

PHRM - PHARMACY

PHRM 501 Biochemistry (3 Credit Hours)

Biochemistry is a comprehensive one-semester course for incoming PharmD students. The course develops a common foundation in applying the principles of general and organic chemistry to analyze the structure of biological molecules and predict their interactions in the body. Students will analyze structure-function relationships and organization in the molecules of life: proteins, carbohydrates, nucleic acids and lipids. The physicochemical properties of functional groups critical in drug delivery will also be evaluated. Specific topics include: membrane structure and function, biosignaling, essential nutrients and cofactors, enzymes, and the regulation of metabolic pathways.

Equivalent to PHAR 371.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 502 Pharmacokinetics (3 Credit Hours)

This course teaches the fundamental skills to design and adjust drug dosages based on pharmacokinetic principles. Initially, the course focuses on the concepts of release (liberation) from the formulation, absorption, distribution, metabolism, excretion and response (LADMER) of drugs. Thereafter, the impact of intra- and inter-patient variability on ADME parameters will be incorporated by discussing changes in drug clearance, volume of distribution and bioavailability. The student will also learn to use pharmacokinetic information to appropriately monitor patients for potential drug interactions or other conditions that alter drug disposition, and to make appropriate adjustments in the patient's dosage regimens.

Equivalent to PHAR 366.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 503 Pharmaceutics (3 Credit Hours)

This course applies fundamental principles and basic science knowledge to solve problems regarding the formulation, development, evaluation, production, distribution, selection, and administration of safe, effective, and reliable drug delivery systems. These systems range from solid/liquid dosage forms and parenterals to bioerodible implants and other forms of controlled drug delivery. The effect of the physical and chemical principles of solubility, pH, and the selection of excipients on the performance and quality of various dosage forms will be examined. Effect of drug stability and degradation on the shelf-life and quality of various dosage forms will be reviewed.

Equivalent to PHAR 373.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 505 Foundations of Drug Action (2 Credit Hours)

This course is designed to provide foundational understanding on concepts related to drug actions, their physicochemical properties, and therapeutic interactions. This course will introduce students to the chemistry of drug acid-base properties, solubility, pharmacophores, structure-activity relationships, stereochemistry, and metabolic pathways. It will offer the needed background to describe and characterize drugs based on their pharmacokinetic (absorption, distribution, metabolism, and elimination; ADME), and pharmacodynamic (drug-receptor interactions, agonists, partial agonists, and antagonists) parameters, and introduce students to the pharmacology of drugs, their therapeutic impact, and adverse effects.

Equivalent to PHAR 375.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 507 Foundations of Pharmacogenomics (2 Credit Hours)

This course will provide students with foundational knowledge of the principles and concepts of pharmacogenomics and pharmaceutical genetics, including a conceptual understanding of how genomic differences can impact drug metabolism, transport, and targets. These foundations will allow the student to apply these concepts later in the curriculum to solve pharmacotherapeutic problems using personalized medicine strategies.

Equivalent to PHAR 362.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 510 D&D - Intro to Drugs & Disease (3 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on concepts that underpin all therapeutic decision-making. General concepts and strategies for caring for the pediatric, geriatric, and pregnant or lactating patient, foundations of self-care and general health and wellness, and principles of toxicology will be included.

Equivalent to PHAR 481.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 519 Summer Community Introductory Pharmacy Practice Experience (IPPE) (4 Credit Hours)

Introductory Pharmacy Practice Experience (IPPE) will provide, both the experienced and inexperienced student, 280 hours of contemporary pharmacy practice in both a community pharmacy setting and a hospital pharmacy setting. The IPPE program will begin immediately following professional year one and conclude before professional year three. The IPPE will consist of both practice site activities as well as supporting activities at the college. This introduction to the practice of pharmacy will provide the student with the ability to integrate first-hand practical experience with their didactic and laboratory coursework. Students who present with an extensive background in a particular setting e.g., as a pharmacy technician in a chain drug store, may be assigned to complete the IPPE requirement in an alternative practice setting e.g., an independent community pharmacy or a compounding practice. The IPPE will allow the student, under adequate professional supervision, to be directly involved with patients and their care. Based on prior pharmacy experience in a particular setting, the student's direct participation in providing patient-centered care will gradually progress allowing the student and preceptor to feel confident in the student's ability to interact with patients. This will provide an opportunity for students to gain an appreciation for the career opportunities available in community pharmacy. Completion of the IPPE program is a prerequisite for beginning the APPE (Advanced Pharmacy Practice Experience) program.

Equivalent to PHAR 370.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 522 Integrated Group Learning II (2 Credit Hours)

Integrated Group Learning is a series of courses that occur during each semester of the didactic curriculum. The purpose of the 6-semester IGL series is to provide students with the opportunity to work in small groups to integrate learning from ongoing and previous coursework to solve patient specific problems. Written assignments, oral presentations, teamwork, peer-evaluation, and reflective practices will be emphasized, and the complexity of problems will increase as the series progresses.

Equivalent to PHAR 356.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 531 Abilities Lab I (2 Credit Hours)

Abilities Labs are a series of courses that occur during each semester of the didactic curriculum. The purpose of the six-semester Abilities Lab series is to assist student pharmacists in achieving proficiency in the professional abilities required for advanced pharmacy practice experiences across a variety of health care environments through the integration of knowledge, skills, behaviors, and values. The sequence requires the integration of didactic and experiential content from the first three years of the curriculum.

