ACCREDITATION COUNCIL FOR PHARMACY EDUCATION

INTERNATIONAL SERVICES PROGRAM

QUALITY CRITERIA FOR INTERNATIONAL-ACCREDITATION OF PROFESSIONAL DEGREE PROGRAMS IN PHARMACY ("Criteria 2026")

Approved: June 12, 2025

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QUALITY CRITERIA PREAMBLE

Accreditation Council for Pharmacy Education (ACPE)

The Accreditation Council for Pharmacy Education (ACPE) is the national agency for the accreditation of professional degree programs in pharmacy and providers of continuing pharmacy education in the United States of America. ACPE (until 2003 known as the American Council on Pharmaceutical Education) was established in 1932 for the accreditation of professional degree programs in pharmacy, and in 1975 ACPE's scope was broadened to include accreditation of providers of continuing pharmacy education (www.acpe-accredit.org). ACPE expanded its activities to include evaluation and international-accreditation of professional degree programs internationally in 2011 and entered into a collaboration with the American Society of HealthSystem Pharmacists (ASHP) to accredit pharmacy technician education and training programs beginning in 2014.

The mission of ACPE is to assure and advance quality in pharmacy education. ACPE is an autonomous and independent agency whose Board of Directors consists of appointees from the American Association of Colleges of Pharmacy (AACP, academy/educators), the American Pharmacists Association (APhA, practitioners), the National Association of Boards of Pharmacy (NABP, regulators) (three appointments each), and a public member (one appointment by ACPE). Since the inception of its accreditation agency recognition program in 1952, the U.S. Department of Education (USDE) has continuously recognized ACPE as an accreditation agency. ACPE also gained recognition by the Council for Higher Education Accreditation (CHEA) in April 2004.

The International Services Program

The ACPE Board of Directors established the International Services Program (ISP) in January 2011. With effect from January 1, 2023, ISP offers consultation, training, and International-Accreditation and International-Preaccreditation of professional degree programs in pharmacy to international stakeholders who seek guidance related to quality assurance and advancement of pharmacy education.

Importance of the Quality Criteria

The *Quality Criteria for International-Accreditation of Professional Degree Programs in Pharmacy* ("Quality Criteria") may be voluntarily adopted by degree programs. The primary purpose of ACPE's International-Accreditation program is to assist colleges/faculties/schools of pharmacy (hereafter referred to as "colleges') in their quality assurance and improvement efforts. ACPE International-Accreditation is limited to

professional degree programs outside the United States and its territories (Puerto Rico, Guam, American Samoa, and the Virgin Islands).

ACPE recognizes that the Quality Criteria will be used and applied in a diverse range of countries, with different cultures and systems, structures, and policies for education and healthcare delivery. These criteria describe the various elements needed for quality-assured professional pharmacy education and are based on evidence and experience. They articulate expectations that ACPE (as well as the international pharmacy academy) has of academic institutions offering pharmacy degree programs. The criteria focus on the educational outcomes identified by pharmacy programs, the assessment of those outcomes, and the structural and process-related elements within pharmacy education necessary to implement evidence-based outcome measures. The Quality Criteria are not specific to any single degree program; for example, Bachelor's, Master's, and professional doctorate programs, such as a PharmD, may be eligible. The key principle for the Quality Criteria is that they will be interpreted and applied within the national context and based on national health and medication-related needs and priorities. Elements of some Criteria may not apply to all programs.

Revision of the Quality Criteria: Background

All accrediting bodies, including ACPE, periodically review and revise their criteria (standards). A number of environmental factors prompted ACPE to conduct a careful reassessment of the Quality Criteria. These factors included the experience gained by ACPE in its accreditation reviews since the International Services Program was established and feedback from ACPE communities of interest regarding quality improvement of the criteria.

