision-making skills, and presentation ability within this course. This course will provide active learning opportunities involving clinical debates, drug information questions, and disease state presentations.

Prerequisites: third professional year standing.

PHMY 898 - Telemental Health (3 Credits)

The objective of this course is to introduce nursing, pharmacy and social work students to direct telemental health practice in health settings – the use of telecommunications technology to provide behavioral health sciences. This course provides health professions students with a detailed examination of the use of telehealth processes to transform the provision of healthcare. Through an interprofessional context, students will learn the history and status of telemental health activities; engage with stimulated and live telemental health learning experiences; understand the use of telemental health to improve healthcare access and population health; and embrace the changing models of care resulting from advancing telemental health technologies.

Prerequisites: third professional year standing.

P2 or P3**PHMY 716 - Special Project, Dept. of Pharmaceutical & Biomedical Sciences (1-4 Credits)**

An individualized program of study or research arranged by consultation between student and faculty member. Credit is variable and the course may be repeated for credit.

Prerequisites: second or third professional year standing or in fulfillment of graduate program requirement or honors thesis.

PHMY 717 - Cancer: Causes, Treatment, and Prevention (2 Credits)

An overview of basic concepts in cancer epidemiology, genetics, and biology, and the therapeutic approaches utilized in the prevention and treatment of cancer.

Prerequisites: second or third professional year standing.

PHMY 756 - Clinical Immunology and Transplant (2 Credits)

This course will introduce students to the principles of solid organ transplantation (SOT) and the role of a pharmacist in the continuum of care for transplant recipients through case-based learning and exposure to primary literature. Students will learn indications, common disease processes, and complications associated with kidney, pancreas, liver, lung, and heart transplantation in addition to the management of population-specific immunosuppression pharmacotherapy regimens.

Prerequisites: second or third professional year standing.

PHMY 757 - Special Project, Dept of Pharmacy and Outcome Sciences (1-4 Credits)

An individualized program of study or research arranged by consultation between student and faculty member. Credit is variable and the course may be repeated for credit.

Prerequisites: second or third professional year standing or in fulfillment of graduate program requirement or honors thesis.

PHMY 762 - Creating Pharmacy Leaders (2 Credits)

This course is designed to teach students the leadership skills needed to influence people and organizations in an effort to create positive change within the practice of pharmacy.

Prerequisites: second or third professional year standing.

PHMY 763 - Introduction to Pharmacy Pathways and Careers (3 Credits)

The course will emphasize aspects of pharmacy career development, to include understanding of the role of a professional, strategies in dealing with various types of patients, development of professional presentations, and familiarity with career pathways in pharmacy.

Prerequisites: second or third professional year standing.

PHMY 764 - Personal Finance (3 Credits)

This course is designed to provide the health care practitioner with the knowledge and skills to manage their personal finances in an effective manner. After successfully completing this course, the student will be able to understand the process for making personal financial decisions; establish personal financial goals; evaluate the factors that influence personal financial planning; and apply strategies for attaining personal financial goals.

Prerequisites: second or third professional year standing.

PHMY 765 - Introduction to Pharmaceutical Industry (2 Credits)

This course will provide students with an overview of the pharmaceutical industry with an emphasis on the drug development process, clinical research, business development, regulatory affairs, and marketing.

Prerequisites: second or third year professional year standing.

PHMY 766 - Alternative Medicine (2 Credits)

This course is designed to expose the student to a wide variety of herbal medicines and dietary supplements. Discussions will also include regulation of herbal supplements, evaluation of the alternative medicine literature, and disease-directed discussions with case studies.

Prerequisites: second or third professional year standing.

PHMY 767 - Off the SCRIPT: Diversity, Equity, and Inclusion Perspectives in Health Care (2 Credits)

This course will teach students to consider social determinants of health when interacting with diverse patients. Students will characterize the role of various healthcare professions in reducing disparities and inequities. Students will learn to communicate with and advocate for patients through interactions with content experts and development of interview-style podcasts.

Prerequisites: second or third professional year standing.

PHMY 768 - Advancing Rural/Underserved Care and Health (2 Credits)

This elective course provides a variety of experiences for students to expand their understanding of healthcare disparities, rural healthcare and begin professional networking in a rural area of South Carolina. Students will develop and employ entrepreneurship skills to design a career plan for a pharmacist in a rural community. Students will develop and employ leadership skills to design an initiative to advance healthcare within a rural community. Students will also develop and employ research skills to design a proposal for evaluating their initiative to advance healthcare within a rural community.