Equivalent to PHAR 357.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 532 Abilities Lab II (2 Credit Hours)

Abilities Labs are a series of courses that occur during each semester of the didactic curriculum. The purpose of the six-semester Abilities Lab series is to assist student pharmacists in achieving proficiency in the professional abilities required for advanced pharmacy practice experiences across a variety of health care environments through the integration of knowledge, skills, behaviors, and values. The sequence requires the integration of didactic and experiential content from the first three years of the curriculum.

Equivalent to PHAR 358.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 541 Pharmacy Success I (1 Credit Hours)

This seven-part course series will develop pharmacy students into professionals through application and practice of curricular skills and abilities. This first course introduces the new Doctor of Pharmacy student to the profession of pharmacy including the evolution of the profession from its historical roots to modern day pharmaceutical care, and it will explore the diversity of pharmacy careers and advanced training opportunities. Professionalism, oral and written communication, ethics, and critical evaluation of problems will be stressed. An introductory overview of cultural awareness, health literacy, and community health resources will be provided. Students will be provided the opportunity to learn and engage with a variety of topics through participation in the class information sessions. The course will feature simulation and interprofessional experiences that require communication skills, teamwork, and thoughtful reflection for professional development. This course will also cover topics intended to benchmark students regarding their knowledge gained from the curriculum.

Equivalent to PHAR 391.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 542 Pharmacy Success II (1 Credit Hours)

This seven-part course series will develop pharmacy students into professionals through application and practice of curricular skills and abilities. Students will be provided the opportunity to learn and engage with a variety of topics through participation in the class information sessions. The course will feature simulation and interprofessional experiences that require communication skills, teamwork, and thoughtful reflection for professional development. The use of a portfolio in this course allows students to demonstrate their development as a professional student. This course will also cover topics intended to benchmark students regarding their knowledge gained from the curriculum.

Equivalent to PHAR 392.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 551 Foundations of Pharmacy Practice (2 Credit Hours)

This course is designed to introduce students to drug information resources and strengthen mastery with mathematical calculations that are commonly implemented in the practice of practice. This course will introduce students to an organized approach to information retrieval as well as a systematic approach for answering patient-care and drug-related questions. The course will prepare students to master dimensional analysis, international systems of units, pharmaceutical measurements and conversions, and interpretation of prescription drug orders.

Equivalent to PHAR 377.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 552 Evid. Based Med & Biostats (3 Credit Hours)

This course will provide the student with the ability to effectively navigate and analyze the medical literature in order to answer patient-care and drug-related questions. The student will be able to identify research methods and protocol designs required to conduct valid and reliable studies and to examine and critique statistical methods used in biomedical research.

Equivalent to PHAR 374.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 591 Intro to Self Care (2 Credit Hours)

Over-the-counter medications, medical supplies, dietary supplements, and other self-care remedies are important components of the health care industry. This course will focus on medications, herbal medicines, dietary supplements, medical supplies, health and beauty aids, and other products that have been approved for sale without a prescription by the Food and Drug Administration. For each product discussed, students will learn the mechanism of action, uses, instructions for use by patients, and potential adverse effects. Therapies reviewed will include, but not be limited to, cough/cold preparations; pain relievers; fever reducers; products used for tobacco cessation; gastrointestinal agents; herbal products, vitamins and nutritional supplements; and women's health products. For the diseases and conditions that are discussed, students will learn causes, signs and symptoms, and self-care guidelines. Students will also develop critical thinking skills necessary to triage patients with self-care needs and to determine if patients are appropriate for self-treatment or if a referral to an outside provider is warranted.

Equivalent to PHAR 376.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 592 Introduction to Pharmacy (1 Credit Hours)

This course introduces the new Doctor of Pharmacy student to the profession of pharmacy. The course addresses the evolution of the profession from its historical roots to modern day pharmaceutical care, and it will explore the diversity of pharmacy careers and advanced training opportunities. Professionalism, oral and written communication, ethics, and critical evaluation of problems will be stressed. An introductory overview of cultural awareness, health literacy, and community health resources will be provided. Both independent and cooperative learning activities will be utilized in order to help develop self-awareness and teamwork skills.

Equivalent to PHAR 361.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 593 Foundations of Medicinal Chemistry (1 Credit Hours)

This course develops a foundation for the later application of drug-specific medicinal chemistry to therapeutic decision-making. Foundational knowledge will include ability to describe the chemistry and physicochemical properties of functional groups with emphasis on recognition of acid-base properties, water solubility, pharmacophores, structure-activity relationships, stereochemistry and metabolic pathways.

Equivalent to PHAR 111, PHAR 363.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 595 Foundations of Pharmacology (1 Credit Hours)

The focus of this course is to provide a solid foundation on the general principles underlying mechanisms of drug action and therapeutics, including an introduction to pharmacodynamics. The foundational knowledge will include the ability to describe and classify the type of receptors, the dynamics involved in the association of a molecule and a receptor site, the subsequent cascade of effects based on the receptor-binding which will contribute to the therapeutic as well as adverse effects.

Equivalent to PHAR 113, PHAR 365.

Academic Level: Graduate

Enrollment is limited to students with a program in Doctor of Pharmacy.

