

SCHOOL OF PHARMACY

Contacts: Dr. Eric R. Blough, Dean

Website: <http://www.marshall.edu/pharmacy> (<http://www.marshall.edu/pharmacy/>)

E-mail: pharmacy@marshall.edu

Programs

- Pharmaceutical Sciences, M.A. (Non-Thesis Option) (<http://catalog.marshall.edu/graduate/programs-az/pharmacy/pharmaceutical-sciences-ma/>)
- Pharmaceutical Sciences, M.S. (<http://catalog.marshall.edu/graduate/programs-az/pharmacy/pharmaceutical-sciences-ms/>)
- Pharmacy, Dual Degree: Pharm.D. and M.B.A. (<http://catalog.marshall.edu/graduate/programs-az/pharmacy/pharmacy-pharmd-mba/>)
- Pharmacy, Dual Degree: Pharm.D. and M.P.H. (<http://catalog.marshall.edu/graduate/programs-az/pharmacy/pharmacy-pharmd-mph/>)
- Pharmacy, Pharm.D. (<http://catalog.marshall.edu/graduate/programs-az/pharmacy/pharmacy-pharmd/>)

Courses

Pharmaceutical Sciences

MSPS 511 Grad Research Seminar 1 Credit hour

This course lays the foundation in oral communication for graduate students in pharmaceutical sciences. It provides experience in scientific presentation with an emphasis on defense of data and interpretation.

Grade Mode: Normal Grading Mode

MSPS 512 Med Chem & Drug Disc 1 Credit hour

This course gives an overview of drug discovery principles and techniques for the practicing medicinal chemist.

Grade Mode: Normal Grading Mode

MSPS 513 Biopharm 2 1 Credit hour

Topics include mechanisms immediate and sustained drug release in formulations; novel drug delivery systems; drug pre-formulation; the drug approval process; drug preparation, liberation, absorption and stability of dosage forms.

Grade Mode: Normal Grading Mode

MSPS 514 Resb Conduct Research 1 Credit hour

This course will help graduate students in pharmaceutical science become familiar with the general ethical issues that will arise through the course of basic science research. This course will help graduate students understand how to conduct ethical research, identify and focus on unethical situations in research, and how to solve future unethical dilemmas that may arise in the workplace.

Grade Mode: Normal Grading Mode

MSPS 531 Regulatory Affairs 3 Credit hours

An overview of USFDA's regulation on drug. Topics covered include pharmaceutical regulatory agencies and organizations around the world and their International Regulatory Audits for Pharma, International Conference on Harmonization (ICH) guidelines, Pharmacopoeias and national formulary, US Food and Drug Administration (USFDA); History of USFDA Law and Regulation, GLP, MMP, NDA, and ANDA.

Grade Mode: Normal Grading Mode

MSPS 542 Science Seminars 1 Credit hour

The course will help graduate students in the pharmaceutical sciences learn the basics of scientific communication and how to critically evaluate scientific literature. This 1 credit hour course is repeatable for credit up to 4 times.

Grade Mode: Normal Grading Mode

MSPS 544 Prin Dis 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; as they relate to drug action and individual variation in response.

Grade Mode: Normal Grading Mode

MSPS 561 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

MSPS 562 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.

Grade Mode: Normal Grading Mode

MSPS 581 Special Topics 1-3 Credit hours

Special Topics

Grade Mode: Normal Grading Mode

MSPS 585 Independent Study 1-3 Credit hours

Independent Study

Grade Mode: Normal Grading Mode

MSPS 586 Problem Report 1-3 Credit hours

Problem Report

Grade Mode: Normal Grading Mode

MSPS 612 Pharm Analysis 1 Credit hour

Pharmaceutical Analysis

Grade Mode: Normal Grading Mode

MSPS 613 Pharmacometrics Recitation 1 Credit hour

Pharmacometrics recitation

Grade Mode: Normal Grading Mode

MSPS 632 Prod Dev by Quality Design 3 Credit hours

Product Development by Quality by Design

Grade Mode: Normal Grading Mode

MSPS 685 Independent Study 1-3 Credit hours

Independent Study

Grade Mode: Normal Grading Mode

MSPS 686 Problem Report 1-3 Credit hours

Problem Report

Grade Mode: Normal Grading Mode

MSPS 699 Thesis 1-6 Credit hours

Thesis

Attributes: Thesis

Grade Mode: Normal Grading Mode

Pharmacy

PHAR 501 Pharm Cont Prof Dev

0 Credit hours

Pharmacy continuing professional development is a required course designed to expose students to various continuing professional development activities.

Grade Mode: Pass/Fail Grading Mode

PHAR 502 Pharm Cont Prof Dev

0 Credit hours

Pharmacy continuing professional development is a required course designed to expose students to various continuing professional development activities.

Grade Mode: Pass/Fail Grading Mode

PHAR 503 Pharm Cont Prof Dev

0 Credit hours

Pharmacy Continuing Professional Development is a required course designed to expose students to various continuing professional development activities.

