

ACPE Educational Standard		Ability Statement
A. Scientific thinker	Biomedical	Biochemistry - Describe the structure, properties, biological functions, kinetics, and metabolic fates of essential macromolecules and their roles in understanding adverse drug interactions, identifying endogenous drug targets, and designing effective drug therapies.
		Human Anatomy - Describe the structure of major human body systems at the cellular, tissue, organ, and system level.
		Human Physiology - Describe the Homeostatic function and normal response reactions across the lifespan of non-diseased human cells, organs, and systems.
		Immunology - Know the components of the immune system and understand its role in infection, disease and the ability to harness it with vaccines and immunotherapy
		Medical Microbiology - Describe the structure, function, and properties of microorganisms (bacteria, viruses, parasites, and fungi) responsible for human disease, and rational approaches to their containment or eradication.
		Pathology/Pathophysiology - Describe basic principles, mechanisms, functional changes and metabolic sequelae of human disease impacting cells, organs, and systems.
	Pharmaceutical	Medicinal Chemistry - Explain the chemical basis of drug action and behavior in vivo and in vitro, with an emphasis on pharmacophore recognition and the application of physicochemical properties, structure and activity relationships, intermolecular drug-receptor interactions and metabolism as it relates to therapeutic decision-making.
		Pharmacology - Pharmacodynamics, mechanisms of therapeutic and adverse drug actions and interactions, and application of these principles to therapeutic decision-making.
		Toxicology - Explain the pharmacodynamics, mechanisms, prevention, and treatment of the toxic effects of drugs and poisons, including poisons associated with bioterrorism.
		Pharmacogenomics/genetics - Describe the genetic and genomic basis for disease and individual differences in metabolizing enzymes,transporters, and other biochemicals impacting drug disposition and action that underpin the practice of personalized medicine.
		Pharmaceutics - Physicochemical properties of drugs, excipients, and dosage forms important to the rational design and manufacture of sterile and non-sterile products. Application of physical chemistry and dosage form science to drug stability, delivery, release, disposition, pharmacokinetics, therapeutic effectiveness, and the development of quality standards for drug products.
		Biopharmaceutics - Apply biotechnology to the rational design of biologic-based therapies.
		Drug Development - describe the process by which drugs are developed and brought to market, including drug stability, delivery, release, disposition, pharmacokinetics, therapeutic effectiveness, and the development of quality standards for drug products that lead to patents, premarket studies, and approval.
		Extemporaneous compounding - Apply general compounding concepts to the safe and accurate preparation of compounded medications and use of related equipment
		Extemporaneous compounding - Preparation of <i>non-sterile</i> prescriptions which are pharmaceutically accurate regarding drug product and dose, free from contamination, and appropriately formulated for safe and effective patient use. Analysis of the scientific principles and quality standards upon which these compounding requirements are based.
		Extemporaneous compounding - Preparation of <i>sterile</i> prescriptions which are pharmaceutically accurate regarding drug product and dose, free from contamination, and appropriately formulated for safe and effective patient use. Analysis of the scientific principles and quality standards upon which these compounding requirements are based.
	Clinical	Clinical Chemistry - Apply clinical laboratory data to disease state management, including screening, diagnosis, progression, and treatment evaluation.
		Brand and Generic Names - Identify the brand and generic names of commonly prescribed medications.
		Indications/Contra-indications - Identify appropriate indications and contraindications or precautions
		Dosing Strategies - Determine the most appropriate patient-specific dosing strategies including, interval and durations for medications for the common conditions in which they are indicated across the lifespan.
		General Administration Techniques -Identify proper administration techniques of pharmacologic and non-pharmacologic products.
		Storage Requirements - Identify important storage requirements of medications.
		Devices and durable medical equipment - Apply knowledge of devices, durable medical equipment, and medical technology
		Pharmaceutical calculations - Mastery of mathematical skills required to accurately prepare prescriptions (including extemporaneously compounded dosage forms) that are therapeutically sound and safe for patient use. Calculation of patient-specific nutritional and drug dosing/delivery requirements.
		Basic Pharmacokinetics - Mathematical determination of the rate of drug movement from one therapeutic or physiologic compartment to another which includes application of physicochemical and kinetic principles and parameters to therapeutically important issues, such as drug delivery, disposition, therapeutic effectiveness, and beneficial or adverse interactions in general and specific populations.
		Clinical Pharmacokinetics - Application of basic pharmacokinetic principles and mathematical models to calculate safe and effective doses of drugs for individual patients, and adjust therapy as appropriate through the monitoring of drug concentration in biological fluids.
B. Problem solving process		For a complex scenario, identify and define the primary problem or true question.
		Demonstrate scientific inquiry by developing, organizing, prioritizing, and defending multiple possible solutions.
		Identify medication-related problems
		Prioritize or triage needs and strategies to address a problem or action plan
C. Communication		Generate new ideas to help improve personal team, a nd organization, and/or pharmacy profession missions.
		Communicate assertively, persuasively, confidently, and clearly.
		Determine the most appropriate communication strategies (verbal, non-verbal, and written) that promote effective interpersonal dialogue to meet the needs of the individual, group, or organization, including adaptation of terminology as appropriate for the audience.
