

**Thomas J. Long School of Pharmacy, University of the Pacific**  
**Doctor of Pharmacy Curriculum**

Rev 1/31/2024

Course No.	Course Name	Units
	<b>SEMESTER 1-Fall</b>	<b>19</b>
PHAR 111	Physiology I	4
PHAR 115	Dispensing, Compounding & Calculations	3
PHAR 116	Principles of Biological Mechanisms	4
PHAR 117	Principles & Application of Dosage Forms	4
PHAR 121	Professional Communications	1
PHAR 122	Drug Information Resources & Technology	1
PHAR 131	Pharmacy Skills I: Introduction to Patient Workup	2
PHAR 669	Interprofessional Education	0
	<b>SEMESTER 2-Spring</b>	<b>17-20</b>
PHAR 211	Physiology II	4
PHAR 212	Introduction to Pharmacology	2
PHAR 213	Drug Disposition I	3
PHAR 221	Biostatistics & Research Design	2
PHAR 231	Pharmacy Skills II: Outpatient Care	1
PHAR 232	Clinical Assessment	1
PHAR 241	Nonprescription Therapy & Self Care	2
PHAR 251	Community I IPPE	2
PHAR 669	Interprofessional Education	0
	Elective(s) *	0-3 *
	<b>SEMESTER 3-Summer</b>	<b>18-20</b>
PHAR 311	Drug Disposition II	3
PHAR 321	Health Care Delivery Systems I & Pharmacoeconomics	2
PHAR 331	Pharmacy Skills III: Assessment & Counseling	1
PHAR 332	Case Based Practice I	1
PHAR 341	ICS: Cardiovascular Disease I Foundations	3
PHAR 343	ICS: Endocrine Disorders	2
PHAR 443	ICS: Gastrointestinal, Nutrition & Renal Disorders	4
PHAR 551	Community II IPPE	2
PHAR 669	Interprofessional Education	0
	Elective(s) *	0-3 *
	<b>SEMESTER 4-Fall</b>	<b>14-20</b>
PHAR 342	ICS: Cardiovascular Disease II Therapeutics	3
PHAR 411	Physiology III: Immunology	1
PHAR 421	Health Care Delivery Systems II	2
PHAR 431	Pharmacy Skills IV: Inpatient Care	1
PHAR 432	Case Based Practice II	1
PHAR 441	ICS: Neuropsychiatric Disorders I Foundations	2
PHAR 442	ICS: Neuropsychiatric Disorders II Therapeutics	4
PHAR 555	Hospital IPPE #	2
PHAR 553	Ambulatory Care IPPE #	1
PHAR 669	Interprofessional Education	0
	Elective(s) *	0-3 *

Course No.	Course Name	Units
<b>SEMESTER 5-Spring</b>		<b>15-20</b>
PHAR 521	Pharmacy Practice Management	3
PHAR 531	Pharmacy Skills V: Professional Communications	1
PHAR 532	Case Based Practice III	1
PHAR 541	ICS: Infectious Diseases I Foundations	2
PHAR 542	ICS: Infectious Diseases II Applications	4
PHAR 543	ICS: Women's, Men's & Genitourinary Disorders	2
PHAR 544	ICS: Pulmonary & Ear, Nose & Throat Therapeutics	1
PHAR 555	Hospital IPPE #	2
PHAR 553	Ambulatory Care IPPE #	1
PHAR 559	Health Care Outreach IPPE #,@	1
PHAR 669	Interprofessional Education	0
	Elective(s) *	0-3 *
<b>SEMESTER 6-Summer</b>		<b>16-20</b>
PHAR 621	Pharmacy Law & Regulatory Affairs	3
PHAR 631	APPE Preparedness	1
PHAR 632	Case Based Practice IV	1
PHAR 641	ICS: Immune, Inflammatory & Pain Disorders	3
PHAR 642	ICS: Pediatrics & Geriatrics	2
PHAR 643	ICS: Oncology	4
PHAR 644	ICS: Critical Care & Emergency Medicine	1
PHAR 553	Ambulatory Care IPPE #	1
PHAR 555	Hospital IPPE #	2
PHAR 669	Interprofessional Education	1
	Elective(s) *	0-3 *
<b>SEMESTER 7 &amp; 8-Fall/Spring</b>		<b>19 &amp; 19</b>
PHAR 751	APPE Capstone I	1
PHAR 752	APPE Capstone II	1
PHAR 753	Internal Medicine APPE	6
PHAR 754	Ambulatory Care APPE	6
PHAR 755	Hospital Pharmacy APPE	6
PHAR 756	Community Pharmacy APPE	6
PHAR 757	Elective APPE I	6
PHAR 758	Elective APPE II	6
<b>TOTAL (includes 4 units of electives in semesters 2-6)</b>		<b>144 *</b>

