

## PharmD Curriculum - Summary by Course Series or Curricular Thread

Academic Year	Term	Course #	Course Name	Course Content
<b>Pharmaceutical Sciences</b>				
P1	Fall	PS508	Drug Delivery & Solutions	<b>Basic Principles of Drug Delivery</b> <ul style="list-style-type: none"> <li>- biological and physical-chemical barriers to the bioavailability of drugs</li> <li>- routes of drug delivery and related dosage forms</li> <li>- principles and problems in equilibria, transport, and chemical kinetics of drug solutions as they relate to liquid dosage form performance</li> <li>- drug product development and approval process</li> </ul>
P1	Winter	PS518	Dispersed/ Solid Forms	<b>Formulation, Development and Approval Process of Dosage Forms</b> <ul style="list-style-type: none"> <li>- suspensions, emulsions, aerosols and solid dosage forms</li> <li>- dproperties that enhance drug delivery via oral, buccal, lung and transdermal routes of administration</li> <li>- relationship between in-vitro drug dissolution and in vivo performance</li> <li>- integration of physicochemical concepts with quality and performance</li> <li>- importance of drug solubility, dissolution and pH on drug bioavailability</li> <li>- chemical and physical stability of drugs; relationship to bioavailability</li> <li>- bioequivalence, generics, and biosimilars</li> <li>- biotechnology products, their stability, formulation, and delivery</li> <li>- calculations for dissolution, bioavailability, and bioequivalence</li> </ul>
P2	Fall	PS608	Pharmacokinetic Concepts	<b>Absorption, Distribution, Metabolism, Excretion, and Transport of Drugs</b> <ul style="list-style-type: none"> <li>- physiological and pathophysiological factors that may impact pharmacologic response and dosing</li> <li>- basic pharmacokinetic principles, including absorption and bioavailability, volume of distribution, clearance, half-life, and protein binding</li> <li>- interpretation pharmacokinetic data after intravenous bolus, intravenous infusion, and extravascular dosing using both plasma and urine data</li> <li>- variability in patient genetics, age and weight, disease, and drug interactions and how they may affect drug kinetics and response</li> <li>- designing an appropriate therapeutic drug regimen and recommending dosing adjustments due to disease progression</li> <li>- linear and nonlinear pharmacokinetics and how they may impact drug levels, dosing and response in patients</li> </ul>
P3	Winter	PS718	Biopharm & Pharmacogenetics	<b>Modern Biopharmaceutics and Pharmacogenomics</b> <ul style="list-style-type: none"> <li>- biopharmaceutics and applied pharmacokinetics in the context of special patient populations</li> <li>- special topics in nanomedicine, drug discovery, and clinical trials</li> <li>- advances in pharmacogenomic and genetic test methods</li> <li>- presentations that focus on patient counselling regarding gene-drug interactions</li> </ul>