		Utilize technology-based communication tools appropriately and understand their impact on healthcare delivery, healthcare access, healthcare information, and patient empowerment.
		Demonstrate fluency with language of instruction (grammar, spelling, syntax)
		Interview patients using an organized structure and techniques such as motivational interviewing, active listening, and open/closed-ended questions to gather information
		Educate patients /informal caregivers, including drug or disease state counseling, by determining and implementing the most effective and enduring ways to impart information and assess understanding.
D. Cultural Humility		Educate peer health professionals by determining the most effective and enduring ways to impart information and assess understanding.
		Exploration of the potential impact of cultural values, beliefs, and practices on patient and population outcomes.
		Recognize the social determinants of health that affect the access to care and care outcomes.
		Assess a patient’s health literacy and modify communication strategies to meet the patient’s needs.
E. Person-Centered Care		Understand bioethical principles in the approach to clinical practice and research, and apply approaches for resolving ethical dilemmas, with an emphasis on moral responsibility and the ability to critically evaluate viable options against the needs of patients and other key stakeholders.
		Collect information - identify data relevant to a patient's health care needs and organize in a manner sufficient to support problem assessment and plan formulation
		Patient assessment - Evaluation of patient function and dysfunction through the performance of tests and assessments leading to objective (e.g., physical assessment, health screening, and lab data interpretation) and subjective (patient interview) data important to the diagnosis and provision of care.
		Interpret information - determine the utility and relevance of patient data when assessing the nature and severity of a health care need
		Select appropriate therapy - identify the appropriate drug or non-drug intervention for a specific health care need
		Determine appropriate monitoring parameters and follow-up timeline
		Formulate a care plan - Practice evidence-based clinical decision making, and medication therapy management strategy development for patients with specific diseases and conditions that complicate care and/or put patients at high risk for adverse events. Emphasis on patient safety, clinical efficacy, pharmacogenomic and pharmacoeconomic considerations, and treatment of patients across the lifespan.
		Initiate a therapeutic treatment plan, including diagnosing and prescribing as appropriate to pharmacist's scope of practice
		Tailor pharmacotherapy plans to patient specific variables
		Document patient care activities - Drug therapy recommendations and care plans are organized into written format for team communication/documentation. Records of patient encounters and health care outcomes are appropriately maintained.
F. Advocacy		Ascertain and incorporate patients goals into clinical decision making
		Advocate for the role of a pharmacist in various practice settings and patients that would benefit from pharmacist intervention
		Assist patients in navigating the complex healthcare system.
		Ensure patients obtain resources and care required in an efficient and cost-effective manner (e.g., patient medication assistance programs and triage to social and/or other healthcare services).
G. Medication use Process stewardship	Manage medication use systems	Understanding of or experience with contemporary practice roles and innovative opportunities, and inculcation of professional attitudes, behaviors, and dispositions.
		Analysis of the systems- and human-associated causes of medication errors , exploration of strategies designed to reduce/eliminate them, and interpretation and application of available and evolving error-reporting mechanisms.
		Manage healthcare needs of patients during transitions of care.
		Utilize continuous quality improvement techniques in the medication use process and the healthcare system.
		Interpret and fulfill a medication order (including sterile and non-sterile products) with accurate preparation and labeling.
		Perfom drug regimen review to identify medication errors or interactions
		Appropriately dispense or distribute medications
		Administer medications as allowed by practice law or regulations
		Maintain patient profiles and pharmacy data
		Oversee the pharmacy operations for an assigned work shift
	Business models	Examination of U.S. health systems and contemporary reimbursement models in which patient-centered and/or population-based care is provided and paid for, and how social, political, economic, organizational, and cultural factors influence providers’ ability to ensure patient safety and deliver coordinated interprofessional care services.
		Application of sound management and leadership principles (including operations, information, resource, fiscal, and personnel including pharmacy technicians and interns) and quality metrics to advance patient care and service delivery within and between various practice settings.
		Demonstrate financial management and entrepreneurial skills to develop and communicate innovative pharmacy services
		Describe drug pricing models, inventory practices and control mechanisms
		Billing for services
	Follow laws and regulations	History of Pharmacy - Exploration of the evolution of pharmacy as a distinct profession, the transition from a focus on the drug to a focus on the patient and the therapy (including pharmacist-provided patient care), and major milestones and contributors in the evolution of pharmacy.
		Pharmacoeconomics - Application of economic principles and theories to the provision of cost-effective pharmacy therapies and services that optimize patient-care outcomes, particularly in situations where healthcare resources are limited.
		Comply with federal, state, and local laws and regulations related to dispensing and non-dispensing functions of a pharmacy practice
		Practice according to the rules and legal requirements for dispensing, administering, storing, and ordering controlled substances in all pharmacy practice settings.
		Comply with federal and appropriate state-specific statutes, regulations, policies, executive orders, and court decisions that regulate the practice of pharmacy related to the mitigation of prescription drug misuse and diversion.
		Discuss laws and regulations regarding appropriate handling and disposal of hazardous and nonhazardous materials.