Revision of the Criteria: Process Employed

In 2022, ACPE announced the intent to revise the Quality Criteria. Written comments were solicited and a web-based survey which allowed anonymous completion was distributed to all stakeholders. A focus group was conducted with members of ACPE's International Services Program. In addition, ISP referred to documents that have been adopted, validated, and endorsed globally, such as the International Pharmaceutical Federation's (FIP's) Global Framework for Quality Assurance of Pharmacy Education[1], FIP's statements of policy on Quality Assurance of Pharmacy Education[2], Good

[1]Quality Assurance of Pharmacy Education: the FIP Global Framework https://www.fip.org/files/fip/PharmacyEducation/Quality_Assurance/QA_Framework_2nd_Edition_online_version.pdf

[2] FIP Statement of Policy on Quality Assurance of Pharmacy Education http://www.fip.org/www/uploads/database_file.php?id=302&table_id=

Pharmacy Education Practice[3], and the FIP/World Health Organization Guidelines on Good Pharmacy Practice[4].

A sub-committee of the International Commission was created to review all comments and develop a draft of the revised Quality Criteria. The draft of the revised criteria was approved by the ACPE Board of Directors on January 30, 2025, and distributed to ACPE stakeholders. A series of online open hearings was held in spring 2025 and a web-based survey was used to gather feedback on the draft Quality Criteria. The ACPE Board of Directors approved the revised Quality Criteria at the June 11 – 13, 2025, meeting with an effective date of July 1, 2026. The new criteria are referred to as "Criteria 2026." Programs evaluated by ACPE beginning in the fall of 2026 must comply with the new Quality Criteria.

Revision of the Criteria: What's Different?

- Organization of Standards – Although, at a minimum, the criteria address the same critical areas as in previous versions, they have been restructured, simplified, and clarified. The criteria are organized and combined into seven Quality Criteria. The Quality Criteria and associated elements are phrased as declarative statements describing the various attributes of an accredited program. Programs not meeting the expectations and requirements outlined within these statements will be out of compliance with the Quality Criterion/Criteria.
- Appendix – One appendix is included within the Quality Criteria. Appendix 1 describes typical expected elements of the didactic component of a pharmacy curriculum.
- Importance of Assessment – Based on feedback from stakeholders, the new criteria emphasize assessment as a means of determining and improving the quality of pharmacy education. Having valid and reliable assessment mechanisms in place will provide additional insights to programs regarding their strengths and deficiencies.

ISP Policies and Procedures and Self-Assessment Instrument

The Quality Criteria should be used in conjunction with ISP's *Policies and Procedures for International-Accreditation of Professional Degree Programs in Pharmacy in Countries other than the United States and its Territories*. The latter document describes in detail the philosophical and operational aspects of International-Accreditation. Both documents contain glossaries in which terms are defined in accordance with the context of their use.

[3] FIP Statement of Policy on Good Pharmacy Education Practice
http://www.fip.org/www/uploads/database_file.php?id=188&table_id=
[4] FIP/WHO Guidelines on Good Pharmacy Practice
http://www.fip.org/www/uploads/database_file.php?id=331&table_id=

The glossaries are not intended to provide or imply a globally adopted definition of the term.

The Quality Criteria should also be used in conjunction with the latest published versions of the *Self-Assessment Instrument for International-Accreditation of Professional Degree Program of Schools of Pharmacy Based Outside the United States of America* and *Self-Assessment Instrument for International-Preaccreditation of Professional Degree Program of Schools of Pharmacy Based Outside the United States of America*, which provide details of documentation and data that must be submitted with applications for International-Accreditation, International-Preaccreditation, continuation of International-Accreditation, or advancement from International-Preaccreditation to International-Accreditation.

Summary

ACPE looks forward to working with programs during the transition to Quality Criteria 2026. Through ACPE's strategic plan, the organization will be investigating opportunities for more standardized ways to evaluate the achievement of the Quality Criteria, including the identification of valid outcome measures to be monitored across all programs with International-Accreditation status. When needed, ACPE will be revising its policies and procedures to allow for greater standardization, consistency, efficiency, and effectiveness in its international-accreditation activities and evaluations. Feedback from ACPE stakeholders is always invited and valued.

ACPE Board of Directors and Staff
June 12, 2025

CRITERION 1: ORGANIZATION AND GOVERNANCE

The college is organized and staffed to advance its vision, mission, and strategic plan; and provides an environment and culture that promotes self-directed lifelong learning, professional and ethical behavior, and collaboration.