Grade Mode: Pass/Fail Grading Mode

PHAR 504 Pharm Cont Prof Dev

0 Credit hours

Pharmacy Continuing Professional Development is a required course designed to expose students to various continuing professional development activities.

Grade Mode: Pass/Fail Grading Mode

PHAR 505 Pharm Cont Prof Development

0 Credit hours

Students will be introduced to additional professionalism topics, evaluation of clinical skills through the OSCEs, and take part in a seminar series throughout the first through third years.

Grade Mode: Normal Grading Mode

PHAR 506 Pharm Cont Prof Dev 6

0 Credit hours

Sixth and final semester of the professional development series where students will be introduced to additional professionalism topics, evaluation of clinical skills through the OSCEs.

Grade Mode: Normal Grading Mode

PHAR 512 Pharmacy Skills Lab I

1 Credit hour

Students will learn the necessary skills of a pharmacist (pt. interviewing, sterile compd, immunizations)

Grade Mode: Normal Grading Mode

PHAR 523 Pharmacogenomics

2 Credit hours

This course will provide students with the 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.

Grade Mode: Normal Grading Mode

PHAR 524 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

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.

Grade Mode: Normal Grading Mode

PHAR 533 Introduction to Pharmacy 1

3 Credit hours

Continued professional development of the pharmacy practitioner. Sterile products, top 300 medications, laboratory values, SOAP notes, documentation, medication safety applications including patient counseling and technology, communication, and public service are stressed.

Pre-req: PHAR 541 with a minimum grade of C.

Grade Mode: Normal Grading Mode

PHAR 536 Introduction to Pharmacy 2

3 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 537 Pharmacokinetics

3 Credit hours

An introductory course emphasizing basic principles in pharmacokinetics.

Grade Mode: Normal Grading Mode

PHAR 538 Pharmacy Skills Lab 2

3 Credit hours

Students will learn the necessary skills of a pharmacist (pt. interviewing, sterile compd, clinical reasoning)

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 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 547 Pharmaceutical Chemistry	4 Credit hours	PHAR 636 Pharm Skills Lab III	3 Credit hours
An introductory course providing the fundamental basics of pharmaceutical chemistry.		Students will learn foundational patient care skills necessary for practice as a pharmacist. Students will apply knowledge, demonstrate critical-thinking and problem-solving skills, practice technical and communication skills, and demonstrate professional behavior in the therapeutic decision making process.	
Grade Mode: Normal Grading Mode		Pre-req: PHAR 512 with a minimum grade of C and PHAR 537 with a minimum grade of C.	
PHAR 611 Integrated Laboratory II	1 Credit hour	Grade Mode: Normal Grading Mode	
Practical hands-on experience in modern scientific methods used in biochemistry, pharmaceuticals, pharmacology, pharmacometrics; and analytical methods employed to detect, characterize, and quantitate naturally occurring substances and drug molecules.		PHAR 637 Pharm Skills Lab IV	3 Credit hours
Grade Mode: Normal Grading Mode		Students will learn foundational patient care skills necessary for practice as a pharmacist. Students will apply knowledge, demonstrate critical-thinking and problem-solving skills, practice technical and communication skills, and demonstrate professional behavior in the therapeutic decision making process.	
PHAR 612 Therapeutic Drug Dosing	1 Credit hour	Pre-req: PHAR 512 with a minimum grade of C and PHAR 538 with a minimum grade of C and PHAR 636 with a minimum grade of C.	
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	
Grade Mode: Normal Grading Mode		PHAR 641 Therapeutics I	4 Credit hours
PHAR 623 Patient Safety	2 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.	
Further professional development in the management of patient safety policies and procedures. Areas covered: medication reconciliation, discharge planning, risk management, and other methods of improving patient safety.		Grade Mode: Normal Grading Mode	
Grade Mode: Normal Grading Mode		PHAR 643 Therapeutics 3 GI & Renal	4 Credit hours
PHAR 631 Pharmacometrics	3 Credit hours	Students will learn about the pharmacology, pathophysiology, and therapeutics associated with commonly encountered gastrointestinal, hepatic, and renal disorders. Activities emphasized include patient assessment, consultation, communication, drug monitoring, drug effectiveness, and the professional and legal dynamics encountered in pharmacy practice.	
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	
Grade Mode: Normal Grading Mode		PHAR 644 Therapeutics 4 Endocrine	4 Credit hours
PHAR 632 PPM Leadership	3 Credit hours	Students will learn about therapeutic and prophylactic treatments for diseases of the endocrine, genitourinary and reproductive systems. Use of medication and non-medication interventions will be emphasized as deemed appropriate. This course will emphasize performance of the activities of the pharmacist as health care provider.	
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	
Grade Mode: Normal Grading Mode		PHAR 652 Therapeutics 2 Cardiology	5 Credit hours
PHAR 633 Patient Care Skills Lab	3 Credit hours	Students will learn about the therapeutic interventions for the treatment and prevention of cardiovascular and pulmonary diseases. Exploration of normal human physiology, disease pathophysiology, and the pharmacologic and chemical properties of medications will precede discussions of therapeutic use. This course will emphasize performance of the activities of the pharmacist as a health care provider.	
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	
Grade Mode: Normal Grading Mode		PHAR 662 Pharmacy Administration	6 Credit hours
PHAR 634 PPM Finance	3 Credit hours	Provides students with a functional working knowledge of the healthcare system and business environment. Concepts examined include but are not limited to: leadership, operations management, health policy, motivational theories, employment issues, labor law, pharmacoeconomics, business planning, and financial analysis of pharmacy operations.	
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	
Grade Mode: Normal Grading Mode			
PHAR 635 Research Methods and Stats	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 research in pharmacy.			
Grade Mode: Normal Grading Mode			