### Symbols and Abbreviations

\* A total of 4 or more units of approved pharmacy electives must be taken by the end of Semester 6

# These IPPEs are taken in Semester 4, 5 or 6 as scheduled by the Office of Professional Programs

@ PHAR 553 Ambulatory Care IPPE and PHAR 559 Health Care Outreach IPPE are both satisfied by taking PRAC 141 Health Care Outreach IPPE and PRAC 142 Medicare Part D IPPE

APPE = Advanced Pharmacy Practice Experience

IPPE = Introductory Pharmacy Practice Experience

## **Courses and Course Descriptions**

### **PHAR 111 Physiology I (4 units)**

This course will provide foundational physiological principles, and an introduction to the Nervous, Cardiovascular and Respiratory systems at organ, cellular and molecular levels.

### **PHAR 115 Dispensing, Compounding, And Calculations (3 units)**

This course covers pharmacy dispensing related topics. Using medications from the Top Drugs list, students will learn how to provide effective consultations, how to communicate effectively with health care professionals, and the process of dispensing medications. Other topics covered in this course include Interpretation of common pharmacy sig abbreviations, brand and generic names of the top medications as well as the major therapeutic use for the majority of those drugs. Students will learn basic non-sterile compounding skills and parenteral compounding skills. This course also covers mathematical concepts as they apply to the practice of pharmacy.

### **PHAR 116 Principles of Biological Mechanisms (4 units)**

This course covers the molecular structure of proteins, nucleic acids, and lipids and the biological mechanisms at the molecular level with focus on rational drug design.

### **PHAR 117 Principles and Application of Dosage Forms (4 units)**

This course will provide foundational knowledge about physicochemical properties and different traditional and advanced dosage forms. In this course, students will learn how the drug development and approval process work in US. This will be followed by the introduction of physicochemical principles of pharmacy that form the basis in the design of rational formulation, preparation/compounding, quality control, stability, packaging, and storage of pharmaceutical dosage forms.

### **PHAR 121 Professional Communications (1 unit)**

An introduction to the roles and responsibilities of the pharmacist in general and in various practice settings with a focus on professional communications and development of professional behaviors.

### **PHAR 122 Drug Information Resources & Technology (1 unit)**

This course will focus on the application of drug information to healthcare and the pharmacy profession and its application as a means of gathering healthcare and medication specific information and communicating it to others. The course will also focus on the ethical use of drug information primarily in patient care, as well as discuss its use in population based care and healthcare/health-system research. An introduction to responding to drug information problems and the search strategies and analysis of the resources will be provided as well.

### **PHAR 131 Pharmacy Skills I – Introduction to Patient Workup (2 units)**

Pharmacy practice skills and knowledge will be developed through completion of self-study modules and guided practice simulations. The practicum experiences relate to effective patient counseling for the most commonly prescribed and select non-prescription medications, pulmonary devices, and immunizations in addition to application of appropriate techniques for measurement of blood pressure, blood glucose and administration of immunizations for adolescents and adults.

### **PHAR 211 Physiology II (4 units)**

This course is an integrated study of the cellular, anatomical, and physiological components of the gastrointestinal, renal, and endocrine systems.

### **PHAR 212 Introduction to Pharmacology (2 units)**

This course will provide the foundational principles of pharmacology prior to the integrated course series.

