

PHARMACY (PHAR)

PHAR 511 Clinical Immunology

1 Credit hour

Skills development in vaccine administration, patient counseling, and maintaining appropriate record management. The student will acquire knowledge regarding individual vaccines and the vaccination process. This knowledge will be reinforced through laboratory and simulation activities. Skill development will culminate with the student providing immunizations in patient settings.

Grade Mode: Normal Grading Mode

PHAR 521 Integrated Laboratory I

2 Credit hours

This is a laboratory course to provide hands-on experience that complements didactic presentations in PHAR 531 and PHAR 532.

Pre-req: PHAR 531.

Co-req: PHAR 532

Grade Mode: Normal Grading Mode

PHAR 522 Fund Med Chem

2 Credit hours

An introductory course providing the fundamental basics of drug action. Specifically, the course will cover the physicochemical properties of drugs, basic principles of medical chemistry and structure activity relationships, including drug-receptor interactions, theories of drug action and drug metabolism.

Grade Mode: Normal Grading Mode

PHAR 531 Biopharmaceutics I

3 Credit hours

Topics covered include the physicochemical principles of pharmacy, such as acid-base theory, solubility, physical states of drugs, thermodynamics, drug stability, excipients, surfactants, dispersions, polymers, drug delivery, chemical compatibility and interactions of drugs in various dosage forms.

Grade Mode: Normal Grading Mode

PHAR 532 Biopharmaceutics II

3 Credit hours

Topics covered include mechanisms of both immediate and sustained drug release in formulations involving solid and semi-solid systems; introduction to novel drug delivery systems; drug pre-formulation, the drug approval processes, and regulations governing the pharmaceutical industry; drug preparation, liberation, absorption and stability dosage.

Pre-req: PHAR 531.

Co-req: PHAR 521

Grade Mode: Normal Grading Mode

PHAR 541 Pharmacy Practice I

4 Credit hours

Begin professional development understanding the responsibilities of a registered pharmacist providing patient care. Professional conduct, personnel management, personal conduct, pharmacy calculations, immunizations, legal issues, and team dynamics are stressed.

Grade Mode: Normal Grading Mode

PHAR 542 Immunology and Microbiology

4 Credit hours

Topics covered include an introduction to the classification, morphology and physiology of microorganisms, primarily organisms that can cause human pathology, such as bacteria, viruses, fungi, protozoans, parasites, and worms; the body's immune response and mechanisms of defense at the cellular and humoral (molecular) level will also be covered in the context of pathogenic organisms, tissue transplants, and autoimmune disease.

Grade Mode: Normal Grading Mode

PHAR 543 Pharmacy Practice II

4 Credit hours

Continued professional development of the pharmacy practitioner. Sterile products, top 200 medications, laboratory values, SOAP notes, documentation, medication safety, patient counseling and technology, communication, and public service are stressed.

Pre-req: PHAR 541.

Grade Mode: Normal Grading Mode

PHAR 544 Prin of Disease & Drug Action

4 Credit hours

Topics covered include the concepts and mechanisms of the basic processes underlying disease and pathophysiology; the general principles underlying drug action and therapeutics, including receptor pharmacology, enzyme inhibition and pharmacology; the relationship between drug concentration at the target tissue and drug effect; and concepts in pharmacogenomics and pharmaceutical genetics as they relate to drug action, and individual variation in response to drug action, nutrition, and biochemical processes.

Grade Mode: Normal Grading Mode

PHAR 545 Therapeutics I

4 Credit hours

Students will learn about the therapeutic use, human physiology, pharmacologic and chemical properties of over-the-counter medication and non-medication interventions for both treatment and prevention of disease.

Pre-req: PHAR 541.

Grade Mode: Normal Grading Mode

PHAR 546 Pharmaceutical Biochemistry

4 Credit hours

This course is designed to provide biochemistry fundamentals to PharmD students. Topics covered include structures and properties of water and biomolecules (proteins, lipids, and nucleic acids), enzymes and enzyme kinetics, membranes, receptors, transporters, signaling, human metabolism, hormonal regulation of metabolism, and basics of genomics, gene regulation, and proteins synthesis. Examples of basic principles covered in this class will be illustrated by use of the top 200 drugs.

