**College of Pharmacy
Program Learning Outcomes (PLOs)**

PLO 1: **Foundational Knowledge.** Demonstrates the knowledge, skills, abilities, behaviors, and attitudes necessary to apply the foundational sciences to the provision of patient-centered care

Indicators	Initial	Developing	Developed	Proficient
1.1. Evaluation of scientific literature Develops, integrates, and applies knowledge from the foundational sciences (i.e., biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences) to evaluate the scientific literature	• Does not demonstrate ability to conduct a literature search or search is not conducted logically or thoughtfully	• Conducts an elementary, literature search that does not address areas appropriate for informing development a patient-specific therapy	• Conducts an evidenced-based literature search to inform development of a therapy that is generally patient-specific and appropriate	• Conducts a thorough, evidenced-based literature search that fully addresses all areas necessary for developing an effective patient-specific therapy
1.2. Explanation of drug action Develops, integrates, and applies knowledge from the foundational sciences (i.e., biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences) to explain drug action	• Does not demonstrate understanding of the qualitative factors affecting the absorption, distribution, and elimination of drugs and does not demonstrate understanding of how these processes affect response to an administered drug • Fails to correctly explain these processes; cannot relate these processes to drug response; rarely explains the impact of one drug on the rate processes of another drug	• Demonstrates partial understanding of the qualitative factors affecting the absorption, distribution, and elimination of drugs yet does not demonstrate understanding of how these processes affect response to an administered drug • Explains some processes clearly but demonstrates confusion about others • Demonstrates a limited understand of the relationship between the rate processes and drug response • Sometimes correlates the impact of one drug on the rate processes of another drug	• Displays sufficient understanding of the qualitative factors affecting the absorption, distribution, and elimination of drugs and how these processes affect response to an administered drug • Demonstrates sufficient understanding of the processes related to biological drug levels • Demonstrates a good understanding of the relationship between rate processes and the response to a drug most of the time • Frequently correlates the impact of one drug on the rate processes of another drug	• Displays a superb understanding of the qualitative factors affecting the absorption, distribution, and elimination of drugs and how these processes affect response to an administered drug • Demonstrates superb understanding of the processes related to biological drug levels • Consistently explains these processes clearly • Consistently and clearly relates rate processes to the response to a drug • Consistently correlates the impact of one drug on the rate processes of another drug
1.3. Advancement of population health Develops, integrates, and applies knowledge from the foundational sciences (i.e.,	• Demonstrates little or no comprehension of important epidemiologic principles • Does not identify methods	• Demonstrates minimal awareness of major epidemiologic principles inherent to the study of ADE in large populations	• Discusses epidemiologic principles in detail and assesses when they are violated in the medical literature	• Demonstrates the ability to evaluate reports and apply knowledge in clinical practice • Identifies appropriate

	that promote wellness and disease prevention	• Identifies elementary methods that promote wellness and disease prevention but has difficulty forming strategies for educating specific populations	• Identifies appropriate methods that promote wellness and disease prevention, formulates strategies to educate specific populations and recommends appropriate strategies but may not always recommend the best strategies	methods that promote wellness and disease prevention, formulates effective strategies to educate specific populations, and recommend appropriate strategies
biomedical, pharmaceutical, social/behavioral/administrative, and clinical sciences) to advance population health and patient-centered care				

PLO 2: Essentials for Practice and Care. Demonstrates the knowledge, skills, abilities, behaviors, and attitudes necessary to provide patient-centered care, manage medication use systems, promote health and wellness, and describe the influence of population-based care on patient-centered care