#### PHAR 213 Drug Disposition I (3 units)

This course is designed to introduce the basic pharmacokinetic concepts by focusing on the fundamental principles of absorption, distribution and elimination that govern drug behavior in the body.

#### PHAR 221 Biostatistics and Research Design (2 units)

This course will focus on the theory, methods and processes used in differing types of research designs seen in healthcare. It will also include information on and an analysis and discussion of the mathematical tools used in testing hypotheses and presenting and making sense of the data collected from research, especially data collected from random samples from the population. This will include a review of scientific methods, forming hypotheses, designing/analyzing interventional and observational studies, processes for gathering data, techniques for summarizing the data collected and drawing inferences from data. An introduction to probability and descriptive statistics will be presented, followed by detailed descriptions of widely used inferential procedures and statistical options. Journal articles from pharmacy, healthcare and epidemiology will be used as examples to enhance the discussions and improve understanding.

#### PHAR 231 Pharmacy Skills II-Outpatient Care (1 unit)

Pharmacy practice skills course will build on previous and current course knowledge and content and encompass the application to practice like activities and simulations. The skills based course experiences relate to effective patient counseling for the advanced dispensing of most commonly prescribed, select non-prescription medications including pharmacist furnishing of products such as Naloxone and Plan B, etc. Students will learn and practice the skills involved in over-the-counter (OTC) therapeutics, patient counseling and motivational interviewing. Students will learn how to gather subjective patient data using patient interviewing and history gathering techniques and how to collect objective patient data. Students will participate in simulated patient scenarios and/or cases using the Pharmacist Patient Care Process (PPCP) requiring students to navigate electronic health records (EHRs) to identify drug related therapy problems and develop drug therapy plans. Implementation, documentation, and communication of drug therapy plans will be developed using standardized formats such as SOAP (subjective objective assessment plan) notes and SBAR (situation background assessment recommendation) model.

#### PHAR232 Clinical Assessment (1 unit)

Students will learn how to collect, evaluate, and assess clinical data such as laboratory values, physical assessment findings, and diagnostic tests using various written and electronic resources including electronic health records, electronic databases, and/or written patient case studies.

#### PHAR 241 Nonprescription Therapy & Self Care (2 units)

Principles of triage and self-care using non-prescription pharmacotherapy and dietary supplements.

#### PHAR 251 Community I Introductory Pharmacy Practice Experience (IPPE) (2 units)

A practice-based introductory experience focusing on the role of the Pharmacist/Pharmacy Intern in a community pharmacy practice. This course is designed to allow students to participate in the delivery of pharmaceutical care.

#### PHAR 311 Drug Disposition II (3 units)

This course is designed to expand on the basic pharmacokinetic concepts cover in Drug Disposition I and covers drug metabolism, advanced and clinical pharmacokinetic concepts, pharmacodynamics, drug interactions and pharmacogenetics.

#### PHAR 321 Health Care Delivery Systems I & Pharmacoeconomics (2 units)

The description and application of economic-based evaluation methods to pharmaceutical products, treatments and services. This includes understanding principles which will help decision makers maximize clinical and/or humanistic outcomes given economic constraints. Additionally, this course will provide an introduction to managed care, an overview of governmental health programs, and their respective roles in the US health care delivery system.

**PHAR 331 Pharmacy Skills III- Assessment and Counseling (1 unit)**

Pharmacy practice skills III will focus on the learning and development of patient care skills necessary for successful implementation and follow up of the Pharmacists Patient Care Process (PPCP). Patient assessment and communication skills will be learned, developed, and applied to patient care scenarios to identify, evaluate, correct, and prevent therapy related problems. Major topics will be barriers to adherence, delivery device technique and evaluation, nutrition and other non-drug therapies, medication history taking, limited physical assessments, conflict resolution, and other patient communication techniques.

**PHAR 332 Case Based Practice I (1 unit)**

This is part of a series of Case Based Practice courses that develop problem solving and critical thinking skills. Knowledge acquired through the Integrated Clinical Sciences series will be applied in cumulative fashion through the workup of complex patient cases utilizing the pharmacist patient care process, presentation, discussion and documentation.