Grade Mode: Normal Grading Mode

PHAR 611 Integrated Laboratory II

1 Credit hour

Practical hands-on experience in modern scientific methods used in biochemistry, pharmaceuticals, pharmacology, pharmacometrics; and analytical methods employed to detect, characterize, and quantify naturally occurring substances and drug molecules.

Grade Mode: Normal Grading Mode

PHAR 612 Therapeutic Drug Dosing

1 Credit hour

Application of the basic principles of pharmacokinetics and pharmacodynamics to practice settings. Simulation and case-based methods are used to allow integration of pharmacy practice and skills learned during the PHAR 631 course.

Grade Mode: Normal Grading Mode

PHAR 621 Pharmacy Law & Ethics

2 Credit hours

An applied analysis of federal and West Virginia state law and ethical standards in the practice of Pharmacy and Pharmaceutical Care.

Grade Mode: Normal Grading Mode

PHAR 622 Drug Info & Comm Skills

2 Credit hours

Topics covered include basic skills in obtaining and utilizing drug information references, and foundational skills required in patient counseling, such as, the Indian health method of counseling.

Grade Mode: Normal Grading Mode

<p>PHAR 631 Pharmacometrics 3 Credit hours Topics covered include the basic theory of pharmacokinetics and pharmacodynamics; process and mechanisms controlling the rate and extent of drug absorption and systemic availability; bioavailability and bioequivalence. Grade Mode: Normal Grading Mode</p>	<p>PHAR 722 PPM Patient Safety 2 Credit hours Further professional development in the management of patient safety policies and procedures. Areas covered include: robotics, medication reconciliation, discharge planning, risk management, and other methods of improving patient safety. Grade Mode: Normal Grading Mode</p>
<p>PHAR 632 PPM Leadership 3 Credit hours Provides students with a working knowledge of important and fundamental aspects of pharmacy practice leadership including, but not limited to: management, strategic planning, motivational theories, and employment issues. Grade Mode: Normal Grading Mode</p>	<p>PHAR 731 Case Studies 3 Credit hours Students will apply the principles of patient care, practice management, and public health to drug therapy issues through student-centered, problem-based instructional processes. Grade Mode: Normal Grading Mode</p>
<p>PHAR 633 Patient Care Skills Lab 3 Credit hours Application of physical assessment, triage, patient counseling, and communication skills. Assessment of individual patient, acuity, responsible therapeutic plan, documentation, conflict resolution, and team building are stressed. Grade Mode: Normal Grading Mode</p>	<p>PHAR 732 Clin Aspects Rx Meds 3 Credit hours A discussion of the clinical aspects of medications will be covered with an emphasis on 1) pharmaceutical calculations and 2) analysis of the differences between various drugs and drug classes. Grade Mode: Normal Grading Mode</p>
<p>PHAR 634 PPM Finance 3 Credit hours The contemporary practice of pharmacy in the healthcare system as it fits into the business environment. Healthcare systems, pharmacoeconomics, planning, evaluating, and decision-making through financial report analysis/case study are stressed. Grade Mode: Normal Grading Mode</p>	<p>PHAR 733 Residency Preparation 3 Credit hours This course will help to prepare the pharmacy student for completion of postgraduate training, exploring processes including research project design and execution, interviewing, residency applications, and professional development. Grade Mode: Normal Grading Mode</p>