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Medicinal Chemistry and Pharmacology				
P1	Fall	MC500	Principles of Drug Action I	<p><b>Basic Concepts Related to Drug Action I</b></p> <ul style="list-style-type: none"> <li>- applications of biopharmaceutical analysis, including titrations, spectroscopic analysis, protein, enzyme and immunoassays, electrophoresis and chromatography and the knowledge of the basic instrumentation used in these analytical methods.</li> <li>- relationship between the chemical structure and nature of drugs to the experimental results from analytical assays.</li> <li>- physiochemical properties and how they influence a drug's biological activity.</li> <li>- processes in the human body that lead to xenobiotic metabolism and resulting drug-drug interactions.</li> <li>- how genetic variations may affect drug action.</li> </ul>
P1	Winter	MC510	Principles of Drug Action II	<p><b>Basic Concepts Related to Drug Action II</b></p> <ul style="list-style-type: none"> <li>- understanding of drugs as chemical molecules and structure-activity relationships</li> <li>- broad scope of the cholinergic and adrenergic systems and the drugs that affect them</li> <li>- physiology and pharmacology of histamine and NSAIDs</li> <li>- physiology and pharmacology of some cardiovascular drug classes (anti-coagulants and lipid-lowering agents) and vitamins</li> </ul>
P2	Fall	MC600	Principles of Drug Action III	<p><b>Basic Concepts Related to Drug Action III</b></p> <ul style="list-style-type: none"> <li>- understanding of drugs as chemical molecules and structure-activity relationships</li> <li>- how chemical structure relates to biological activity for drugs that affect the cardiovascular and central nervous systems</li> <li>- how xenobiotic metabolism affects biological activity for drugs that affect the cardiovascular and central nervous systems</li> </ul>
P2	Winter	MC610	Principles of Drug Action IV	<p><b>Basic Concepts Related to Drug Action IV</b></p> <ul style="list-style-type: none"> <li>- understanding of drugs as chemical molecules and that structure determines biological activity</li> <li>- pharmacology and physiology of the endocrine system</li> <li>- pathology of diseases related to endocrine disorders, diabetes, gout and asthma</li> <li>- microorganisms that lead to infectious diseases in humans and the various targets of drugs used to overcome these infections</li> <li>- how chemical structure relates to biological activity and how xenobiotic metabolism affects biological activity for drugs</li> <li>- metabolism, mechanisms of action, adverse effects, and drug-drug interactions of drugs that affect the endocrine system, anti-infective agents, agents used in gout, asthma and diabetes</li> </ul>
P3	Fall	MC700	Principles of Drug Action V	<p><b>Basic Concepts Related to Drug Action IV</b></p> <ul style="list-style-type: none"> <li>- understanding of drugs as chemical molecules and that structure determines biological activity</li> <li>- pharmacological basis and uses of chemotherapeutic agents and biologicals.</li> <li>- how xenobiotic metabolism affects biological activity chemotherapeutic agents.</li> <li>- adverse effects and interactions associated with chemotherapeutic agents and biologicals</li> <li>- clinically available antiviral agents, cancer chemotherapeutic agents and some novel therapeutics</li> <li>- capstone cases that integrate content from MedChem and Therapeutics and show the relevance and application of the basic sciences to clinical practice</li> </ul>

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Health Systems and Pharmacy Practice				
P1	Fall	P501	Introduction to Pharmacy	<p><b>Exploring the Profession of Pharmacy</b></p> <ul style="list-style-type: none"> <li>- introduction to and history of the US healthcare system, pharmacy practice, and drug regulation in the US</li> <li>- role of pharmacists and scope pharmacy practice related to patient care (clinical care, MTM) and other healthcare professionals</li> <li>- State and Federal healthcare issues in pharmacy</li> <li>- professionalism, e-professionalism, and professional organizations</li> <li>- career exploration, networking, career planning, internships, CV, letters of rec &amp; letters of intent</li> </ul>
P1	Winter	P516	Health Care Systems	<p><b>Components of the US Healthcare System</b></p> <ul style="list-style-type: none"> <li>- primary payers of healthcare in the United States, outlining the varying approaches that they use to pay providers</li> <li>- economics of health care compared to the economics of other industries</li> <li>- how various forms of reimbursement can create different incentives to control utilization of health care</li> <li>- stakeholders in the US healthcare system and how they intersect with different health professions</li> <li>- synergistic versus conflicting actions of the main players in the healthcare system, and how inter-professional collaboration plays a role in setting health policy agendas</li> <li>- the history of healthcare reform in the United States</li> <li>- the structure and function of benefits and cost-sharing in health insurance plans and how insurance plans are designed to incorporate benefits across healthcare setting</li> <li>- major settings of healthcare delivery in the United States</li> <li>- how payment and reform have impacted the organizations and/or settings of healthcare delivery in the United States</li> <li>- major types of managed care organizations (MCOs)</li> <li>- the function of a pharmacy benefit manager, and tools used by PBMs and payers to manage pharmaceutical use</li> <li>- how trends in technology, quality and safety impact healthcare delivery in the United States</li> </ul>
P2	Winter	P616	Health Systems	<p><b>Health-System Pharmacy Practice and Leadership</b></p> <ul style="list-style-type: none"> <li>- the role of pharmacy informatics and automation to improve efficiency, safety, and support pharmacy practice</li> <li>- advancement of the pharmacy practice model and clinical pharmacy practice</li> <li>- how the determination of what services patients need can be used to guide how resources are deployed</li> <li>- differences and similarities between quality measures and the provision of safe care</li> <li>- leadership decisions as they relate to safety, quality, efficiency, financial management, and change leadership</li> <li>- how to plan and execute a patient care service</li> <li>- marketing strategies to let others know about a clinical service</li> <li>- the role and function of the Medication Safety Officer (MSO)</li> <li>- basic medication safety and error event discovery techniques</li> <li>- the medication safety features and risks with various technologies and automation, and how they may be used in practice</li> <li>- approaches to manage unexpected patient care issues (medication shortages and electronic health record downtime)</li> <li>- evaluation of medication orders for verification within the EHR</li> <li>- the use of EHR in pharmacy practice and the rationale for their use in health systems</li> <li>- developing a vision for the future state of pharmacy practice in health systems.</li> </ul>