PHRM 597 Foundations of Drug Information (1 Credit Hours)

This course will introduce students to an organized approach to information retrieval, the commonly used sources of drug information, and a systematic approach to answering patient-care and drug-related questions. Classroom interactions and Drug Information Center exercises will be employed.

Equivalent to PHAR 117, PHAR 367.

Academic Level: Graduate

Enrollment is limited to students with a program in Doctor of Pharmacy.

PHRM 599 Foundations of Pharmacy Calculations (1 Credit Hours)

This course will enable students to demonstrate mastery of dimensional analysis, international systems of units, pharmaceutical measurements and conversions, and interpretation of prescription drug orders.

Equivalent to PHAR 115, PHAR 369.

Academic Level: Graduate

Enrollment is limited to students with a program in Doctor of Pharmacy.

PHRM 602 Medical Immunology (3 Credit Hours)

This course introduces the student to the body's immune system, including the mechanisms of innate and adaptive immunity and the roles of the immune system in infection, auto-immunity, and cancer.

Equivalent to PHAR 364.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 605 Drugs & Disease Bridge Course (1 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug-receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on infectious diseases.

Academic Level: Graduate

PHRM 611 Drugs and Disease - Cardiovascular I (4 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on medical conditions of the cardiovascular system.

Equivalent to PHAR 483.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 612 Drugs and Disease - Cardiovascular II (2 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course is a continuation of Drugs and Disease II and continues focus on medical conditions of the cardiovascular system.

Equivalent to PHAR 485.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 613 Drugs and Disease - Infectious Disease I (3 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on infectious diseases.

Equivalent to PHAR 484.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 614 Drugs and Disease - Infectious Disease II (3 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on infectious diseases.

Equivalent to PHAR 486.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 616 Drugs and Disease - Renal (2 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on medical conditions of the renal system.

Equivalent to PHAR 482.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 619 Summer Hospital/Health Systems Introductory Pharmacy Practice Experience (IPPE) (3 Credit Hours)

The Introductory Pharmacy Practice Experience (IPPE) will provide, both the experienced and inexperienced student, 280 hours of contemporary pharmacy practice in both a community pharmacy setting and a hospital pharmacy setting. The IPPE program will begin immediately following professional year one and conclude before professional year three. The IPPE will consist of both practice site activities as well as supporting activities at the college. This introduction to the practice of pharmacy will provide the student with the ability to integrate first-hand practical experience with their didactic and laboratory coursework. Students who present with an extensive background in a particular setting e.g., as a pharmacy technician in a chain drug store, may be assigned to complete the IPPE requirement in an alternative practice setting e.g., an independent community pharmacy or a compounding practice. The IPPE will allow the student, under adequate professional supervision, to be directly involved with patients and their care. Based on prior pharmacy experience in a particular setting, the student's direct participation in providing patient-centered care will gradually progress allowing the student and preceptor to feel confident in the student's ability to interact with patients. This will provide an opportunity for students to gain an appreciation for the career opportunities available in community pharmacy. Completion of the IPPE program is a prerequisite for beginning the APPE (Advanced Pharmacy Practice Experience) program.

Equivalent to PHAR 470.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 621 Integrated Group Learning III (2 Credit Hours)

Integrated Group Learning is a series of courses that occur during each semester of the didactic curriculum. The purpose of the 6-semester IGL series is to provide students with the opportunity to work in small groups to integrate learning from ongoing and previous coursework to solve patient specific problems. Written assignments, oral presentations, teamwork, peer-evaluation, and reflective practices will be emphasized, and the complexity of problems will increase as the series progresses.

Equivalent to PHAR 455.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 622 Integrated Group Learning IV (2 Credit Hours)

Integrated Group Learning is a series of courses that occur during each semester of the didactic curriculum. The purpose of the 6-semester IGL series is to provide students with the opportunity to work in small groups to integrate learning from ongoing and previous coursework to solve patient-specific problems. Written assignments, oral presentations, teamwork, peer-evaluation, and reflective practices will be emphasized, and the complexity of problems will increase as the series progresses.

Equivalent to PHAR 456.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 631 Abilities Lab III (2 Credit Hours)

Abilities Labs are a series of courses that occur during each semester of the didactic curriculum. The purpose of the six-semester Abilities Lab series is to assist student pharmacists in achieving proficiency in the professional abilities required for advanced pharmacy practice experiences across a variety of health care environments through the integration of knowledge, skills, behaviors, and values. The sequence requires the integration of didactic and experiential content from the first three years of the curriculum.

Equivalent to PHAR 457.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 632 Abilities Lab IV (2 Credit Hours)

Abilities Labs are a series of courses that occur during each semester of the didactic curriculum. The purpose of the six-semester Abilities Lab series is to assist student pharmacists in achieving proficiency in the professional abilities required for advanced pharmacy practice experiences across a variety of health care environments through the integration of knowledge, skills, behaviors, and values. The sequence requires the integration of didactic and experiential content from the first three years of the curriculum.

Equivalent to PHAR 458.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 641 Pharmacy Success III (1 Credit Hours)

This seven-part course series will develop pharmacy students into professionals through application and practice of curricular skills and abilities. Students will be provided the opportunity to learn and engage with a variety of topics through participation in the class information sessions. The course will feature simulation and interprofessional experiences that require communication skills, teamwork, and thoughtful reflection for professional development. The use of a portfolio in this course allows students to demonstrate their development as a professional student. This course will also cover topics intended to benchmark students regarding their knowledge gained from the curriculum.