<p>PHAR 635 Research Outcomes Patient Care 3 Credit hours The fundamentals of clinical and outcomes research will be discussed and applied to patient care. Students will gain an understanding of study design, research methods, statistical analysis, and pharmacotherapy. Grade Mode: Normal Grading Mode</p>	<p>PHAR 734 Medications of Abuse 3 Credit hours This course discusses medications of abuse and their impact on society, reviews the history of substance use disorder relating them to current affairs and the impact on society. Grade Mode: Normal Grading Mode</p>
<p>PHAR 661 Therapeutics II 6 Credit hours This course discusses clinical microbiology and principles of anti-infective therapy as well as the pathophysiology, associated pharmacology, and therapeutic approaches to infectious diseases and conditions of the integumentary system. Grade Mode: Normal Grading Mode</p>	<p>PHAR 741 Ther-Endocrine 4 Credit hours Students will learn about the therapeutic use of medication and non-medication interventions for reproduction, and treatment and prevention of endocrine and genitourinary diseases. Grade Mode: Normal Grading Mode</p>
<p>PHAR 671 Therapeutics III 7 Credit hours Students will learn about the therapeutic use of medication and non-medication interventions for both treatment and prevention of cardiovascular diseases, renal diseases, pulmonary diseases, and associated electrolyte disorders. Grade Mode: Normal Grading Mode</p>	<p>PHAR 751 Neuro & Psychiatric Dis 5 Credit hours Students will learn treatment and prevention of neurological and psychiatric diseases including the physiology, pathophysiology, pharmacology and therapy. This course emphasizes the pharmacist as a health care provider. Grade Mode: Normal Grading Mode</p>
<p>PHAR 711 Med Therapy Management 1 Credit hour The student will learn to resolve medication-related problems to reduce costs and improve outcomes. Grade Mode: Normal Grading Mode</p>	<p>PHAR 761 HemeOnc Nutrition Hepa MS 6 Credit hours Students will learn treatment/prevention of heme-onc, nutrition, hepatic and musculoskeletal diseases including the pathophysiology, pharmacology and therapy. This course emphasizes the pharmacist as a health care provider. Grade Mode: Normal Grading Mode</p>
<p>PHAR 712 Capstone Diabetes Care 1 Credit hour Diabetes care capstone. Grade Mode: Normal Grading Mode</p>	<p>PHAR 781 Veterinary Pharmacy 3 Credit hours To instruct students in the administration, clinical pharmacology, clinical applications, diseases, medication safety and comparative dosing of veterinary medications that a pharmacist may encounter in the community pharmacy setting. Grade Mode: Normal Grading Mode</p>
<p>PHAR 721 Therapeutics 7 2 Credit hours This course will emphasize the unique needs and differences in therapeutic recommendations for patients at the extremes of ages, diverse cultural backgrounds, and those with co-morbidities and other health conditions. Grade Mode: Normal Grading Mode</p>	<p>PHAR 801 Special Topics I 1-6 Credit hours An opportunity for individual students to gain advanced experiences in practice, research, or service. Students will identify mentor and jointly develop individualized learning outcomes and a learning plan. Grade Mode: Normal Grading Mode</p>