CRITERION 1.1. Mission, Vision, and Values

1.1.1. Mission and Vision – The college operates under a defined mission and vision, which is compatible with the mission of the university and is aligned with the needs of society and national and/or regional goals.

1.1.2. Stakeholder Involvement – Broad input from stakeholders of the college (*e.g.*, academic and non-academic staff, students, preceptors, alumni, university administrators, employers, regulators) is used in the development and periodic review of the college's mission and vision.

1.1.3. Commitment to Continuous Quality Improvement – The mission, goals, and values reflect a commitment to continuous quality improvement, professional pharmacy education, research, scholarship, and community service.

CRITERION 1.2. Strategic Planning

1.2.1. Strategic Plan – The college implements a strategic plan to advance its mission. The strategic plan outlines the program's goals and objectives, includes action steps, performance metrics, responsible persons, needed resources, and the timetable for achievement.

1.2.2. Alignment – The college's strategic plan is aligned with the University's strategic plan.

1.2.3. Inclusive Process – The strategic plan is developed through an inclusive process, including academic and non-academic staff, students, preceptors, practitioners, and other relevant constituents.

1.2.4. Communication – The strategic plan is communicated to communities of interest to the college (academic and non-academic staff, students, preceptors, alumni, etc.).

1.2.5. Periodic Revision – The college periodically reviews and updates its strategic plan. The review and revision process is completed with input from relevant communities of interest.

CRITERION 1.3. Internal and External Relationships

1.3.1. Autonomy – The college has appropriate autonomy to implement and manage the pharmacy program. The university and college policies and procedures clearly define the autonomy, respective authority, and responsibility of the pharmacy program leadership team.

1.3.2. University Participation – The college contributes to the leadership and governance of the university. The college works effectively with other units within the university.

1.3.3. Collaborative Relationships – To support and advance its mission, the college establishes, maintains, and evaluates, collaborative relationships with organizations and entities inside and outside the university (*e.g.*, organizations that support the college's efforts related to education, research, and other scholarly activity, industry, pharmacy practice, legislation, and community service).

CRITERION 1.4. Organizational Structure and Governance of the College

1.4.1. Qualified Leadership team – The college dean (chief academic officer) and other administrative leaders are adequately qualified to provide leadership in pharmacy professional education and practice, research and scholarship, and professional and community service. The administrative leadership

team collectively demonstrates support for pharmacy education and the profession of pharmacy.

1.4.2. Organizational Structure – The dean and other administrative leaders have defined lines of responsibility and authority and function in an organizational structure that ensures the optimal use and development of resources, including academic and non-academic staff resources, to support achievement of the mission.

1.4.3. Authority and Responsibility – The governance documents of the college (such as bylaws and policies) describe the authority and responsibility of the leadership team (including councils, committees, task forces, units), organizational structure, and the functions and responsibilities of committees and meetings of academic staff.

CRITERION 1.5. Organizational Culture

1.5.1. Professional and Ethical Behavior – The college demonstrates a commitment to professional and ethical behavior. The college fosters ethical leadership in administrators, academic and non-academic staff, preceptors, and students.

1.5.2. Professional Identify Formation – The college facilitates students' professional identity development including internalization of the pharmacy profession's core values, beliefs, skills, and knowledge.

1.5.3. Culture – In alignment with national norms and culture, the college promotes the consideration of diverse perspectives, lived experiences, backgrounds, religion, and cultures, to create environments that support and enhance learning, teaching, research, and pharmacy practice.

CRITERION 2: CURRICULUM

The college, using competency-based program outcomes, imparts to the graduate the knowledge, skills, abilities, behaviors, and attitudes necessary for entry into the contemporary practice of pharmacy. The curriculum is designed, delivered, and monitored by academic staff to ensure breadth and depth of knowledge and skills and the maturation of professional attitudes and behavior in alignment with current and anticipated practice trends at the national, regional, and international levels. The curriculum provides a foundation in the basic, biomedical, pharmaceutical, social/administrative/behavioral, and clinical sciences, while emphasizing active learning pedagogy, content integration, knowledge acquisition, the application of knowledge, and attitudinal, skill, and behavioral development. A baccalaureate curriculum usually requires a five academic year program of study or the equivalent. A doctor of pharmacy curriculum usually requires six academic years or the equivalent.