**PHAR 341 Integrated Clinical Sciences: Cardiovascular Disease I – Foundations (3 units)**

This cardiovascular disease focused course is an integration of Pathophysiology, Pharmacology, and Medicinal Chemistry. The course will enable students to 1) acquire a fundamental understanding of the pathophysiology of the cardiovascular diseases, 2) describe and classify drugs into the major cardiovascular system based pharmacologic classes, and 3) describe select structure-activity relationships of cardiovascular classes of drugs along with their medicinal chemistry bases. Course content, discussion and case based learning will build on student's pre-requisite knowledge, placing in-depth and focused emphasis on cardiovascular science empowering students to make appropriate decisions regarding the selection and use of drug therapy for the management or prevention of disease.

**PHAR 342 Integrated Clinical Sciences: Cardiovascular Disease II – Therapeutics (3 units)**

The cardiovascular therapeutics course will enable students to design and implement patient care plans for patients with or at risk of commonly encountered cardiovascular diseases. Students will learn and apply clinical science and evidence-based medicine with the goal of improving patient care and health outcomes. Course content, discussion and case based learning will build on student's pre-requisite knowledge, placing in-depth and focused emphasis on cardiovascular clinical science and therapeutics with the goal of empowering students to make appropriate decisions regarding the selection, use and monitoring of drug therapy for the management or prevention of cardiovascular diseases. Topics covered include; Hypertension, Hyperlipidemia, Coronary Artery Disease & Angina, Peripheral Arterial Disease, Acute Coronary Syndromes, Post-MI, Stent and CABG Therapeutics, Transient Ischemic Attack & Cerebrovascular Accidents, Heart Failure, Cardiogenic Shock, Venous Thromboembolism, Atrial Fibrillation & Stroke Prevention and Brady & Tachyarrhythmias.

**PHAR 343 Integrated Clinical Sciences: Endocrine Disorders (2 units)**

This is an integrative course combining pathophysiology, pharmacology, medicinal chemistry and therapeutics. Students will develop the abilities to assess and develop patient-specific care plans for patients with endocrine disorders, diabetes and drug-induced problems utilizing basic and applied pharmaceutical science abilities. Lectures, readings, and discussion will enable students to develop the abilities to assess, manage, and document simple to complex patients.

**PHAR 411 Physiology III: Immunology (1 unit)**

Molecular and Cellular Basis of the Immune System.

#### PHAR 421 Health Care Delivery Systems II (2 units)

This social and behavioral based course will focus on the pharmacists role in various social and population based programs including the use of CLIA waivers to support point-of-care or clinic based laboratory testing, disease prevention (prediabetes, fall risk, etc.) programs and activities, major public health initiatives, the pharmacists role in public health campaigns, preventative care strategies (e.g., Immunization programs), refill clinics, telepharmacy, and crisis management (e.g. natural disaster, eco-political turmoil, disruption of supply chain and threats to usual methods of delivering pharmaceutical care).

#### PHAR 431 Pharmacy Skills IV: Inpatient Care (1 unit)

This course is a component of the longitudinal skills based curriculum. Skills III will include a focus on inpatient or hospital practice. The student will gain an understanding of inpatient workflow, pharmacist order verification and entry, sterile intravenous compounding and administration, order-set development, medication reconciliation, transition of care and drug monographs.

#### PHAR 432 Case Based Practice II (1 unit)

This is part of a series of Case Based Practice courses that develop problem solving and critical thinking skills. Knowledge acquired through the Integrated Clinical Sciences series will be applied in cumulative fashion through the workup of complex patient cases utilizing the pharmacist patient care process, presentation, discussion and documentation.

#### PHAR 441 Integrated Clinical Sciences: Neuropsychiatric Disorders I—Foundations (2 units)

This course discusses the molecular mechanisms of drug action and its relation to chemical structure. This course will cover how prototype therapeutic agents used in the treatment of neuropsychiatric and other disorders affect the peripheral and the central nervous system, both in terms of therapeutic and adverse effects. The emphasis of the course is placed on the molecular mechanisms by which these drugs alter the biochemistry, physiology and pathology of the nervous system, and on the structure-activity relationship (SAR) of these drugs.