Indicators	Initial	Developing	Developed	Proficient
2.1. Patient-centered care Demonstrates ability to provide patient-centered care as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities)	• Does not demonstrate ability to provide patient-centered care at the medication expert level; e.g., demonstrates ability to collect but not sufficiently interpret evidence, does not prioritize, formulates basic assessments and recommendations, does not sufficiently monitor and adjust plans nor document activities.	• Demonstrates ability to provide patient-centered care as the medication expert in some, but not all, areas as follows: collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities	• Demonstrates ability to provide patient-centered care as the medication expert (generally demonstrates ability to collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities)	• Demonstrates ability to provide sufficient patient-centered care as the medication expert (collects and interprets evidence, prioritizes, formulates assessments and recommendations, implements, monitors and adjusts plans, and documents activities)
2.2. Medication use and systems management Demonstrates ability to manage patient healthcare needs using human, financial, technological, and physical resources to optimize the safety and efficacy of medication use systems	• Does not demonstrate understanding of healthcare delivery systems parts • Does not demonstrate understanding of the forces that influence components of the healthcare delivery system, including their connection to patient care • Does not demonstrate understanding of any challenges to systems that	• Demonstrates understanding of some parts of healthcare delivery systems but does not identify how they are related to each other • Demonstrates understanding of some forces that influence the parts of healthcare delivery systems, but demonstrate minimal understanding of	• Demonstrates understanding of most major components of healthcare systems and their respective relationships • Demonstrates understanding of the forces that influence the components of healthcare delivery systems, and demonstrate some understanding of their	• Demonstrates understanding of the major components of healthcare systems, their respective relationships, and their functions related to patient care • Demonstrates thorough understanding of the forces that influence components of healthcare delivery systems and demonstrate

	affect healthcare delivery • Does not demonstrate understanding of how to work with different subsystems to deliver healthcare	their connection to patient care • Demonstrates understanding of some challenges that can affect delivery of healthcare • Demonstrates some understanding of how to work with different subsystems and how they function to deliver healthcare, but demonstrate minimal awareness or understanding of one's own role within the healthcare delivery system	influence on the quality of patient care • Demonstrates understanding of most challenges that can affect delivery of healthcare, but does not demonstrate complete comprehension of the effects • Demonstrates basic understanding of how to work with different subsystems and how they function to deliver healthcare and demonstrate some understanding of one's role within the healthcare delivery system, but does not necessarily demonstrate application of knowledge in a manner that maximizes the quality of healthcare	full understanding of their influence and implications on the quality of patient care • Demonstrates understanding of pertinent challenges to specific aspects of healthcare delivery by demonstrating abilities to thoroughly discuss the implications for the appropriate parts of health care delivery systems • Demonstrates excellent understanding of how to work with different subsystems involved while also demonstrating understanding of one's role within the subsystems, and demonstrate appropriate application of knowledge in a manner that maximizes the quality of healthcare
2.3. Health and wellness Designs prevention, intervention, and educational strategies for individuals and communities to manage chronic disease and improve health and wellness	• Does not demonstrate understanding of how the arts can be utilized to optimize patients' well-being	• Demonstrates knowledge of some of the ways that the arts can be utilized to optimize patients' well-being	• Demonstrates sufficient knowledge of multiple ways that the arts can be utilized to optimize patients' well-being	• Demonstrates thorough knowledge of the ways that the arts can be utilized to optimize patients' well-being and creatively applies this knowledge to improve well-being and the practice and delivery of healthcare
2.4. Population-based care Demonstrates understanding of how population-based care influences patient-centered care and the development of practice guidelines and evidence-based best practices	• Does not demonstrate awareness of population-based care.	• Demonstrates minimal understanding of population-based care and how it influences patient-centered care • Does not demonstrate awareness of how these notions influence the development of practice	• Demonstrates sufficient understanding of population-based care and how it influences patient-centered care • Demonstrates sufficient understanding of how population-based care influences the development	• Demonstrates superb understanding of population-based care and how it influences patient-centered care • Demonstrates superb understanding of how population-based care influences the development

				of practice guidelines and best practices for patient care	of practice guidelines and demonstrates knowledge of best practices for patient care