Equivalent to PHAR 491.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 642 Pharmacy Success IV (1 Credit Hours)

This seven-part course series will develop pharmacy students into professionals through application and practice of curricular skills and abilities. Students will be provided the opportunity to learn and engage with a variety of topics through participation in the class information sessions. The course will feature simulation and interprofessional experiences that require communication skills, teamwork, and thoughtful reflection for professional development. The use of a portfolio in this course allows students to demonstrate their development as a professional student. This course will also cover topics intended to benchmark students regarding their knowledge gained from the curriculum.

Equivalent to PHAR 492.

Academic Level: Graduate

Enrollment is limited to students with a major in Pharmacy or Doctor of Pharmacy.

PHRM 651 Healthcare Systems and Quality (3 Credit Hours)

This course will provide the student with an introduction to the structure, organization and financing of the US healthcare system and to promote patient safety. The course will emphasize the implications of the components that impact pharmacy practice and medication use.

Equivalent to PHAR 477.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 652 Soc Behav, Outcomes, Pop Health (3 Credit Hours)

This course provides a foundation in medication use behaviors for chronic conditions, pharmacoeconomic concepts used in health care decision making and information systems that focus on medication related knowledge and data within healthcare. An introduction to key public health concepts and principles unique to the study of medication use and outcomes in large populations will be discussed. In addition, the course will emphasize other factors that impact patient care such as cultural competence, health literacy, prescribing behaviors and personal and professional development.

Equivalent to PHAR 478.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 659 Pharm Independent Study (1-16 Credit Hours)

May be repeated for credit. *Equivalent to PHAX 397.*

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 660 Veterinary Pharmacy (2 Credit Hours)

This elective course will provide the pharmacy student with the tools to confidently provide pharmaceutical care and medication counseling for their non-human patients. The course is designed to expand upon current pharmacology knowledge by providing students with the working fundamentals of veterinary pharmacology. An emphasis will be placed on the basic understanding of how the anatomy and physiological features of non-human patients impact drug therapy as well as recognize the differences found in human patients. Basic pharmacology of medications for dogs, cats, horses, rodents, and exotic animals will be highlighted. Common disease states and pharmacological treatment strategies will be covered, including veterinary and human approved products along with appropriate options for compounded medications. Basic and clinical aspects of the most common toxicities that affect animals will be discussed in detail. Safety of handling veterinary medications is an important part of this course. Students will learn about commonly resourced veterinary drug information resources utilized by veterinary pharmacists as well as veterinary medical terminology and abbreviations. Students will discuss regulatory and ethical issues impacting the practice of veterinary pharmacy. Upon completion of this course the pharmacy student will be able to demonstrate sufficient knowledge to begin to accurately interpret veterinary prescriptions, know the sources of drug information, offer drug information consultations to veterinarians, and counsel animal owners regarding appropriate drug administration and potential adverse drug events.

Equivalent to PHAX 406.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 661 Adv Veterinary Pharmacy (2 Credit Hours)

This elective course will provide the pharmacy student with the tools to confidently provide pharmaceutical care and medication counseling for their non-human patients. The course is designed to expand upon current pharmacology knowledge by providing students with the working fundamentals of veterinary pharmacology. An emphasis will be placed on the basic understanding of how the anatomy and physiological features of non-human patients impact drug therapy as well as recognize the differences found in human patients. Basic pharmacology of dogs, cats, horses, rodents, and exotic animals will be highlighted. Common disease states and pharmacological treatment strategies will be covered, including veterinary and human approved products along with appropriate options for compounded medications. Upon completion of this course the pharmacy student will be able to demonstrate sufficient knowledge to begin to accurately interpret veterinary prescriptions, know the sources of drug information, offer drug information consultations to veterinarians, and counsel animal owners regarding appropriate drug administration and potential adverse drug events.

Equivalent to PHAX 411.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 663 Lifestyle Medicine (2 Credit Hours)

This course is designed to introduce the student to concepts of lifestyle and how they relate directly to disease and disease state management. Learners will engage in lectures as well as activities that will enhance both their knowledge and experience with the concepts of lifestyle modifications. Learners will become prepared to evaluate, design, and implement lifestyle changes. This course will also prepare students to design plans for patients and counsel them on evidence-based recommendations for lifestyle modification.

Equivalent to PHAX 422.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 664 Integrative Pharmacy (2 Credit Hours)

Academic Level: Graduate

PHRM 666 Medical Cancer Biology (2 Credit Hours)

Students will evaluate molecular mechanisms related to cancer biology, and the value of these mechanisms as therapeutic targets for the treatment of cancers. Emphasis will be placed on communication skills, active learning, and self-awareness.