#### PHAR 442 Integrated Clinical Sciences: Neuropsychiatric Disorders II- Therapeutics (4 units)

Students will develop the abilities to assess and develop patient-specific care plans for patients with specific neurologic and psychiatric conditions, diseases, disorders, and drug-induced problems utilizing basic and applied pharmaceutical science abilities. Lectures, readings, and discussion will enable students to develop the abilities to assess, manage, and document simple to complex patients.

#### PHAR 443 Integrated Clinical Sciences: Gastrointestinal, Nutrition & Renal Disorders (4 units)

Students will develop the abilities to assess and develop patient-specific care plans for patients with gastrointestinal, hepatic, nutrition, and renal conditions, diseases, disorders, and drug-induced problems utilizing basic and applied pharmaceutical science abilities. Lectures and readings will provide the foundational information to understand and apply pathophysiologic and pharmacologic principles. Lectures, readings, and case applications will enable students to develop the abilities to assess, manage, and document simple to complex patients.

#### PHAR 521 Pharmacy Practice Management (3 units)

This course provides an overview of human resource management and financial modeling applicable to pharmacy management; included a problem solving models, management decision-making models, and elements from bioethics and legal cases that pertain to management.

#### PHAR 531 Pharmacy Skills V: Professional Communications (1 unit)

Pharmacy practice skills course will build on previous and current course knowledge and content and encompass the application to practice-like activities and simulations. The skills based course experiences relate to effective communications in verbal and written form. Students will learn and practice the skills involved in responding to a drug information request, developing of a drug monograph, and conducting in-service presentations.

**PHAR 532 Case Based Practice III (1 unit)**

This is part of a series of Case Based Practice courses that develop problem solving and critical thinking skills. Knowledge acquired through the Integrated Clinical Sciences series will be applied in cumulative fashion through the workup of complex patient cases utilizing the pharmacist patient care process, presentation, discussion and documentation.

**PHAR 541 Integrated Course Series - Infectious Diseases I Fundamentals (2 units)**

Infectious Diseases I is an integrated course where students will learn the foundational concepts of medical microbiology and medicinal chemistry to be able to progress to the Infectious Diseases II Applications course and learn to care for patients with infectious diseases.

**PHAR 542 Integrated Course Series – Infectious Diseases II Applications (4 units)**

Infectious Diseases II is an integrated course where students will build up on the foundational concepts from the Infectious Diseases I course and develop further knowledge in clinical pharmacology, pharmacokinetics, pharmacodynamics and therapeutics in order to care for patients with infectious diseases.

**PHAR 543 Integrated Clinical Sciences: Women's, Men's & Genitourinary Disorders (2 units)**

This integrated clinical science course develops a student's abilities to manage patients with common women's health, men's health, and genitourinary conditions. Prior course work in the foundational sciences serve as the basis for the development of knowledge and application of pertinent pathophysiology, pharmacology, medicinal chemistry and therapeutics.

**PHAR 544 Integrated Clinical Sciences: Pulmonary & Ear, Nose and Throat Therapeutics (1 unit)**

Students will develop the abilities to assess and develop patient-specific care plans for patients with pulmonary/ENT diseases, disorders, and drug-induced problems utilizing basic and applied pharmaceutical science abilities. Lectures and readings will provide the foundational information to understand and apply pathophysiologic and pharmacologic principles. Lectures, readings, labs, and case applications will enable students to develop the abilities to assess, manage, and document simple to complex patients.

**PHAR 551 Community II Introductory Pharmacy Practice Experience (IPPE) (2 units)**

Community II Introductory Pharmacy Practice Experiences are a method to enhance each student's understanding of the role and responsibilities of pharmacists in the community setting and to gain experiences with the medication use system within a community pharmacy and expand the abilities developed in the Community I Introductory Pharmacy Practice Experience.