CRITERION 2.1. Program Outcomes

2.1.1. Competency-based Program Outcomes – The college identifies and publishes competency-based program outcomes that graduates must achieve. The competency-based program outcomes: 1) ensure graduates are prepared for patient care practice roles; 2) address medication and health-related needs of individuals and populations; 3) are appropriate for the degree awarded; and 4) address national program learning outcomes (if applicable) and are reflective of current and future national pharmacy practice.

CRITERION 2.2. Curriculum Design, Delivery, and Oversight

2.2.1. Curriculum Development – The college, through a defined process, uses the desired competency-based program outcomes to design and develop the curriculum (philosophy, structure, content, and instructional methods) to ensure attainment of the breadth and depth of knowledge and skills, and the maturation of professional attitudes and behaviors.

2.2.2. Curricular Content – The curricular content provides students with the necessary foundational knowledge in the following content areas, as appropriate, to achieve the desired competency-based program outcomes (also see Appendix 1):

- Basic Sciences: biology, chemistry, organic chemistry, mathematics, humanities/social sciences
- Biomedical Sciences: biochemistry, biostatistics, human anatomy, human physiology, immunology, medical microbiology, pathophysiology
- Pharmaceutical Sciences: clinical chemistry, extemporaneous compounding, medicinal chemistry, pharmaceutical calculations, pharmaceutics/biopharmaceutics, pharmacogenomics/genetics, pharmacognosy, pharmacokinetics, pharmacology, toxicology
- Social/Behavioral/Administrative Sciences: cultural awareness, ethics, pharmacoeconomics, pharmacoepidemiology, pharmacy law, practice management, professional communication, professional development, research design, social and behavioral aspects of practice
- Clinical Sciences: clinical pharmacokinetics, digital health, health informatics, health information retrieval and evaluation, medication dispensing, distribution, and administration, patient assessment, patient safety, pharmacotherapy, public health, self-care pharmacotherapy

2.2.3. Intraprofessional and Interprofessional Education – To advance collaboration and quality of patient care, the college emphasizes the pharmacist's role as a healthcare team member in providing team-based, patient-centered care. As available, the college provides opportunities for students to learn about, from, and with other health professional students and members of the intraprofessional and interprofessional healthcare team.

2.2.4. Organization and Sequence – The professional curriculum is organized to allow for the logical building of a sound scientific and clinical knowledge base. The curriculum is sequenced to promote integration and reinforcement of content and the demonstration of competency in skills required to achieve the competency-based program outcomes.

2.2.5. Teaching and Learning Methods – The curriculum encompasses didactic, simulation, and experiential components. Teaching and learning methods used to deliver the curriculum address the diverse learning needs of students and: 1) facilitate achievement of learning outcomes; 2) actively engage learners; 3) promote student responsibility for self-directed learning; 4) foster collaborative learning; 5) provide timely, formative performance feedback to students in both didactic and experiential education courses; and 6) are appropriate for the student population.

2.2.6. Technology and Simulation Activities – The college incorporates educational technology and simulation activities, as available and appropriate, to enhance delivery of the curriculum (*e.g.*, simulation activities and databases, electronic library databases, telehealth, artificial intelligence-generated assignments/activities, etc.). Simulation activities are used to supplement practice experiences.

CRITERION 3: EXPERIENTIAL EDUCATION

The curriculum incorporates pharmacy practice experiences that are used to integrate, apply, reinforce, and advance the knowledge, skills, attitudes, abilities, and behaviors included in the competency-based program outcomes and ensure graduates are practice-ready and team-ready. The college has a sufficient number of preceptors, who have professional credentials and expertise commensurate with their responsibilities to the professional program, needed to effectively deliver and evaluate students in the experiential components of the curriculum. The college has the appropriate number and mix of practice sites and experiences to accommodate students.

CRITERION 3.1. Pharmacy Practice Experiences Curriculum

3.1.1. Practice Experiences for Baccalaureate Degree Programs – The curriculum provides educational practice experiences in a variety of actual healthcare settings for students to develop and demonstrate achievement of the desired competency-based program outcomes, under academic staff and preceptor supervision and guidance. The practice experiences integrate, apply, reinforce, and advance the knowledge, skills, attitudes, and values developed throughout the didactic curriculum.