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P3	Fall	P706	Health Care Outcomes	<b>Effectiveness of Pharmaceuticals</b> <ul style="list-style-type: none"> <li>- impact of pharmaceutical services and products and other health care services on patients' health-related outcomes</li> <li>- definitions of and key factors required for assuring accurate, complete, and available data for use in health care outcomes assessment</li> <li>- tools used in health care outcome measurement and assessment, including database, pharmacoeconomic modeling, surveying, and medication use evaluation</li> <li>- how pharmacists can help patients achieve outcomes important to them in the ambulatory care environment through individual or population intervention</li> <li>- measures that characterize the level of success of various pharmacy practice programs</li> <li>- evaluation of drug use trends and utilization patterns using data to determine if variances in practice exist which could affect health care outcomes</li> <li>- developing plans to improve medication use and/or patient health care outcomes</li> <li>- developing and testing a psychometrically sound patient-reported outcome measure</li> </ul>
P3	Winter	P716	Law	<b>Pharmacy Law</b> <ul style="list-style-type: none"> <li>- sources for the Federal and State regulatory law pertaining to the practice of pharmacy and related tasks</li> <li>- integration of Federal regulations with State Administrative Rules</li> <li>- specific rules, regulations, and law pertaining to the practice of pharmacy</li> <li>- the legal and ethical practice of pharmacy based on Federal and State law</li> </ul>

### Therapeutics and Clinical Skills

P1	Winter	P512	Self-Care	<b>Self-Care Therapeutics</b> <ul style="list-style-type: none"> <li>- assessing and triaging patients with common health-related concerns</li> <li>- recommending appropriate non-prescription or nonpharmacologic treatment</li> <li>- counseling self-treating patients on recommended therapies</li> <li>- monitoring for efficacy and safety of treatment</li> <li>- mechanisms of action, doses/formulations, common side effects and their management, and common drug interactions for self-care products</li> <li>- communicating with patients empathically and respectfully; appreciating barriers to pharmacist-patient communication (including health literacy and cultural differences) and adapting communications accordingly</li> <li>- participating constructively in teams, using skills such as advocacy and inquiry to ensure optimal team functioning</li> <li>- leadership and the ability to encourage balanced participation from all team members and foster healthy team dynamics</li> </ul>
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P2	Fall	P602	Therapeutic Problem Solv I	<p><b>Therapeutic Problem Solving I</b></p> <ul style="list-style-type: none"> <li>- pathophysiology, etiology, clinical signs and symptoms, diagnosis, complications, and treatment of the medical conditions</li> <li>- read, locate, organize, interpret, and prioritize information found in the medical record or obtained via patient interview</li> <li>- recognize normal clinical laboratory values and evaluate these tests with respect to their usefulness in monitoring disease progress and drug levels, assessment of drug-laboratory interactions, and familiarity with potential errors made by patients using home diagnostic or monitoring devices</li> <li>- drug therapy/applied pharmacokinetics/monitoring for common chronic conditions (hypertension, heart failure, pain, coagulation disorders, coronary artery disease, hyperlipidemia, thyroid, osteoporosis, PUD/GERD, asthma/COPD, contraception, pulmonary arterial hypertension, lifestyle)</li> <li>- role of evidence-based medicine in regard to therapeutic decisions</li> <li>- developing comprehensive pharmaceutical care plans</li> </ul>
P2	Winter	P612	Therapeutic Problem Solv II	<p><b>Therapeutic Problem Solving II</b></p> <ul style="list-style-type: none"> <li>- pathophysiology, etiology, clinical signs and symptoms, diagnosis, complications, and treatment of the medical conditions</li> <li>- drug therapy and applied pharmacokinetics for common chronic conditions (diabetes, substance misuse &amp; substance use disorders, epilepsy, Parkinson disease, peptic ulcer disease, anemia, pediatrics, geriatrics, neurocognitive disorders, headache, BPH, pregnancy/lactation, erectile dysfunction, urinary incontinence, smoking cessation)</li> <li>- role of evidence-based medicine in regard to therapeutic decisions</li> <li>- developing comprehensive pharmaceutical care plans</li> <li>- therapeutic drug monitoring</li> </ul>
P3	Fall	P702	Therapeutic Problem Solv III	<p><b>Therapeutic Problem Solving III</b></p> <ul style="list-style-type: none"> <li>- pathophysiology, etiology, clinical signs and symptoms, diagnosis, complications, and treatment of the medical conditions</li> <li>- drug therapy/applied pharmacokinetics for acute and chronic conditions (psychiatric disorders, fluid &amp; electrolytes/acid base, chronic kidney disease and acute kidney injury, infectious diseases, otitis media, HIV therapy)</li> <li>- clinical pharmacokinetics</li> <li>- role of evidence-based medicine in regard to therapeutic decisions</li> <li>- developing comprehensive pharmaceutical care plans</li> </ul>
P3	Winter	P712	Therapeutic Problem Solv IV	<p><b>Therapeutic Problem Solving, IV</b></p> <ul style="list-style-type: none"> <li>- pathophysiology, etiology, clinical signs and symptoms, diagnosis, complications, and treatment of the medical conditions</li> <li>- drug therapy/applied pharmacokinetics for acute conditions (oncology and supportive care, immunology, hepatology, rheumatology, solid organ transplant, IBD, sepsis and shock, arrhythmias, acute coronary syndrome, acute heart failure, ICU pain agitation delirium, viral hepatitis, nutrition assessments and parenteral nutrition)</li> <li>- role of evidence-based medicine in regard to therapeutic decisions</li> <li>- developing comprehensive pharmaceutical care plans</li> </ul>