PLO 3: **Approach to Practice and Care.** Demonstrates the knowledge, skills, abilities, behaviors, and attitudes necessary to solve problems; educate, advocate, and collaborate, working with a broad range of people; recognize social determinants of health; and effectively communicate verbally and nonverbally

Indicators	Initial	Developing	Developed	Proficient
3.1. Problem solving Identifies problems; explore and prioritize potential strategies; and designs, implements, and evaluates viable solutions	• Is not able to correctly identify the problem or issue being considered. • Does not identify appropriate resources. Includes extraneous information or inappropriate or insufficient resources. • Does not demonstrate understanding of the content of materials reviewed. Makes inappropriate inferences. • Does not evaluate possible alternatives or generates ideas that are illogical or extraneous to issue at hand. • Does not propose a solution or does not articulate decision. • Does not adequately provide rationale for selected alternative or decision	• Identifies the problem or issue but does not demonstrate awareness of all the factors associated with the problem or issues that impact decision making. • Identifies a few, but not all, resources needed for decision making. • Demonstrates ability to interpret some information and data but not all. • Does not fully or effectively evaluate alternative solutions. • Proposes a decision with many apparent weaknesses (i.e., not feasible, lack of regard for consequences, lack of supporting evidence, illogical, irrelevant to issue at hand, etc.). • Provides rationale for selected alternative or decision but does not build a solid position with supporting evidence. Is unable to defend decision or course of action.	• Correctly identifies problem or issue being considered and demonstrates adequate awareness of the factors associated with this problem or issue that impact decision making. • Identifies most of the resources needed. • Demonstrates ability to interpret most information and data. • Considers and evaluates possible solutions in a way that generally leads to a logical decision or course of action. • Proposes a solution that does not contain apparent weaknesses that may or may not be the obvious clear choice. Solutions chosen demonstrate consideration of most of the strengths, weaknesses, feasibility, effects, consequences, relevance, etc.). • Provides rationale for selected alternative or	• Consistently correctly identifies the problem or issue being considered and all of the primary factors associated with this problem or issue that impact decision making. Articulates the importance of these factors. • Identifies all appropriate resources. • Demonstrates ability to correctly interpret information and data needed for appropriate decision making. Demonstrates awareness of importance of these data in decision-making process. • Considers and evaluates possible solutions effectively and thoroughly. Evaluation leads to sound, logical, and "best" decision or course of action. • Proposes a solution that is entirely appropriate to the situation at hand. Solutions chosen demonstrate consideration of all of the important and relevant

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			decision which includes some solid supporting evidence. Is able to defend decision or course of action at a basic level.	strengths, weaknesses, feasibility, effects, consequences, etc.). • Provides rationale for selected alternative or decision and builds a solid position with appropriate and relevant supporting evidence. Effectively defends decision or course of action.
3.2. Education Demonstrates ability to educate all audiences through effectively communicating information and assessing learning	• Does not appropriately counsel patients on proper usage of medications • Does not check for understanding, ask questions, and/or asks inappropriate questions. • Does not demonstrate the ability to find and utilize appropriate resources and references necessary for providing accurate pharmacotherapy counseling, consultation and education	• Counsels patients regarding medication usage but leaves out pertinent information needed by patient • Communicates with basic level of clarity but does not always check for understanding or rephrase when confusion occurs. • Demonstrates the ability to find a one or two resources, yet the resources are not the best or most appropriate for providing accurate pharmacotherapy counseling, consultation and education	• Generally demonstrates ability to counsel patients on proper usage of medications and demonstrates some of the following counseling techniques: demonstrates empathy, communicates accurate information clearly, checks for understanding • Seeks to ensure understanding and generally asks questions. • Frequently demonstrates the ability to find and utilize appropriate resources and references necessary for providing accurate pharmacotherapy counseling, consultation and education	• Consistently demonstrates ability to counsel patients on proper usage of medications and demonstrate appropriate counseling techniques (demonstrates empathy, communicates accurate information clearly, checks for understanding) • Ensures understanding and asks appropriate questions. • Consistently demonstrates the ability to find and utilize appropriate resources and references for providing accurate pharmacotherapy counseling, consultation and education
3.3. Patient advocacy Represents the patient's best interests	• Does not demonstrate the ability represent a patient's best interest	• Demonstrates awareness of issues that impact a patient • Demonstrates minimal ability to articulate these issues but does not demonstrate ability to sufficiently advocate on a patient's behalf	• Demonstrates sufficient awareness of issues that impact a patient • Demonstrates ability to articulate these issues • Demonstrates ability to sufficiently advocate on a patient's behalf	• Demonstrates full awareness of the most important issues that impact a patient • Demonstrates ability to clearly and effectively articulate these issues • Demonstrates ability to