3.1.2. Practice Experiences for the Doctor of Pharmacy Degree Program (or Equivalent) – The curriculum provides educational practice experiences in a variety of actual healthcare settings for students to develop and demonstrate achievement of the desired competency-based program outcomes, under academic staff and preceptor supervision and guidance. The practice experiences integrate, apply, reinforce, and advance the knowledge, skills, attitudes, and values developed throughout the didactic curriculum. Doctor of Pharmacy and equivalent degree programs include advanced pharmacy practice experiences with opportunities for patient care.

CRITERION 3.2. Practice Sites and Preceptors

3.2.1. Selection – The college has criteria to ensure that sites and preceptors are of high quality and committed to advancing practice in their respective settings. The college uses the established criteria to approve sites and preceptors prior to students undertaking their practice experience at the site.

3.2.2. Quantity – The college has an adequate number, balance, and mix of practice sites and preceptors in community, hospital, and other settings to support the curricular pharmacy practice experiences, taking into account any national regulations or expectations.

3.2.3. Communication – The college has an effective system for bidirectional communication with sites and preceptors, and evaluating the site, preceptor, and students' experiences and outcomes.

3.2.4. Preceptor Development – Preceptors are oriented to the college's mission, the specific learning expectations for the experiences outlined in the syllabus, and effective performance evaluation techniques before accepting students. The college fosters the ongoing professional development of its preceptors commensurate with their educational responsibilities to the college.

CRITERION 4: STUDENT SERVICES

The college has an appropriate array of services available that promote student success. The college develops, implements, and assesses its policies and procedures to promote student success, resilience, and well-being; ensures the selection of a qualified student body; and supports progression through the pharmacy program.

CRITERION 4.1. Student Services

4.1.1. Healthcare – The university or college ensures students have access to adequate physical and mental health services.

4.1.2. Wellness – The college supports and provides programs and services to promote maintenance of student health and wellness.

4.1.3. Records Maintenance – The college uses an ordered, accurate, and secure system of student records.

4.1.4. Academic Advising/Mentorship – Academic advising/mentoring opportunities are provided and used to support the academic and career development of students.

4.1.5. Academic Support – Tutoring and remediation opportunities are provided to support students experiencing academic difficulty.

4.1.6. Disability Accommodations – The college accommodates students with documented disabilities.

4.1.7. Financial Aid Advising – The college provides students with financial aid information and guidance by appropriately trained personnel, as applicable.

CRITERION 4.2. Academic Policies and Procedures

4.2.1. Program Information – The college produces a complete and accurate description of the academic requirements and policies, including admissions and transfers, progression, graduation, probation, remediation, missed course work or credit, dismissal, re-admission, and due process, and makes this information available to academic staff, students, and prospective students.

4.2.2. Policies and Procedures Review – The college regularly assesses student admission and progression criteria, policies, and procedures based on how successfully graduates attain the desired outcomes.

4.2.3. Distance Learning Policies – For colleges offering distance learning opportunities, admissions information clearly explains the conditions and requirements related to distance learning and full disclosure of any requirements that cannot be completed at a distance.

CRITERION 4.3. Admissions

4.3.1. Enrollment Policies and Management – The college ensures that enrollment is aligned with available resources (*e.g.*, number of academic staff, physical facilities, practice site capacity) and national needs and policies.

4.3.2. Admissions Process – The college has policies and procedures that address admissions including admissions criteria and pre-requisite requirements.

CRITERION 4.4. Progression

4.4.1. Progression policies – The college creates and makes available to students and prospective students, policies and procedures aligned with university requirements, related to:

- Academic progression
- Appeal mechanisms
- Dismissals for academic and non-academic reasons
- Leaves of absence
- Missed coursework or credit
- Readmission
- Rights to due process
- Suspension
- Withdrawals

CRITERION 4.5. Student Perspectives

4.5.1. Student Representation – The college has clearly defined structures and mechanisms, including membership on relevant college committees, that provide a forum for student dialogue, facilitate student representation and input to the administrative leaders of the college, and foster the development of student leadership and professionalism.