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<b>Pharmaceutical Care Series</b>				
P1	Fall	P504	Pharmacy Practice Skills I	<p><b>Introduction to Contemporary Community Pharmacy Practice</b></p> <ul style="list-style-type: none"> <li>- determining the validity of a prescription order</li> <li>- information legally required for new and transferred prescriptions</li> <li>- reviewing patient profiles and identifying inappropriate dose, route, frequency or dosage form; drug-allergy interactions; history of side effects; or irrational therapeutic regimen for top 50 medications and compounded products</li> <li>- use point-of-care resources to answer drug information questions</li> <li>- dose calculations; reducing and enlarging; density, specific gravity, specific volume; dilution, concentration; percentage ratio strength; potency; constitution of powders</li> <li>- compounding medications pursuant to a prescription order</li> <li>- preparing and dispensing medications pursuant to State and Federal regulations</li> <li>- community-pharmacy-based primary, secondary, and tertiary health promotion and disease prevention recommendations</li> <li>- analyzing top 50 prescription orders according to the following: brand and generic names, therapeutic category, drug schedule, indications, usual adult dosing range, common side effects, monitoring parameters, available dosage forms, warnings, and counseling points</li> </ul>
P1	Fall	P506	Patient Communications	<p><b>Communication Skills</b></p> <ul style="list-style-type: none"> <li>- verbal, nonverbal and written communication skills</li> <li>- assessing the effectiveness of your own verbal and non-verbal communication</li> <li>- applying communication techniques and available resources to ensure communication is sensitive to the social and cultural background of an individual patient</li> <li>- Indian Health Service (IHS) model for counseling patients.</li> <li>- patient interviews and medication histories</li> <li>- applying principles of motivational interviewing to guide ambivalent patients toward positive behavior change</li> <li>- barriers to patient-pharmacist communication and how these can be overcome.</li> <li>- medical terminology</li> </ul>