				effectively advocate on a patient's behalf
3.4. Collaboration Engages collaboratively as a healthcare team member by demonstrating mutual respect, understanding, and values to meet patient care needs	• Does not participate in the team • Does not demonstrate willingness to collaborate with preceptor/staff. Is not responsive. • Does not demonstrate respect for others • Does not demonstrate a focus on patient care • Does not foster integrity, honesty, and respect in working relationships	• Reluctantly participates in team discussions and if so, only when asked by team members • Collaborates with preceptor/staff in a way that focuses on oneself rather than the team—or does not always seek to collaborate with others. • Demonstrates an attempt to foster integrity, honesty, and respect in working relationships yet exhibits lapses in one or more of these values	• Generally takes an active role in teamwork that produces positive outcomes for patients • Collaborates with preceptor/staff in a way that generally enhances communication and promotes teamwork but does not always improve performance. • Generally demonstrates integrity, honesty, and respect in order to foster collaborative working relationships	• Consistently takes an active role in teamwork that produces positive outcomes for patients • Collaborates with preceptor/staff in a way that enhances communication, performance, and teamwork. • Consistently demonstrates the highest level of integrity, honesty, and respect in order to foster collaborative working relationships
3.5. Cultural sensitivity Identifies social determinants of health, acts to diminish disparities and inequities in access to quality care, and communicates with cultural sensitivity	• Does not demonstrate communication and interactions that convey respect or concern for patients and the community. • Does not demonstrate an awareness of customs, beliefs, or perspectives in diverse patients • Does not demonstrate awareness of cultural and linguistic needs of patients in order to communicate health information	• Demonstrates communication and interactions characteristic of a minimal level of respect, and little concern for patients and the community is apparent through use of some appropriate communication, but student does not employ follow-up questions for clarification, when necessary, and student provides inappropriate detail in responses • Demonstrates a minimal level of awareness of customs, beliefs, or perspectives in diverse patients • Demonstrates minimal	• Demonstrates appropriate communication and interactions that are characteristic of a basic level of respect, and concern for patients and the community is apparent through use of appropriate communication, where student uses some clear, but not necessarily relevant or detailed, follow-up questions and responses • Demonstrates awareness of customs and beliefs, but may not clarify with patients about personal perspectives • Demonstrates awareness of the cultural and linguistic needs of diverse patients,	• Demonstrates professional communication and interactions by showing empathy, respect, and concern for patients and the community through use of appropriate communication where follow-up questions (as needed) and responses are clear, relevant, and detailed • Demonstrates awareness of customs, beliefs, or perspectives in diverse patients; ask appropriate questions to clarify perspectives and perceptions in diverse patients • Demonstrates full awareness of and