Equivalent to PHAX 405.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 667 Advanced Pharmaceutics Lab (2 Credit Hours)

This elective course will reinforce for you the tablet dosage form manufactured in the pharmaceutical industry and expand upon the knowledge gained in Pharmaceutics by working through the process of creating a tablet dosage form. In this two-credit course you will hear a 30 minute lecture that meets some weeks and work 1.5-3 hours in the laboratory each week. You will self-select a buddy for your team. Your team will determine which day of the week works best for you. You will enjoy lectures on the calculations required for the laboratory, the physical and chemical aspects of laboratory work, the acceptable techniques for preparing the samples for numerous instruments, as well as the regulatory guidelines governing this aspect of pharmacy practice. You will prepare a "real world" manufacture of a tablet using a tablet press, determine its dissolution, as well as the variability in the tablet's weight, and the amount of active in a tablet. You will learn how to assay the active by HPLC. Your team will present your experiences at the end of the semester.

Equivalent to PHAX 410.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 668 Basic Pharm Princpl Drug Dev (2 Credit Hours)

This course will provide an overview of the drug development process, focusing on drug development science, regulation, and industry from the U.S. perspective. Most sessions will consist of a brief didactic overview of the day's topic, followed by discussion of a primary scientific publication that emphasizes the most important principles covered.

Equivalent to PHAX 401.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 669 Intro to UNIX Computing and Molecular Visualization (2 Credit Hours)

This hands-on computer lab course teaches students to solve problems methodically and efficiently. Programming experience is not needed. The course serves as an introduction to computer science and the intersection between hardware and software by using the Unix command-line interface to perform automated data analysis. The tutorial-based labs conclude with visualization of molecular graphics models for drugs interacting with their protein targets. The scientific basis of protein-drug interactions, rooted in thermodynamics, will be developed.

Equivalent to PHAX 402, PHRM 686.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 670 Introduction to Python (3 Credit Hours)

This course is designed for students who are interested in coding, Python. This course primarily focuses on data analytics. In this course, students will learn different data types (strings, numbers, and booleans), various data structures (lists, tuples, sets, and dictionaries), condition statements, functions, loops, OOP concepts, built-in modules (pickle, os, random, itertools, and others), and python module management system (pip). In addition, Python libraries, numpy, pandas, matplotlib, and seaborn will also be introduced in this course. Other advanced Python topics such as, generators, decorators, and testing & debugging will also be covered if time permits.

Equivalent to PHAX 446, PHRM 678.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 672 History of American Pharmacy (2 Credit Hours)

This survey course will provide an overview of American pharmacy from the colonial period to today. Topics will include the evolution of practice, changes in education and licensure requirements, the development of professional organizations, the growth of the pharmaceutical industry, and the role of pharmacy in contemporary health care practice. In addition, the course will include an introduction to pharmacy artifacts and the integral role they played in the development of pharmacy in the United States.

Equivalent to PHAX 427.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 673 Prev. Burnout in Health Prof (2 Credit Hours)

Burnout is increasingly recognized as a current threat to the well being of health care providers and students. A number of factors affect burnout such as high workload, long working hours, and high performance expectations. Burnout may directly impact personal satisfaction and a sense of purposeful accomplishment, as well as harm our relationships with patients, peers, friends, and family. This course will approach burnout from a holistic perspective, aimed at broadening the student's perspectives, as well as recognizing options for preventing and treating burnout in both ourselves, as well as others. Topics covered may include, but are not limited to: pathophysiology of stress, resilience, work habits, self-care, spiritual components of wellness, social connections, sleep, and integrative medicine approaches to health and wellness. Students should be prepared to participate in group work, lead discussions, and teach peers. Students will learn, and gain perspective, from College of Pharmacy Faculty, as well as Practitioners of Integrative Medicine, Healers, Psychologists and Physician Assistant Faculty.

Equivalent to PHAX 415.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 674 Phytotherapy (2 Credit Hours)

This course will provide basic information about herbal medicine and phytochemistry including indication, contraindication, plant description, origin, dosage form and extraction methods. The pharmacological and toxicological studies of the most commonly used herbal medicines will also be discussed.

Equivalent to PHAX 408.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 675 Pharmacy Independent Studies (2 Credit Hours)

May be repeated for credit. *Equivalent to PHAX 295.*

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 677 Communicative Spanish for APPE (2 Credit Hours)

Spanish for the Granada, Spain APPE focuses on the practical language skills you will need to interact with your host family, friends, instructors, and other Spanish speakers during your stay in Spain. The class emphasizes speaking and understanding Spanish rather than reading and writing. Specifically, you'll learn how to talk about yourself, your life and your interests; how to converse with people appropriately and function in social situations; how to ask questions, make requests and give advice; how to negotiate transactions in restaurants, banks, and stores; and how to negotiate discourse in order to better understand and make yourself understood. You will also learn about some important cultural aspects of living and working in Spain.

Equivalent to PHAX 247.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 680 Medical and Regulatory Affairs (2 Credit Hours)

This course will serve as an introduction to the pharmaceutical industry for students in order to help them understand the various functional areas, challenges, and complexities associated with today's industry. An integral aspect of the course will be focused around educating prospective students on how to adequately prepare for and pursue a career path in pharma with an emphasis on the medical affairs and regulatory affairs functions which happen to be the most commonly sought-after pathways for PharmD graduates. At the end of this course pharmacy students will cultivate the proper skill-sets and tools necessary to leverage in their quest for pursuing a career in the pharmaceutical industry. This course will have a duo component looking at the areas of pre-clinical, clinical, and post market activities from both a Medical Affairs and Regulatory Affairs prospective.