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P1	Winter	P514	Pharmacy Practice Skills II	<p><b>Basic Pharmaceutical Care</b></p> <ul style="list-style-type: none"> <li>- drug distribution in a health system environment</li> <li>- basic unit-dose dispensing activities, including checking packaging and labeling and quantities dispensed in a typical cart-fill distribution model</li> <li>- elements required per USP &lt;797&gt; for preparation and dispensing of compounded sterile product (CSP)</li> <li>- risk levels of CSP as defined by USP &lt;797&gt;</li> <li>- making a low risk CSP (including garbing, handwashing, use of proper sterile compounding technique, final product checking and labeling, and beyond use dating)</li> <li>- elements required for preparing hazardous drugs as defined by USP &lt;800&gt;</li> <li>- determining compatibility of parenteral products using a standard reference</li> <li>- pharmaceutical calculations commonly used in health-system practice</li> <li>- medication-related problems (classification, potentiating factors, tools for reducing problems)</li> <li>- methods/tools of the pharmacist available for optimizing patient adherence to medications</li> <li>- Pharmacists' Patient Care Process, care plans, SOAP notes, and verbal communication with health care providers and patients</li> <li>- interactions with community partners through the longitudinal early practice experience (LEPE) IPPE</li> </ul>
P3	Fall	P723	Pharmacy Practice Skills III	<p><b>Chronic Disease Management</b></p> <ul style="list-style-type: none"> <li>- utilizing a data collection form to facilitate gathering, organizing, interpreting, and presenting patient-specific information</li> <li>- developing a care plan with evidence-based recommendations for pharmacological and non-pharmacological interventions</li> <li>- counseling patients on therapeutic and lifestyle recommendations for management of their chronic disease(s)</li> <li>- documenting patient findings and recommendations in a SOAP note format</li> </ul> <p><b>Diabetes:</b></p> <ul style="list-style-type: none"> <li>- glucose self-monitoring, use of a glucometer, diabetic foot exam</li> <li>- counseling on goals for glycemic control and action plan for medical referral based on home glucose readings</li> <li>- insulin administration (proper technique, admixture, dosing)</li> </ul> <p><b>Asthma/COPD:</b></p> <ul style="list-style-type: none"> <li>- correct use of inhaler devices including determining when to refill the prescription</li> <li>- patient-specific symptom or peak-flow based Asthma Action Plans</li> </ul> <p><b>Hypertension:</b></p> <ul style="list-style-type: none"> <li>- measuring blood pressure and heart rate using a mercury/aneroid manometer with stethoscope; and automatic monitors</li> <li>- differences between JNC7 and JNC8 hypertension management guidelines</li> </ul> <p><b>Lipid Profile, CHD Risk Assessment and Therapeutic Lifestyle Changes:</b></p> <ul style="list-style-type: none"> <li>- explaining components of a patient's lipid panel and 10-year ASCVS risk in patient friendly terms</li> <li>- obtaining the necessary patient information to assess cardiovascular disease risk using the Pooled Cohort equations</li> <li>- patient specific modifiable and non-modifiable CHD risk factors</li> <li>- CHD risk, risk factors, and interventions (pharmacological and non-pharmacological) to modify CHD risk factors</li> <li>- differences between the TPIII and 2013 ACC/AHA lipid management guidelines</li> </ul>

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P3	Winter	P733	Pharmacy Practice Skills IV	<b>Acute Care</b> <ul style="list-style-type: none"> <li>- collecting relevant information on a Patient Monitoring Form</li> <li>- assessing patient-specific data, identifying and prioritizing medical problems, and formulating a written Pharmacist's Care Plan</li> <li>- integration of the primary literature into the development of a Pharmacist's Care Plan</li> <li>- SOAP notes that clearly, concisely and accurately portrays clinical recommendations</li> <li>- effectively communicating patient information to health care professionals utilizing a structured case presentation approach to summarize a patient's medical issues, problem list and Care Plan</li> <li>- researching a clinical topic for a brief, formal oral presentation</li> <li>- inpatient pharmacy-oriented pharmaceutical calculations</li> </ul>
P3	Winter	P714	Team-Based Clinical Decision Making	<b>Team-Based Clinical Decision Making, Interprofessional Education</b> <ul style="list-style-type: none"> <li>- describe the unique roles that advanced practice providers, dentistry, pharmacy, and social work bring to the healthcare team.</li> <li>- how differing viewpoints can affect patient-care decisions.</li> <li>- personal and team attributes that improve or compromise team effectiveness.</li> <li>- developing team-based care plans for healthcare situations that synthesize available evidence and incorporate multiple perspectives (individual, family, providers).</li> </ul>