4.5.2. Student Perspectives – The administrative leaders of the college consider student feedback and respond within an appropriate time to student requests, recommendations, problems, and issues of concern.

4.5.3. Student Complaints – The college has a process through which students may submit complaints and a policy that is followed in the event of a formal complaint (grievance) related to the program or college is received.

CRITERION 5: ACADEMIC AND NON-ACADEMIC STAFF

The college has a sufficient cohort of academic and non-academic staff with the qualifications and experience needed to effectively deliver and evaluate the professional degree program.

CRITERION 5.1. Academic and Non-Academic Staff – Quantitative Factors

5.1.1. Quantity of Academic Staff – The number of qualified full-time academic staff is adequate to effectively deliver and evaluate the professional degree program, while providing adequate time for academic staff development, research and other scholarly activities, student advising, service, and, where applicable, pharmacy practice. The composition of the academic staff, including contributions from collaborative relationships, part-time academic staff, and preceptors, encompasses the biomedical, pharmaceutical, social/behavioral/administrative, and clinical science disciplines, and meets the needs of the education, research, and service elements of the mission of the college. The college defines, in alignment with the university and national accrediting bodies, the roles and responsibilities of part-time academic staff.

5.1.2. Quantity Non-Academic Staff – The number of non-academic staff is adequate to support the achievement of the college's mission.

CRITERION 5.2. Academic and Non-Academic Staff – Qualitative Factors

5.2.1. Academic Credentials – All academic staff members hold appropriate credentials suitable to their assigned instructional responsibilities. Where applicable, the qualifications of the academic staff are in compliance with the expectations set by the oversight body of the country (*e.g.*, Ministry of Education).

5.2.2. Professional Credentials – Non-academic staff have professional credentials and expertise commensurate with their roles and responsibilities to the professional program.

CRITERION 5.3. Professional Development and Performance Evaluation

5.3.1. Continuing Professional Development – The college promotes, facilitates, and supports the training and ongoing professional development of its academic and non-academic staff and preceptors, commensurate with their programmatic responsibilities. The college evaluates the training and professional development activities regularly and implements measures to enhance professional development as needed.

5.3.2. Performance Evaluation and Advancement – The college regularly evaluates the productivity, scholarship, and performance of its academic and non-academic staff. The criteria for promotion (and tenure, if applicable) are articulated clearly to academic staff and consistently applied.

CRITERION 6: RESOURCES

The college has adequate and appropriately equipped physical facilities and educational resources to achieve its mission and goals. The college has current and anticipated financial resources to deliver the educational program and accomplish its mission and strategic plan.

CRITERION 6.1. Physical Facilities and Educational Resources

6.1.1. Physical Facilities – The college has adequate physical facilities to support achievement of its mission. The facilities provide a comfortable, well-equipped, and safe environment for administration, teaching, learning, and research, and enable effective interaction between administrators, academic and non-academic staff, and students. Facilities and resources for different groups of students (including students at multiple campuses or students separated by gender), academic and non-academic staff assure comparable experiences and opportunities, and equivalent competency-based program outcomes for all students.

6.1.2. Access to Educational Resources – The academic staff, preceptors, and students have access to library, learning, and educational resources, including online/digital resources, that are sufficient to support the degree program, research, and other scholarly activities according to the mission and goals of the college.

CRITERION 6.2. Financial Resources

6.2.1. Revenue allocation – The college has the financial resources necessary to provide the human, physical, technological, and educational resources needed to accomplish its mission.

6.2.2. Budget planning – The budget of the college is planned, developed, and managed according to university policies and sound management practices. The budget ensures ongoing stability of the college.

CRITERON 7: ASSESSMENT

The college develops, resources, and implements a plan to assess achievement of its mission, strategic plan, and attainment of the competency-based program outcomes to ensure that graduates are prepared to enter practice. Assessment data should be used for continuous quality improvement of the pharmacy program.

CRITERION 7.1. Assessment Plan

7.1.1. Assessment Plan Expectations – The college develops and utilizes an assessment plan that assesses the key elements of Criterion 7. The college uses the analysis of process and outcome measures for continuous quality improvement of the pharmacy program.