Equivalent to PHAX 235.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 681 Intro to Pharm Industry and Bio (2 Credit Hours)

There is a growing demand for pharmacists in the pharmaceutical industry. Offering an overview of the pharmaceutical industry and biotechnology, this course is designed to broaden the student's exposure to functional operations in industry at large. For example this course will utilize select guest speakers such as key thought leaders, pharmaceutical company executives and postdoctoral fellows to represent specific departments and functions within industry, while providing a comprehensive understanding of each department's role and value within a given company. A maximum of 25 students may enroll in this course.

Equivalent to PHAX 233.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 682 Developing Pharmacy Leaders (2 Credit Hours)

Using the pearls of wisdom for successful leadership compiled by Clark & White, this course provides an overview of the key characteristics of effective leaders in pharmacy. Using "real world" examples, students will have the opportunity to explore and apply effective leadership strategies essential in today's complex health care environment.

Equivalent to PHAX 228.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 683 Spanish for Pharmacists (2 Credit Hours)

This course aims to provide the basic fundamentals of vocabulary, grammar, conversation, and cultural elements of the Spanish-speaking world for the pharmacy professional. There is no prerequisite for this course, but students who have not had any Spanish before should speak with the instructor to assure that they can manage the course.

Equivalent to PHAX 221.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 684 French for Pharmacists (2 Credit Hours)

French for Healthcare Professionals focuses on the practical language skills you'll need to interact with French-speaking clients. The course includes a review of basic structures as well as intensive practice of health-related vocabulary. Specifically, you'll learn to gather information from patients, advise clients about taking medications, discuss possible side effects, and verify patient understanding. The class focuses on speaking and understanding French rather than on reading and writing.

Equivalent to PHAX 220.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 685 Speciality Pharmacy (2 Credit Hours)

This elective course is designed to provide students with the foundational knowledge of a distinct, growing field of pharmacy practice: specialty pharmacy. Students will learn about the service requirements of specialty pharmacy, including disease state management, outcomes reporting, distribution, reimbursement, and other activities required for the management of patients with complex, chronic diseases. Focus will be placed on both the clinical role of the specialty pharmacist as part of an interdisciplinary team and on the administrative fundamentals of this field. This course will include guest speakers, small group activities, presentations, and group discussions. By course completion, the student will develop their clinical patient management skills in specialty disease states, including HIV, HCV, inflammatory conditions, solid organ transplant, and fertility. Students will discuss and evaluate the roles of the pharmaceutical industry, managed care, health care policy, and cost constraints on the provision of specialty pharmacy care. A maximum of 25 students may enroll in this course.

Equivalent to PHAX 217.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 687 Pharmaceutical Drug Discovery (2 Credit Hours)

This course will provide an overview of the drug development process, focusing on drug development science, regulation, and industry from the U.S. perspective. Most sessions will consist of a brief didactic overview of the day's topic, followed by discussion of a primary scientific publication that emphasizes the most important principles covered.

Equivalent to PHAX 201.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 711 Drugs and Disease - Endocrine/GI (3 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on medical conditions of the endocrine and gastrointestinal systems.

Equivalent to PHAR 581.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 712 Drugs and Disease - Pain/Inflammation (3 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on immunomodulation, pain, and opioid use disorder.

Equivalent to PHAR 583.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 713 Drugs and Disease - Psychiatry (3 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course focus on psychiatry.

Equivalent to PHAR 582.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 714 Drugs and Disease - Neurology (2 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on neurology and substance use disorders.

Equivalent to PHAR 584.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 715 Drugs and Disease - Respiratory, Men's/Women's Health (3 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on medical conditions of the respiratory system as well as issues related to men's and women's health.

Equivalent to PHAR 586.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 716 Drugs and Disease - Oncology (2 Credit Hours)

Drugs and Disease is a series of courses that ultimately teaches students how to identify and resolve drug-related problems through the design of therapeutic regimens (prescription, over-the-counter, complementary-alternative, and non-pharmacologic) and patient monitoring plans. Critical to this process is mastery of the basic and clinical sciences that support those decisions. Each course within this series will examine the clinical and laboratory manifestations of disease (pathophysiology) and require application of physicochemical properties, structure-activity relationships, and intermolecular drug receptor interactions (medicinal chemistry) and pharmacodynamic and pharmacokinetic characteristics (pharmacology) to therapeutic decision-making. When applicable, therapeutic plans will be personalized using clinical pharmacokinetics and pharmacogenomics. This course specifically focuses on oncology.

Equivalent to PHAR 585.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 719 Longitudinal IPPE (1 Credit Hours)

The longitudinal Introductory Pharmacy Practice Experiences (IPPE) are a series of experiences that occur during each semester (P1-P3) in collaboration with the Abilities Lab and the didactic curriculum. The six-semester IPPE will provide the student pharmacist with 20 hours of pharmacy simulation activities. The focus of this IPPE will include the pre-advanced pharmacy practice domains, as defined by the Accreditation Council for Pharmacy Education, of: Basic Patient Assessment; Identification, Assessment, and Resolution of Drug – Related Problems; General Communication; Patient Education; and Health and Wellness. This IPPE will also focus on interprofessional collaboration with other members of the healthcare team.

Academic Level: Graduate

Enrollment is limited to students with a program in Doctor of Pharmacy.