### Evidence-Based Medicine and Scientific Inquiry

P2	Fall	P604	Evidence Based Medicine	<b>Principles of Evidence-Based Practice</b> <ul style="list-style-type: none"> <li>- the principles of evidence-based practice</li> <li>- employing strategies to formulate clinical questions</li> <li>- identifying the appropriate drug information source to use for a given query</li> <li>- appropriate search strategies for various drug information questions</li> <li>- appraisal of primary literature for experimental and observational clinical drug trials</li> <li>- using the framework of evidence-based medicine to formulate clinical decisions for selected topic</li> </ul>
P2	Winter	P614	Research Methods	<b>Introduction to Research Methods and Proposal Writing</b> <ul style="list-style-type: none"> <li>- formulating a research problem that is relevant to human health</li> <li>- constructing a hypothesis and understand how it relates to the research problem</li> <li>- writing and verbally conveying a logical hypothesis</li> <li>- developing specific aims to address a hypothesis</li> <li>- the needed background information to support the rationale for a hypothesis</li> <li>- appropriate study designs (including methods and measurements/ outcomes) to address a hypothesis</li> <li>- collaboration and consensus building in research project development and problem solving</li> <li>- conveying and convincing, in writing and verbally, the importance and significance of a chosen research problem and develop a proposal to address the problem</li> <li>- the purpose for each component of a research proposal</li> <li>- constructing a scientific poster for presentation of a research proposal</li> </ul>



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P3	Fall	P704	Ethics/EBM Clinical Applications	<p><b>Ethics and Evidence-Based Medicine in Practice</b></p> <ul style="list-style-type: none"> <li>- efficient and effective search strategies to answer clinical questions</li> <li>- assessing the validity of clinical trials for application to clinical practice</li> <li>- applying the principles of evidence-based-medicine to clinical decision making</li> <li>- the importance of the patient perspective in clinical decision making</li> <li>- applying ethical principles to clinical practice scenarios: autonomy, beneficence, nonmaleficence, justice, fidelity, and veracity</li> <li>- ethical and clinical challenges facing the healthcare practitioner</li> <li>- the relationships among moral, professional, and legal obligations of pharmacists including those involving honesty and respect for patient well-being, autonomy, dignity and confidentiality</li> <li>- the ethical aspects of the design, conduct, regulation, and promotion of clinical research that require explicit judgment and justification</li> <li>- identifying real-world connections to course content and effectively communicating the connections in writing through current event discussion boards</li> </ul>
P4		P730	Seminar	<p><b>PharmD Seminar</b></p> <ul style="list-style-type: none"> <li>- developing formal communication skills through the preparation and presentation of a pharmacy practice-related topic or PharmD Investigations research project</li> <li>- developing skills in self evaluation and peer critique</li> <li>- developing skills in critical thinking and problem solving through a pharmacy practice-related problem analysis</li> </ul>
Multi-year		P/MC/PS	PharmD Research	<p><b>PharmD Research Project</b></p> <ul style="list-style-type: none"> <li>- formulating a research question relevant to pharmacy, pharmaceutical science, medicinal chemistry or biomedical sciences</li> <li>- conducting a comprehensive literature search surrounding a research question</li> <li>- developing a written research proposal that includes the methods by which the research question will be analyzed</li> <li>- collecting and analyzing data to answer the research question</li> <li>- interpreting data and draw appropriate conclusions about the data</li> <li>- articulating research findings in a well-written manuscript</li> <li>- constructing and presenting research findings in an appropriate venue (e.g., poster presentation)</li> </ul>