PHAR 802 Special Topics II	1-6 Credit hours	PHAR 881 APPE 1-General Medicine	5 Credit hours
An opportunity for students to didactically explore advanced topics within the profession of pharmacy.		Provides students pharmacy experience in a clinical, inpatient, acute care and team-based environment. Students will be expected to utilize multiple abilities learned throughout the curriculum in order to collect patient-specific information, evaluate and monitor drug therapy, educate patients and/or caregivers, respond to drug information inquiries and function effectively within a team.	
Grade Mode: Normal Grading Mode		Grade Mode: Normal Grading Mode	
PHAR 811 Pharm Prac Exp I (IPPE 1)	1 Credit hour	PHAR 882 APPE 2-Amb Care/Prim Care	5 Credit hours
Grade Mode: Normal Grading Mode		The Amb Care / Prim Care APPE provides students experience in an out-patient care clinically focused practice environment. Students will be expected to utilize abilities learned previously throughout the curriculum in order to perform the following tasks: collect patient-specific information, evaluate and monitor drug therapy, educate patients and caregivers, drug information tasks, and other requirements.	
PHAR 812 Pharm Prac Exp II (IPPE II)	1 Credit hour	Grade Mode: Normal Grading Mode	
Introduction to community pharmacy practice in a supervised setting. Students are exposed to the role and responsibilities of the community pharmacist; including effective communication, and application of laws governing pharmacy.		PHAR 883 APPE 3-Advanced Community	5 Credit hours
Grade Mode: Normal Grading Mode		This is a 5-week advanced pharmacy practice experience in a community pharmacy setting that focuses on enhancing a student's ability to provide patient-centered pharmacy care services such as disease management, medication therapy management, preventative health screening, immunizations, specialty compounding, patient education, or other advanced patient care activities.	
PHAR 813 IPPE 3 Community 2	1 Credit hour	Grade Mode: Normal Grading Mode	
Builds on the foundation of the Community Pharmacy 1 experience. The student will demonstrate critical thinking and problem solving skills, topical compounding skills, and professional attitude and behaviors.		PHAR 884 APPE 4-Adv Institutional	5 Credit hours
Grade Mode: Normal Grading Mode		This is a 5-week experiential rotation in an approved health system that prepares the student to function within integrated pharmacy services. Particular emphasis is placed on the preparation, distribution, and control of medications, medication monitoring, and the ability to communicate with other healthcare professionals. This rotation develops competence to function as a staff hospital pharmacist.	
PHAR 814 Intro Phar Institutions 2	1 Credit hour	Grade Mode: Normal Grading Mode	
Builds on the foundations of the Institutional Pharmacy 1 Experience. The student will demonstrate critical thinking and problem solving, document professional practice activities, and parenteral compounding abilities.		PHAR 885 APPE 5-Geriatrics	5 Credit hours
Grade Mode: Normal Grading Mode		This is a 5-week experiential rotation that focuses on provision of clinical pharmacy services in a variety of settings with a focus on care to the elderly population. These sites may include community pharmacies, speciality clinics, rehabilitation hospitals, skilled nursing facilities (SNFs), home-based consult services, and assisted living facilities (ALFs). A focus is placed on the interdisciplinary care of the geriatric patient.	
PHAR 815 Phar Prac Exp 5 IPPE 5	1 Credit hour	Grade Mode: Normal Grading Mode	
Introduces pharmacist student to the ambulatory care setting. Student will demonstrate the ability to develop a therapeutic plan that includes the selection of appropriate drug therapy based on patient characteristics.		PHAR 886 APPE 6-Diverse Populations	5 Credit hours
Grade Mode: Normal Grading Mode		This is a 5-week required advanced pharmacy practice experience in a community, ambulatory, or other pharmacy setting to a medically under-served population. Students will utilize a variety of skills obtained throughout the curriculum. A focus will be providing care in a culturally sensitive, compassionate, community-oriented, and effective way to a diverse, ethnic, rural, poor, and/or indigent population(s).	
PHAR 816 Inpatient Clinical Skills	1 Credit hour	Grade Mode: Normal Grading Mode	
Introduces the pharmacy student to the clinical skills in an institutional setting needed to be successful. Student will demonstrate appropriate drug dosing and drug selection based on patient characteristics.		PHAR 887 APPE 7 & 8-Electives	5 Credit hours
Grade Mode: Normal Grading Mode		The APPE general elective(s) are 5-week experiential rotation(s) that will give the students the opportunity to participate in a variety of pharmacy practice experiences, depending on the rotation site and practice setting, related to direct patient care, supportive patient care, or not related to patient care. Students must complete 2 elective rotations.	
PHAR 817 Intro Phar Prac Exp IPPE 7	1 Credit hour	Grade Mode: Normal Grading Mode	
Students are exposed to the role and responsibilities of a pharmacy team leader, manager, or director and the application of management strategy, tools, and responsibilities.		PHAR 821 IPPE Institutional	2 Credit hours
Grade Mode: Normal Grading Mode		The Introductory Pharmacy Practice Experience in Institutions is designed to allow the student to demonstrate knowledge and skill learned in the classroom while concurrently gaining understanding to the systems and function of the pharmacy in an institutional setting.	
PHAR 818 Education IPPE 8	1 Credit hour	Grade Mode: Normal Grading Mode	
The Pharmacist Student will develop and present continuing education programs or active learning exercises, apply instructional as well as learning techniques, and demonstrate mentoring skills.			
Grade Mode: Normal Grading Mode			
PHAR 819 Long Care of Patient	1 Credit hour		
This course will provide the student with pharmacy care of a patient over an extended period of time. Students will be exposed to the role and responsibilities of the pharmacist. The student will demonstrate knowledge of the medical regimen and an understanding of why the medical regimen was or was not modified over a period of time.			
Grade Mode: Normal Grading Mode			

PHAR 891 Pharmacy Capstone

4 Credit hours

Pharmacy capstone experience where students are challenged to demonstrate acquisition of pharmacy skill, knowledge, and behavior competency.

Grade Mode: Normal Grading Mode