PHRM 721 Integrated Group Learning V (2 Credit Hours)

Integrated Group Learning is a series of courses that occur during each semester of the didactic curriculum. The purpose of the 6-semester IGL series is to provide students with the opportunity to work in small groups to integrate learning from ongoing and previous coursework to solve patient specific problems. Written assignments, oral presentations, teamwork, peer-evaluation, and reflective practices will be emphasized, and the complexity of problems will increase as the series progresses.

Equivalent to PHAR 555.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 722 Integrated Group Learning VI (2 Credit Hours)

Integrated Group Learning is a series of courses that occur during each semester of the didactic curriculum. The purpose of the 6-semester IGL series is to provide students with the opportunity to work in small groups to integrate learning from ongoing and previous coursework to solve patient-specific problems. Written assignments, oral presentations, teamwork, peer-evaluation, and reflective practices will be emphasized, and the complexity of problems will increase as the series progresses.

Equivalent to PHAR 556.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 731 Abilities Lab V (2 Credit Hours)

Abilities Labs are a series of courses that occur during each semester of the didactic curriculum. The purpose of the six-semester Abilities Lab series is to assist student pharmacists in achieving proficiency in the professional abilities required for advanced pharmacy practice experiences across a variety of health care environments through the integration of knowledge, skills, behaviors, and values. The sequence requires the integration of didactic and experiential content from the first three years of the curriculum.

Equivalent to PHAR 557.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 732 Abilities Lab VI (2 Credit Hours)

Abilities Labs are a series of courses that occur during each semester of the didactic curriculum. The purpose of the six-semester Abilities Lab series is to assist student pharmacists in achieving proficiency in the professional abilities required for advanced pharmacy practice experiences across a variety of health care environments through the integration of knowledge, skills, behaviors, and values. The sequence requires the integration of didactic and experiential content from the first three years of the curriculum.

Equivalent to PHAR 558.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 741 Interprofessional Experience (3 Credit Hours)

This course will introduce, reinforce, and provide hands-on experience with interprofessional practice to prepare the next generation of health care leaders for team-based practice. This course will be a mix of required and selective activities and will involve a range of other health profession such as physician assistant students, medical students, nursing students. Course activities will take place over 3 years. Students will participate in a broad range of IPE activities including the IGEP program, CAIEP events, SBIRT, team-based conferences, and simulation.

Equivalent to PHAR 591.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 743 Pharmacy Success V (1 Credit Hours)

This seven-part course series will develop pharmacy students into professionals through application and practice of curricular skills and abilities. Students will be provided the opportunity to learn and engage with a variety of topics through participation in the class information sessions. The course will feature simulation and interprofessional experiences that require communication skills, teamwork, and thoughtful reflection for professional development. The use of a portfolio in this course allows students to demonstrate their development as a professional student. This course will also cover topics intended to benchmark students regarding their knowledge gained from the curriculum.

Equivalent to PHAR 593.

Academic Level: Graduate

Enrollment is limited to students with a program in Pharmacy or Doctor of Pharmacy.

PHRM 744 Pharmacy Success VI (1 Credit Hours)

This seven-part course series will develop pharmacy students into professionals through application and practice of curricular skills and abilities. Students will be provided the opportunity to learn and engage with a variety of topics through participation in the class information sessions. The course will feature simulation and interprofessional experiences that require communication skills, teamwork, and thoughtful reflection for professional development. The use of a portfolio in this course allows students to demonstrate their development as a professional student. This course will also cover topics intended to benchmark students regarding their knowledge gained from the curriculum.

Equivalent to PHAR 594.

Academic Level: Graduate

Enrollment is limited to students with a program in Pharmacy or Doctor of Pharmacy.

PHRM 746 Pharmacy Success VII (1 Credit Hours)

This seven-part course series will develop pharmacy students into professionals through application and practice of curricular skills and abilities. Students will be provided the opportunity to learn and engage with a variety of topics through participation in the class information sessions. The course will feature simulation and interprofessional experiences that require communication skills, teamwork, and thoughtful reflection for professional development. The use of a portfolio in this course allows students to demonstrate their development as a professional student. This course will also cover topics intended to benchmark students regarding their knowledge gained from the curriculum.

Equivalent to PHAR 692.

Academic Level: Graduate

Enrollment is limited to students with a program in Pharmacy or Doctor of Pharmacy.

PHRM 751 Pharm Mgmt & Leadership (3 Credit Hours)

This course will provide the student with an understanding of pharmacy management principles and topics. We will cover management/ leadership principles and skills as well as operations, personnel and financial management topics. Leadership qualities and skills will be studied as well as personal inventory traits in self-awareness.

Equivalent to PHAR 577.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 752 Pharmacy Law & Ethics (3 Credit Hours)

This course is designed to give the student a working knowledge of the laws and regulations that govern the practice of pharmacy. It is intended to not only provide a resource for the students for the facts of pharmacy law, but also for stimulating critical thinking about issues in the field. Working in a field that deals with the well-being of patients and the public, it is important that students understand historically why the various laws and regulations exist, how they affect pharmacy practice, and that students develop an awareness and understanding of, not just the professional standards and ethics of practice but the importance of practicing them as well. The course will also provide an introduction to biomedical ethics, including the application of moral rules and ethical principles to situations and contemporary issues students may confront as pharmacy practitioners.