		Maintain pharmacy/facility compliance with operational standards
		HIPAA: Share health information in accordance with all federal policies.
	Use and evaluate health/ medical information systems	Effective and secure design and use of electronic and other technology-based systems , including electronic health records, to capture, store, retrieve, and analyze data for use in patient care, and confidentially/legally share health information in accordance with federal policies.
		Recognize the types of medical and drug information that is available in general (tertiary), secondary, and primary information sources.
		Search and Collect accurate and comprehensive drug information from appropriate sources.
		Differentiate among experimental models and methodology employed in clinical study design
		Identify types of data and statistical tests
		Evaluation of research methods or clinical trial design, including determination of appropriate use of commonly employed statistical tests, management of data sets, and the evaluation of the validity and reliability of conclusions generated based on the application of those tests to the data sets.
		Generate an effective drug information response - Critical analysis and application of relevant health sciences literature and other information resources to answer specific patient-care and/or drug-related questions and provide evidence-based therapeutic recommendations to healthcare providers or, when appropriate, the public.
H. Interprofessional Collaboration		Values and Ethics for Interprofessional practice: work with team members to maintain a climate of shared values, ethical conduct and mutual respect.
		Roles and Responsibilities: Use knowledge of one’s own role and team member’s expertise to address potential health outcomes
		Communication: Communicate in a responsive, responsible, respectful, and compassionate manner with team members.
		Teams and Teamwork: Apply values and principles of teamwork to adapt one’s own role in a variety of team settings
I. Population Health and Wellness	Population and Public health	Public health - Exploration of population health management strategies, national and community-based public health programs, and implementation of activities that advance public health and wellness.
		Pharmacoepidemiology - Cause-and-effect patterns of health and disease in large populations that advance safe and effective drug use as well as non-drug therapies and positive care outcomes within those populations.
		Identify needs of a targeted population - Evaluate how the unique characteristics (social, cultural, religious, economic, and environmental) of a patient population can contribute to drug-related problems.
		Describe how patient specific characteristics affect risk of disease, prognosis, response to therapy, or access to care.
		Understand lifespan-dependent variations in physiology or biochemistry that impact drug action and effectiveness. Participate in population health management by evaluating and adjusting interventions to advance safe and effective drug use and positive care outcomes within the pediatric population.
		Understand lifespan-dependent variations in physiology or biochemistry that impact drug action and effectiveness. Participate in population health management by evaluating and adjusting interventions to advance safe and effective drug use and positive care outcomes within the geriatric population.
	Prevention, wellness and self care	Wellness - describe the dimensions of wellness
		Preventative care - Describe systematic preventive care, using risk assessment, risk reduction, screening, education, and immunizations.
		Self-care assessment – Evaluate individuals seeking self-treatment, including triaging the need for referral to other health professionals.
		Self-care pharmacotherapy – Identify appropriate self-treatment strategies, including non-prescription drug products, non-pharmacologic treatments, and health/wellness strategies.
		Immunizations - Provide immunizations to patients against vaccine-preventable diseases.
		Pharmacognosy – Provide evidence-based evaluation of the therapeutic value, safety, and regulation of natural products, alternative medicine and dietary supplements.
		Complimentary therapy - Evidence-based evaluation of the therapeutic value, safety, and regulation of non-pharmacologic complimentary therapy
J. Leadership		Identify characteristics that reflect leadership versus management.
		Demonstrate behaviors that support collaboration and consensus building
		Demonstrate skills in task/project management , including time management, organization, and workflow execution
		Know principles of change management
K. Self-awareness		Apply legal, regulatory, and ethical principles in areas such as employment law, institutional compliance , and professional integrity
		Utilize resources to participate in self exploration
		Perform self assessment/reflection
		Demonstrate emotional intelligence
L. Professionalism		Develop skills to support resilience
		Personal growth - Incorporate newly learned abilities into both personal and professional life
		Portfolio/CV - Document continuing professional development (CPD)
		Personal Appearance - Maintain personal appearance consistent with the image of the profession.
		Attendance and engagement - Demonstrate punctuality and consideration for class, group or work schedules , and practice sites
		Follow-through on Tasks - Demonstrates follow through with responsibilities and adjusts work style as needed to achieve milestones.
		Appropriate Technology Use - Demonstrates appropriate use of electronic devices and social media platforms.
		Self-Directed / Accountable - Demonstrate accountability and self-direction while undertaking tasks to exceed minimal standards and deadlines.
		Efficent Use of Time - Demonstrates effective time management skills, including adequate preparation for all personal and practice-related responsibilities and adherence to deadlines
		Behaves in Legal and Ethical Manner - Exemplifies high ethical standards through honesty, acting in one’s best interests, and by holding self and others accountable for professional conduct.
M. Professional Skills and Attitudes		Demonstrates Empathy - Demonstrates empathy and an appreciation of the concerns of others.
		Accepts Constructive Feedback - Utilizes constructive feedback to improve both efficiency and effectiveness of performance.
N. Entrustable Professional Activities		Complete and reflect on the requirements of the "Professional Identity Formation" program as part of co-curricular offerings.
		EPAs associated with various curricular areas are denoted in corresponding document.