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		awareness of cultural and linguistic needs of patients; either does not or only attempt to adapt behaviors, but does so ineffectively, to communicate health information	and adapt behaviors to communicate health information, but communication may not be effective	responsiveness to cultural and linguistic needs of diverse patients by adapting behaviors appropriately in order to effectively communicate health information
3.6. Communication Effectively communicates verbally and nonverbally when interacting with individuals, groups, and organizations	• Does not demonstrate an understanding of active and empathic listening techniques to decrease communication barriers • Demonstrates highly inappropriate and ineffective use of nonverbal cues (e.g., paralanguage, gestures, facial expressions) that create uncomfortable, perhaps even hostile, misunderstandings between the patient and student.	• Demonstrates minimal basic active listening techniques • Demonstrates use of nonverbal cues (e.g., paralanguage, gestures, facial expressions) when interacting with patients, but the use of these cues may contradict the verbal message, creating confusion between the patient and student	• Frequently utilizes active and empathic listening strategies during patient counseling to decrease the impact of communication barriers • Demonstrates use of nonverbal cues (e.g., paralanguage, gestures, facial expressions) appropriate to the context where the student creates mutual understanding with the patient in an open, comfortable communicative environment	• Consistently utilizes active and empathic listening strategies during patient counseling to decrease the impact of communication barriers • Demonstrates effective use of nonverbal cues (e.g., paralanguage, gestures, facial expressions) appropriate to the context where the student creates mutual understanding with and respect for the patient in an open, communicative environment

PLO 4: Personal and Professional Development. Uses the knowledge, skills, abilities, behaviors, and attitudes necessary to demonstrate self-awareness, leadership, innovation, entrepreneurship, and professionalism

Indicators	Initial	Developing	Developed	Proficient
4.1. Self-awareness Examines and reflects on personal knowledge, skills, abilities, beliefs, biases, motivation, and emotions that could enhance or limit personal and professional growth	• Does not demonstrate self-awareness, particularly of own biases and emotions that could impact patient outcomes	• Demonstrates minimal degree of self-awareness in terms of identifying own beliefs • Demonstrates rudimentary ability to reflect on own knowledge, skills, abilities, and experiences	• Demonstrates self-awareness in terms of identifying beliefs and ability to reflect on own knowledge, skills, and abilities • Demonstrates awareness of own motivations and emotions and some of own biases; demonstrates recognition of how these could impact patient care	• Consistently demonstrates professional attitudes and behaviors that uphold the integrity and competence of the work completed. • Consistently demonstrates awareness of own motivations, emotions, and biases; demonstrates recognition of how these could impact patient care and outcomes and the

			and outcomes and the ability to function well on a healthcare team; acts in ways that mitigate harm from biases, beliefs, and emotions • Seeks opportunities for personal growth and self-directed learning	ability to function well on a healthcare team; regularly acts to prevent harm to others • Regularly seeks opportunities for personal growth and self-directed learning
4.2. Leadership Demonstrates responsibility for creating and achieving shared goals, regardless of position	• Functions to satisfy personal needs rather than those of the healthcare team	• Demonstrates minimal ability to contribute toward shared goals; does not lead but participates willingly	• Generally demonstrates attitudes and behaviors that respond to the accomplishment of shared goals that improve healthcare • Demonstrates ability to work well with others to co-create shared goals • Regularly takes responsibility for projects that improve healthcare	• Consistently demonstrates appropriate attitudes and behaviors that contribute to the accomplishment of shared goals that improve healthcare • Demonstrates ability to work well with people and systems and to drive the creation, development, and implementation of shared goals that improve healthcare
4.3. Innovation and entrepreneurship Engages in innovative activities by using creative thinking to envision better ways of accomplishing professional goals	• Does not demonstrate ability to use innovation or creative thinking to accomplish professional goals	• Demonstrates rudimentary ability to think creatively • Engages in innovative activities that others devise • Demonstrates willingness to work with others to accomplish professional goals	• Demonstrates creative thinking in problem solving • Directs creative thinking toward improving healthcare support and the accomplishment of professional goals	• Regularly uses creative thinking to devise and execute innovative solutions to healthcare challenges and to improve healthcare support
4.4. Professionalism Demonstrates behaviors and values that are consistent with the trust given to the profession by patients, other healthcare providers, and society	• Does not consistently demonstrate professional attitudes and behaviors (altruism, excellence, duty, accountability, honesty, and integrity) • Demonstrates frequent lapses in accountability or quality of work	• Demonstrates some professional attitudes and behaviors yet there is inconsistency that may impede on the quality of work or treatment of patients and other healthcare team members (altruism, excellence, duty, accountability, honesty, and integrity)	• Generally demonstrates most of the professional attitudes and behaviors (altruism, excellence, duty, accountability, honesty, and integrity) • that are required in the profession • Demonstrates ability to use these behaviors and values to improve healthcare	• Consistently demonstrates the professional attitudes and behaviors that uphold the integrity and competence of the work and the treatment of patients and other healthcare team professionals (altruism, excellence, duty, accountability, honesty, and