CRITERION 7.2. Program Assessment

7.2.1. Measurement of Achievement of the Mission – The college establishes and uses measures, including input from stakeholders, to evaluate achievement of the mission and program outcomes.

7.2.2. Assessment of the Strategic Plan – The college's assessment plan is designed to monitor and assess the achievement of the college's strategic plan. Key performance indicators, metrics, and benchmarks are established to define achievement.

7.2.3. Assessment of Organizational Effectiveness – The college's assessment plan evaluates the effectiveness of the organizational structure to support achievement of the mission.

7.2.4. Assessment of Organizational Culture – The college assesses the development of a culture that supports collaboration; professional and ethical behavior; and professional identify formation.

CRITERION 7.3. Assessment Elements for Competency-Based Program Outcomes, Curriculum, and Experiential Learning

7.3.1. Depth and Breadth – The college documents, through mapping or other comparable methods, the breadth and depth of exposure to didactic and experiential curricular content areas in relation to the identified competency-based program outcomes.

7.3.2. Curriculum Assessment – The college completes a periodic review of the curricular structure, content, and organization.

7.3.3. Valid and Reliable Methods – Assessment methods for student learning are valid and reliable to evaluate the desired curricular outcomes.

7.3.4. Use of Assessment Data – Quantitative and qualitative assessment data are used to evaluate and improve individual and collective student learning.

7.3.5. Achievement of the Competency-Based Program Outcomes – The college analyzes, interprets, and uses these data to determine the level of attainment of the desired competency-based program outcomes and to continuously improve the content, organization, and delivery of the curriculum.

7.3.6. Experiential Quality Assurance – The college develops and implements a quality assurance procedure for the pharmacy practice experiences that is established and implemented to periodically review practice sites and preceptors to: 1) facilitate achievement of stated course expectations for the practice experience; 2) standardize key components of experiences across all sites offering the same experiential course; and 3) promote consistent assessment of student performance.

7.3.7. Comparability – The assessment plan includes a variety of assessments that will allow for comparison and establishment of educational parity of all students at different campuses or for instances of gender-based differences in instruction (if applicable).

CRITERION 7.4. Assessment of Elements for Student Services, Academic and Non-Academic Staff, and Resources

7.4.1. Student Services – The college assesses the quality and quantity of student services to address the programmatic needs for healthcare, wellness, advising, and academic support.

7.4.2. Admission Criteria – The college regularly assesses the criteria, policies, and procedures to ensure the selection of students with the potential for academic success in the program.

7.4.3. Student Progression – The college regularly assesses student progression, including retention and attrition data, criteria, policies, and procedures to identify and analyze trends and to make programmatic adjustments to optimize student progression as needed.

7.4.4. Academic and Non-Academic Staff Workload – The college regularly assesses academic and non-academic staff workload to effectively address programmatic needs.

7.4.5. Preceptor Capacity – The college systematically assesses the preceptor quality and quantity needs based on enrollment.

7.4.6. Physical and Financial Resources – The college evaluates the physical facilities and financial resources based on programmatic needs.

CRITERION 7.5. Continuous Quality Improvement

7.5.1. Quality Improvements – The college utilizes assessment data, including feedback from communities of interest, to make changes to the program and improve the competency-based program outcomes and programmatic processes.

7.5.2. Continuous Compliance with the Quality Criteria – The college has in place processes and procedures for reviewing and ensuring its pharmacy program meets all international-accreditation criteria during the awarded accreditation term.

Appendix 1

Expected Elements of the Didactic Pharmacy Curriculum

The following didactic content areas and associated learning expectations are viewed as central to a contemporary, high-quality pharmacy education and are incorporated at an appropriate breadth and depth in the required didactic pharmacy curriculum to address the expected competency-based program outcomes. Where noted, content areas may be addressed in the pre-professional curriculum (*i.e.*, as requirements for admission). Programs are encouraged to map courses in the pharmacy curriculum to Appendix 1 content areas to ensure complete coverage and outcome alignment. Mapping exercises should periodically be reviewed and updated given changes in curricular content to address changes in practice standards, technology, and public health priorities.