**PHAR 553 Ambulatory Care Introductory Pharmacy Practice Experience (IPPE) (1 unit)**

The Ambulatory Care IPPE enhances each student's understanding, participation, and commitment to enhancing the health of an ambulatory population. Students will work with healthcare professionals within a health care system and utilize stratification strategies to provide ambulatory population management activities. Students will evaluate electronic health information and document assessments and plans using standardized progress notes. Students will contact patients to provide information and education pertinent to health promotion and disease prevention and document those discussions in electronic health records. Work is conducted under the supervision of a licensed pharmacist.

**PHAR 555 Hospital Introductory Pharmacy Practice Experience (IPPE) (2 units)**

The Hospital IPPE course enhances each student's understanding of the role of pharmacists throughout the medication use process in the hospital setting, with emphasis on pharmacy operations and administration, compounding, dispensing, and monitoring medications, regulatory and accreditation standards, communicating with patients and other health care professionals, and providing drug information.

**PHAR 559 Health Care Outreach Introductory Pharmacy Practice Experience (HCO IPPE) (1 unit)**

Community health care outreach introductory pharmacy practice experiences are a method to enhance each student's understanding, participation, and commitment to enhancing the health of the public. Groups of students will work with community agencies and organizations in the development, organization, management, implementation, delivery, and assessment of health care outreach activities in local communities. Many of these activities will be managed through professional student organizations. Students will also reflect on their activities to determine the impact of these activities on the public and on themselves.

**PHAR 621 Pharmacy Law and Regulatory Affairs (3 units)**

Discussions and analysis of federal and state law, regulations, standards of practice, case law and ethics related to pharmacy practice and drug development and distribution. The focus is California laws and regulations that govern the practice of pharmacy in community and institutional settings.

**PHAR 631 APPE Preparedness (1 unit)**

This course brings the critical thinking, problem-solving skills, and knowledge acquired throughout the curriculum together to ensure students are best prepared to transition to the Advanced Pharmacy Practice Experiences (APPEs). Focus will be on effective workup of complex patient cases, applied pharmacokinetics, case presentation, SOAP/chart note documentation, drug information response, medication reconciliation, antimicrobial de-escalation, and common clinical protocols used at practice sites.

**PHAR 632 Case Based Practice IV (1 unit)**

This is part of a series of Case Based Practice courses that develop problem solving and critical thinking skills. Knowledge acquired through the Integrated Clinical Sciences series will be applied in cumulative fashion through the workup of complex patient cases utilizing the pharmacist patient care process, presentation, discussion and documentation.

**PHAR 641 Integrated Clinical Sciences: Immune, Inflammatory & Pain Disorders (3 units)**

This integrated clinical science course develops a student's abilities to manage patients with common immune, pain, dermatologic, and ophthalmic conditions. Prior course work in the foundational sciences serve as the basis for the development of knowledge and application of pertinent pathophysiology, pharmacology, medicinal chemistry and therapeutics.

**PHAR 642 Integrated Clinical Sciences: Pediatrics & Geriatrics (2 units)**

This is an integrated course with both basic and clinical sciences. Students will develop the abilities to assess and develop pharmacy patient care plans (PPCP) for specific pediatric and geriatric conditions, diseases, disorders, and drug-induced problems utilizing basic and applied pharmaceutical science abilities. Lectures, readings, and discussion will enable students to develop the abilities to assess, manage, and document simple to complex patients.

**PHAR 643 Integrated Clinical Sciences: Oncology (4 units)**

This integrated clinical science course develops students' abilities to manage patients with solid cancer and hematological malignancy or patients with high risk to have these conditions. Prior course work in the foundational sciences serve as the basis for the development of knowledge and application of pertinent pathophysiology, pharmacology, medicinal chemistry, and therapeutics.