	•		integrity) • Consistently uses these behaviors and values to improve healthcare

PLO 5: **Interprofessional Competence.** Uses the knowledge, skills, abilities, behaviors, and attitudes necessary to demonstrate appropriate values and ethics, roles and responsibilities, communication, and teamwork for collaborative practice

Indicators	Initial	Developing	Developed	Proficient
5.1. Values and ethics Demonstrates ability to work with individuals of other professions to cultivate a climate of mutual respect and shared values	• Does not demonstrate ability to work well with individuals of other professions • Does not demonstrate respect or shared values	• Demonstrates rudimentary ability to work with individuals of other professions • Makes attempts to act respectfully and to support shared values • Behavior does not always align with these values (e.g., might exhibit lapses in accountability or confidentiality)	• Generally demonstrates ability to work well with individuals of other professions • Demonstrates ability to cultivate a climate of mutual respect and shared values (i.e., accountability, confidentiality, trust, integrity, honesty)	• Consistently demonstrates ability to work effectively with individuals of other professions • Consistently cultivates a climate of mutual respect and shared values (i.e., accountability, confidentiality, trust, integrity, honesty)
5.2. Roles and responsibilities Uses the knowledge of one's own role and those of other professions to assess and address the healthcare needs of the patients and populations served	• Does not use the knowledge of one's own role and those of other professions to assess and address the healthcare needs	• Demonstrates awareness of one's own role and those of other professions yet does not use this knowledge to address healthcare needs	• Generally uses the knowledge of one's own role and those of other professions to appropriately assess the healthcare needs of the patients and populations served but does not fully address these needs	• Consistently and appropriately uses the knowledge of one's own role and those of other professions to assess and address the healthcare needs of the patients and populations served
5.3. Interprofessional communication Demonstrates ability to communicate with patients, families, communities, and other health professionals	• Does not demonstrate ability to communicate with patients, families, communities, and other health professionals in a responsive and responsible manner	• Demonstrates rudimentary ability to communicate with patients, families, communities, and other health professionals • Communication is not responsive and/or does not support a team approach to the maintenance of health and the treatment of disease	• Demonstrates ability to communicate with patients, families, communities, and other health professionals in a manner that is generally responsive and responsible and that supports a team approach to the maintenance of health and the treatment of disease	• Demonstrates ability to communicate with patients, families, communities, and other health professionals in a responsive and responsible manner that facilitates a team approach to the maintenance of health and the treatment of disease

		• Exhibits lapses in responsibility and/or judgment		
5.4. Teamwork Apply relationship-building values and the principles of team dynamics to perform effectively in various team roles	• Does not apply relationship-building values and the principles of team dynamics to perform effectively	• Demonstrates awareness of relationship-building values and principles of team dynamics but does not appropriately apply them or applies them in a way that is inconsistent with patient/population-centered care that is safe, timely, efficient, effective, and equitable	• Applies relationship-building values and the principles of team dynamics to perform effectively in various team roles to plan and deliver patient-/population-centered care that is safe, timely, and generally effective	• Applies relationship-building values and the principles of team dynamics to perform effectively in various team roles to plan and deliver patient-/population-centered care that is safe, timely, efficient, effective, and equitable

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