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**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**PHAR 712 Capstone Diabetes Care****1 Credit hour**

Diabetes care capstone.

Grade Mode: Normal Grading Mode**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**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**PHAR 723 Special Populations****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**PHAR 730 Derm/Ophthalmic/Musc Dis****3 Credit hours**

Students will learn treatment/prevention of ophthalmic, otic, dermatologic, and musculoskeletal diseases including the physiology, pathophysiology, pharmacology and therapy. This course emphasizes the pharmacist as a healthcare provider.

Grade Mode: Normal Grading Mode**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**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**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**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**PHAR 735 Pharmacy Law & Ethics****3 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 736 Pharmacy Skills Lab 6****3 Credit hours**

Covers foundational patient care skills. Students apply knowledge, demonstrate critical-thinking and problem-solving skills, practice technical and communication skills, and demonstrate professional behavior in the therapeutic decision making process.

Pre-req: PHAR 637 with a minimum grade of C.**Grade Mode:** Normal Grading Mode**PHAR 737 Pharmacy Skills Lab 5****3 Credit hours**

Covers foundational patient care skills. Students apply knowledge, demonstrate critical-thinking and problem-solving skills, practice technical and communication skills, and demonstrate professional behavior in the therapeutic decision making process.

Grade Mode: Normal Grading Mode**PHAR 738 Pharmacy Education I****3 Credit hours**

This course will prepare students for a career in pharmacy education.

Grade Mode: Normal Grading Mode**PHAR 739 Pharmacy Education II****3 Credit hours**

This course will prepare students to apply skills learning in PHAR 738 in a lab setting.

Pre-req: PHAR 738 with a minimum grade of C.**Grade Mode:** Normal Grading Mode**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**PHAR 742 HemeOnc Nutrition Hepa MS****4 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**PHAR 743 Therapeutics 9 Hem Onc****4 Credit hours**

Students will learn treatment/prevention of heme-onc diseases including physiology, pathophysiology, pharmacology and therapy. Activities emphasized include patient assessment, consultation monitoring, communication, and drug effectiveness (safety, interactions, and adverse events).

Grade Mode: Normal Grading Mode**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**PHAR 752 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

PHAR 761 Infectious Disease	6 Credit hours	PHAR 818 Education IPPE 8	1 Credit hour
This course discusses clinical microbiology and principles of anti-infective therapy as well as the pathophysiology, associated pharmacology, and therapeutic approaches to infectious diseases. Successful completion of PHAR 542 is a prerequisite.		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		Grade Mode: Normal Grading Mode	
PHAR 781 Veterinary Pharmacy	3 Credit hours	PHAR 819 Long Care of Patient	1 Credit hour
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.		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		Grade Mode: Normal Grading Mode	
PHAR 801 Special Topics I	1-6 Credit hours	PHAR 821 IPPE Institutional	2 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.		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.	
Grade Mode: Normal Grading Mode		Grade Mode: Normal Grading Mode	
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.			
Grade Mode: Normal Grading Mode			
PHAR 815 Phar Prac Exp 5 IPPE 5	1 Credit hour		
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.			
Grade Mode: Normal Grading Mode			
PHAR 816 Inpatient Clinical Skills	1 Credit hour		
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.			
Grade Mode: Normal Grading Mode			
PHAR 817 Intro Phar Prac Exp IPPE 7	1 Credit hour		
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.			
Grade Mode: Normal Grading Mode			

PHAR 885 APPE 5-Transitions of Care 5 Credit hours

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.

Grade Mode: Normal Grading Mode

PHAR 886 APPE 6-Diverse Populations 5 Credit hours

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).

Grade Mode: Normal Grading Mode

PHAR 887 APPE 7 & 8-Electives 5 Credit hours

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.

Grade Mode: Normal Grading Mode

PHAR 891 Pharmacy Capstone I 2 Credit hours

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

Grade Mode: Normal Grading Mode

PHAR 892 Pharmacy Capstone 2 2 Credit hours

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

Pre-req: PHAR 891 with a minimum grade of C.

Grade Mode: Normal Grading Mode