**PHAR 644 Integrated Clinical Sciences: Critical Care & Emergency Medicine (1 unit)**

Students will develop the abilities to assess and develop patient-specific care plans for patients in emergency or critical care units with various diseases, disorders, and drug-induced problems utilizing basic and applied pharmaceutical science abilities. Lectures and readings will provide the foundational information to understand and apply pathophysiologic and pharmacologic principles. Lectures, readings, labs, and case applications will enable students to develop the abilities to assess, manage, and document simple to complex patients.



**PHAR 669 Interprofessional Education (1 unit)**

This course is a longitudinal course which will provide pharmacy students with an opportunity to learn and collaborate with students from other health professions. These activities will generally include students from medical schools, nurse practitioner program, physician assistant program, dentistry, and/or other allied health professions.

**PHAR 751 Advanced Pharmacy Practice Experience (APPE) Capstone I (1 unit)**

This is the first of a required, two-semester sequential course for pharmacy students during their advanced pharmacy practice experiences. This course is designed to: 1) prepare students for practice in the profession of pharmacy, 2) build upon didactic knowledge gained previously in the Doctor of Pharmacy program, and 3) help students become life-long learners through self-assessment and reflection on learning. Course activities may include but are not limited to board exam preparation, quizzes, case presentations, disease state and/or drug information presentations/discussions, journal club presentations, self-reflection assignments, and/or guest lectures by pharmacists and other healthcare practitioners in addition to other region-specific activities.

**PHAR 752 Advanced Pharmacy Practice Experience (APPE) Capstone II (1 unit)**

This is the second of a required, two-semester sequential course for pharmacy students during their advanced pharmacy practice experiences. This course is designed to: 1) prepare students for practice in the profession of pharmacy, 2) build upon didactic knowledge gained previously in the Doctor of Pharmacy program, and 3) help students become life-long learners through self-assessment and reflection on learning. Course activities may include but are not limited to board exam preparation, quizzes, case presentations, disease state and/or drug information presentations/discussions, journal club presentations, self-reflection assignments, and/or guest lectures by pharmacists and other healthcare practitioners in addition to other region-specific activities.

**PHAR 753 Internal Medicine Advanced Pharmacy Practice Experience (APPE) (6 units)**

A clinical pharmacy practice rotation at an affiliated health care facility with emphasis on the medical management of disease states, rational drug therapy, and patient monitoring using the pharmaceutical care practice model in the care of inpatients.

**PHAR 754 Ambulatory Care Advanced Pharmacy Practice Experience (APPE) (6 units)**

A clinical pharmacy practice rotation at an affiliated health care facility with emphasis on the medical management of disease states, rational drug therapy, and patient monitoring using the pharmaceutical care practice model in the care of outpatient and ambulatory care clinic patients.

**PHAR 755 Hospital Pharmacy Advanced Pharmacy Practice Experience (APPE) (6 units)**

A clinical pharmacy practice rotation at an affiliated health care facility with emphasis on selecting drug products, compounding, dispensing, monitoring and evaluation, as well as understanding pharmacy operations and administration, communicating with patients and other health professionals, and providing drug information.

**PHAR 756 Community Pharmacy Advanced Pharmacy Practice Experience (APPE) (6 units)**

A clinical pharmacy practice rotation at an affiliated community pharmacy facility with emphasis on selecting drug products, compounding, dispensing, monitoring and evaluating, communicating with patients, caregivers, and other health professionals, providing drug information, promoting public health, and learning pharmacy operations and management.

**PHAR 757 Advanced Pharmacy Practice Experience (APPE) Elective I (6 units)**

This is the first of two elective advanced pharmacy practice experiences that allow the student to explore and develop abilities in an area of interest within the health care industry. This experience may be in a variety of biomedical settings that include patient care, administration, health care system, public health, governmental agency, professional organization, research, academic, pharmaceutical industry, and other biomedical or health related settings.

**PHAR 758 Advanced Pharmacy Practice Experience (APPE) Elective II (6 units)**

This is the second of two elective advanced pharmacy practice experiences that allow the student to explore and develop abilities in an area of interest within the health care industry. This experience may be in a variety of biomedical settings including patient care, administration, health care system, public health, governmental agency, professional organization, research, academic, pharmaceutical industry, and other biomedical or health related settings.