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<b>Experiential</b>				
Multi-year		P511	Life Long Learning	<p><b>Life-Long Learning</b></p> <ul style="list-style-type: none"> <li>- professional and career development</li> <li>- health promotion</li> <li>- service</li> <li>- advocacy</li> <li>- leadership</li> <li>- commitment to self-improvement</li> <li>- accountability for one's learning and commitment to excellence</li> </ul>
P1	Fall or Winter	P503	Service Learning	<p><b>Interdisciplinary Service (includes community service)</b></p> <p><b>Cultural Sensitivity</b></p> <p>-sensitivity and responsiveness to culture race/ethnicity, age, socioeconomic status, gender, sexual orientation, spirituality, disabilities and other aspects of diversity and identification of these when interacting with clients, patients and other health professionals.</p> <p><b>Health Disparities</b></p> <ul style="list-style-type: none"> <li>- factors that contribute to health disparities.</li> <li>- Observing examples of social determinants of health and health disparities by interacting with service learning site clients and understanding the mission of the service learning site.</li> </ul> <p><b>Civic Engagement</b></p> <ul style="list-style-type: none"> <li>- Working to make a difference in the life of our communities and developing the combination of knowledge, skills, values, and motivation to make a difference.</li> </ul> <p><b>Interprofessional Teams</b></p> <ul style="list-style-type: none"> <li>- Working with individuals of other professions to maintain a climate of mutual respect and shared values</li> <li>- Applying relationship-building values to discuss health disparities among interprofessional students, considering site-specific mission and services that work to reduce health disparities</li> <li>- Gaining an understanding of roles and responsibilities of other professions and health professionals via class discussion and activity, and developing an understanding of how other professionals assume/value health and its production.</li> </ul>

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P2	Fall or Winter	P603	Community IPPE	<p><b>Experiential Practice in Community Pharmacy</b></p> <ul style="list-style-type: none"> <li>- connecting didactic learning to experiential practice in the community setting</li> <li>- role of pharmacist, technician, and other members of interprofessional team</li> <li>- hands-on experience with safely and accurately dispensing medications, drug therapy assessments, nonprescription drug selection, patient counseling, and communicating with healthcare providers</li> <li>- selection of nonprescription medications and self-care for patients</li> <li>- collect, record, and assess patient data to define health and medication-related issues</li> <li>- professional and ethical behavior in all practice activities, demonstrating empathy, cultural sensitivity, and professional communications in compliance with all laws, regulations, and professional standards</li> <li>- pharmaceutical calculations related to the preparation of compounded oral, topical, rectal, or ophthalmic medications and pharmacokinetic calculation of appropriate doses</li> <li>- procedures required in the sound management and operation of a pharmacy</li> </ul>
P2	Fall or Winter	P613	Ambulatory Care IPPE	<p><b>Experiential Practice in Ambulatory Care Pharmacy</b></p> <ul style="list-style-type: none"> <li>- navigating the medical record demonstrating knowledge of where to obtain pertinent patient information</li> <li>- collecting, recording, and assessing patient data to define health and medication-related issues to ensure safe and effective medication use</li> <li>- the role of the pharmacist and other members of an interprofessional team</li> <li>- demonstrating professional and ethical behavior in all practice activities, including empathy, cultural sensitivity, and professional communications in compliance with all laws, regulations, and professional standards</li> </ul>
P3	Fall or Winter	P703	Institutional IPPE	<p><b>Experiential Practice in Health System/Hospital Pharmacy</b></p> <ul style="list-style-type: none"> <li>- connecting didactic learning to experiential practice in the hospital/health system setting</li> <li>- introduction to patient care activities (taking medication histories, medication reconciliation, solving medication problems in conjunction with other healthcare providers, etc)</li> </ul>
P3	Fall or Winter	P713	Direct Care IPPE	<p><b>Experiential Practice in Providing Direct Patient Care</b></p> <ul style="list-style-type: none"> <li>- communicating with patients in a caring and compassionate manner to accurately obtain complete medication histories and to provide needed information about prescription or nonprescription drug use.</li> <li>- evaluating patient relevant data to identify and prioritize medication-related problems.</li> <li>- formulating recommendations to solve the medication-related problems.</li> <li>- documentation of recommendations in the medical record in accordance to institutional policies and procedures.</li> <li>- utilizing patient profiles to ensure safe and effective medication use.</li> <li>- procedures required in the sound management and operation of a pharmacy.</li> <li>- practicing within the laws and ethics governing pharmacy practice.</li> <li>- the role of pharmacy technicians.</li> <li>- communicating with health care providers and patients to disseminate therapeutic knowledge</li> </ul>
P4		P687- P695	APPE Rotations	<p><b>Advanced Pharmacy Practice Experiences</b></p> <ul style="list-style-type: none"> <li>- 5-week rotations (minimum of 8 rotations, up to 9 allowed) of supervised pharmacy practice</li> <li>- rotations are required in community, health system/hospital inpatient care, ambulatory care, drug information and nontraditional practice settings</li> </ul>