Equivalent to PHAR 578.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 801 APPE Core Community (6 Credit Hours)

The advanced community pharmacy experience is designed to enhance the student pharmacist's knowledge, attitudes and professional competency in a community practice setting. Emphasis is placed on the provision of pharmaceutical care through accurately dispensing reviewing and reconciling medications, identifying, addressing and improving medication-related problems, affordability and adherence, as well as educating patients regarding both non-pharmacological and pharmacological therapies and assisting them with self-care product selection. The course reinforces and will further develop the student pharmacist's abilities to, accurately interpret prescriptions and dispense medications, screen patients for potential diseases, monitor the progress of chronic drug therapy, and screen patients for potential diseases, dispense medications and counsel patients on the safe and appropriate use of medications in community pharmacies. The course has been designed to incorporate realistic patient care activities that are currently available in community pharmacies and in order to highlight the incorporation of the patient-centered model of pharmacy practice with the traditional dispensing role of the pharmacist.

Equivalent to PHAR 641.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 802 Core Hospital/Health Systems Advanced Pharmacy Practice Experience (APPE) (6 Credit Hours)

Students participating in this 6-week rotation will work closely with hospital pharmacists and participate directly in all aspects of pharmaceutical care, pharmacy services including drug distribution, sterile preparations, inventory regulation, and quality assurance programs. Emphasis will be placed on the student's ability to interact professionally with pharmacists, technical staff, and other healthcare professionals. They will also learn to administer pharmaceutical care services according to the standards of hospital pharmacy practice.

Equivalent to PHAR 642.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 803 APPE Core Inpatient/Acute Care (6 Credit Hours)

Students participating in this rotation will be exposed to various aspects of clinical pharmacy practice in the inpatient setting. Under the direct guidance of a clinical preceptor, the students will function as an integral part of the health care team performing numerous activities in accordance with the concept of total patient care. Clinical site activities will include, but not limited to, 1) presenting patient case studies emphasizing rational drug therapy, 2) participating in daily work rounds and 3) providing patient education and drug information. Conferences will be scheduled at the institution to discuss patient care activities and effective patient management.

Equivalent to PHAR 643.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 804 APPE Core Ambulatory Care (6 Credit Hours)

The ambulatory care pharmacy experience is designed to enhance student pharmacists' knowledge of the various roles of pharmacists within a Primary Care patient setting, including: individualized medication education, assistance with disease management, management of drug therapy, and medication reconciliation. These services are provided to a variety of patient populations and in different practice settings. Although the types of experiences offered on rotations will differ for each site, all sites offered are interprofessional and within a primary care setting. Through these experiences, students will become familiar with the therapeutic management of patients at their site.

Equivalent to PHAR 644.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 805 APPE Elective (6 Credit Hours)

Advanced practice experiences are a series of experiential courses for Doctor of Pharmacy students encompassing rotations with UNE faculty and preceptors at hospitals, clinics, industry, managed care and a variety of other clinical sites. Students have an opportunity to learn how to "practice" all of the core concepts of pharmaceutical care through a variety of rotations and by interacting with faculty, clinicians, and patients. Students have the opportunity to concentrate some of their advanced practice experiences to specialty areas of practice to gain added expertise based on the student's personal goals. Each student will be required to enroll in two elective rotations in addition to the four required rotation types.

Equivalent to PHAR 645.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 806 APPE Elective (6 Credit Hours)

Advanced practice experiences are a series of experiential courses for Doctor of Pharmacy students encompassing rotations with UNE faculty and preceptors at hospitals, clinics, industry, managed care and a variety of other clinical sites. Students have an opportunity to learn how to "practice" all of the core concepts of pharmaceutical care through a variety of rotations and by interacting with faculty, clinicians, and patients. Students have the opportunity to concentrate some of their advanced practice experiences to specialty areas of practice to gain added expertise based on the student's personal goals. Each student will be required to enroll in two elective rotations in addition to the four required rotation types.

Equivalent to PHAR 646.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 807 APPE Elective (6 Credit Hours)

Advanced practice experiences are a series of experiential courses for Doctor of Pharmacy students encompassing rotations with UNE faculty and preceptors at hospitals, clinics, industry, managed care and a variety of other clinical sites. Students have an opportunity to learn how to "practice" all of the core concepts of pharmaceutical care through a variety of rotations and by interacting with faculty, clinicians, and patients. Students have the opportunity to concentrate some of their advanced practice experiences to specialty areas of practice to gain added expertise based on the student's personal goals. Each student will be required to enroll in two elective rotations in addition to the four required rotation types.

Equivalent to PHAR 647.

Academic Level: Graduate

Enrollment is limited to students with a major in Doctor of Pharmacy.

PHRM 808 APPE Elective (6 Credit Hours)

Advanced practice experiences consist of a series of experiential courses for Doctor of Pharmacy students encompassing rotations with UNE faculty and preceptors at hospitals, clinics, industry, managed care and a variety of other clinical sites. Students have an opportunity to learn how to "practice" all of the core concepts of pharmaceutical care through a variety of rotations and by interacting with faculty, clinicians, and patients. Students have the opportunity to concentrate some of their advanced practice experiences to specialty areas of practice to gain added expertise based on the student's personal goals. Each student will be required to enroll in two elective rotations in addition to the four required rotation types.

Academic Level: Graduate