Prerequisites: Second or third professional year standing.

PHMY 774 - Pharmacy Political Advocacy (2 Credits)

This class will focus on enabling students to become advocates for the pharmacy profession through review of current legislation that affects pharmacists and healthcare, as well as determining the impact of legislation on the profession. Students will learn how to affect legislation through contact with their representatives and through collaboration with pharmacy organizations. Concepts for providing to their representatives a concise review of the effect of legislation will also be reviewed.

Prerequisites: second or third professional year standing.

PHMY 779 - Advanced Self-Care (2 Credits)

This elective focuses on developing critical thinking, problem solving, and communication skills by incorporating principles of self-management covered in Self-care and Complementary Medicines (PHMY 750) into evidence-based case discussions and presentations.

Prerequisites: second or third professional standing.

PHMY 784 - Post-graduate and Research Training (2 Credits)

This course is designed to prepare students for and promote post-graduate training, with an emphasis on residency training, but also including PhD and fellowship training. All elements of preparation for post-graduate training will be covered; the class will provide information related to various types of research, discuss the ethical considerations related to research and provide the opportunity to develop and present a research protocol.

Prerequisites: second or third professional year standing.

PHMY 785 - Principles of Pharmacoepidemiology (2 Credits)

Didactic lectures and discussions involving content from relevant textbooks and research literature on the principles of pharmacoepidemiology, research design, and statistical techniques.

Prerequisites: Second or third professional year standing.

PHMY 788 - Interprofessional Prevention of Childhood Obesity (2 Credits)

This course introduces health professions students to concepts in community and public health focusing on childhood obesity. The course is in collaboration with the Junior Doctors of Health (JDOH) program. JDOH is an interprofessional service-learning program that works with children in low-income schools with the aim of long term prevention of childhood obesity. During the course, students will lead education and interactive sessions that are part of the JDOH curriculum to promote healthy diet and physical activity behaviors. Students from public health, social work, and pharmacy will participate in didactic class sessions together then will provide education regarding the prevention of childhood obesity as interprofessional teams to elementary students in local schools. Teams will then develop presentations regarding their experiences to present during the final class session.

Prerequisites: second or third professional year standing.

PHMY 855 - The What, Why, and How of Health Sciences Research (1 Credit)

Students will be exposed to the process of designing a research experiment from idea conception through manuscript submission, including protocol development, IRB approval, abstract submission, grant funding, and peer review. Students will also familiarize themselves with technology commonly used in data collection, analysis, and manuscript writing. Weekly opportunities to engage with accomplished health science researchers will allow the student to be exposed to numerous research designs. The overall goal of this course is to make the student prepared to step in and work in a faculty mentored research study.

Prerequisites: second or third professional year standing.

PHMY 856 - Evidence Based Medicine (2 Credits)

This course is designed to instruct students on the proper approach to critical evaluation of the medical literature. An evidence based approach to patient care hinges on the medical team's ability to utilize the most current literature available. Students will learn the keys to critiquing the medical literature, including basic statistical and analytical concepts, in an open forum style, with application of literature information to clinical scenarios.

Prerequisites: second or third professional year standing.

PHMY 882 - Integrated Pharmacy: Infectious Diseases Pharmacotherapy in Patient Care (2 Credits)

This course is an integrated approach to infectious diseases pharmacotherapy that builds upon required PHMY courses. At the conclusion of the course, the student will have a working knowledge of infectious diseases pharmacotherapy and be able to develop a complete patient care plan given an infectious diagnosis. Additionally, the course will stress important drug interactions with antimicrobials, adverse events associated with antimicrobials, and the prominent role of pharmacists in a HIV clinic, antimicrobial stewardship program, and/or medical crisis.

Prerequisites: second or third professional year standing.

PHMY 891 - Clinical Pharmacogenomics and Advanced Personalized Medicine (3 Credits)

This course will incorporate didactic teaching from both the basic sciences and pharmacotherapy realms to prepare students to effectively engage with commonly encountered questions and pharmacy practice dilemmas related to pharmacogenomics. The course will also provide active learning through longitudinal projects involving pharmacogenomic literature analysis, and solving pharmacogenetics-related pharmacotherapy selection problems.

Prerequisites: second or third professional year standing.