Content areas may be delivered within individual or integrated courses and may involve multiple disciplines and professions. This process may involve integration of overlapping content areas.

This appendix was purposely written at the level of broad learning outcomes. It was constructed to provide statements of concepts and understandings essential for pharmacists to master, rather than a list of required topics to cover in the didactic curriculum. The goal is to ensure that critical areas of learning are included in the curricula without dictating how the lessons are structured, organized, or delivered.

It is expected that programs will incorporate content appropriate to achievement of the program's expected competency-based program outcomes. ACPE expects that some content areas may not be relevant for the competency-based program outcomes based on the type of degree awarded and the nature of pharmacy practice in the region. The clear expectation embedded within Appendix 1 is that students will be able to retain, recall, build upon, and apply that knowledge in a variety of practice settings.

NOTE: The topics under each category are organized in alphabetical order.

Biomedical Sciences (may be addressed in the pre-professional curriculum)

Biochemistry

- Structure, properties, biological functions, applicable kinetics, and metabolic fate of macromolecules essential to life (proteins, lipids, carbohydrates, and nucleic acids). Application of these concepts to identify endogenous targets for drug therapy and rational drug design strategies.

Biostatistics

- Appropriate use of commonly employed statistical tests, management of data sets, and the evaluation of the validity of conclusions generated based on the application of those tests to the data sets.

Human Anatomy

- Structure of major human body systems at the cellular, tissue, organ, and system level.

Human Physiology

- Homeostatic function and normal response reactions across the lifespan of non-diseased human cells, organs, and systems.

Immunology

- Human immune system components, innate and adaptive immune responses to infection, injury and disease, and augmentation of the human immune system to prevent disease.

Medical Microbiology

- Structure, function, and properties of microorganisms (bacteria, viruses, parasites, and fungi) responsible for human disease, and rational approaches to their containment or eradication.

Pathophysiology

- Basic principles, mechanisms, functional changes, and metabolic sequelae of human disease impacting cells, organs, and systems.

Pharmaceutical Sciences

Clinical Chemistry

- Application of clinical laboratory data to disease state management, including screening, diagnosis, progression, and treatment evaluation.

Extemporaneous Compounding

- Preparation of sterile and non-sterile 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.

Medicinal Chemistry

- 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 activity relationships, intermolecular drug-receptor interactions and metabolism to therapeutic decision-making.

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.

Pharmaceutics/Biopharmaceutics

- 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.

Pharmacogenomics/genetics

- Genetic 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.

Pharmacognosy:

- The study of medicines or crude drugs produced from natural sources such as plants, microbes, and animals. It includes analysis of their biological, chemical, biochemical, and physical properties.

Pharmacokinetics

- Mathematical determination of the rate of drug movement from one therapeutic or physiologic compartment to another. 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.

Pharmacology

- Pharmacodynamics, mechanisms of therapeutic and adverse drug actions and interactions, lifespan-dependent variations in physiology or biochemistry that impact drug action and effectiveness, and application of these principles to therapeutic decision-making.

Toxicology

- Pharmacodynamics, mechanisms, prevention, and treatment of the toxic effects of drugs and poisons, including poisons associated with bioterrorism.

Social/Administrative/Behavioral Sciences

Cultural Awareness

- Exploration of the potential impact of cultural values, beliefs, and practices on patient and population outcomes. Cultural practices commonly selected by practitioners and/or patients for use in the promotion of health and wellness, and their potential impact on pharmacotherapy.

Ethics

- Exploration of approaches for resolving ethical dilemmas in patient care and its delivery, with an emphasis on moral responsibility and the ability to critically evaluate viable options against the needs of patients and other key stakeholders.

Pharmacoeconomics

- Measuring costs and outcomes associated with the use of pharmaceuticals in healthcare delivery.

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.

Pharmacy Law

- Regulations, policies, executive orders, and decisions that regulate the practice of pharmacy, including the mitigation of drug abuse (*e.g.*, prescription, illicit, non-prescription) and diversion.

Practice Management

- 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.

Professional Communication

- Analysis and practice of verbal, non-verbal, and written communication strategies that promote effective interpersonal dialog and understanding to advance specific patient care, education, advocacy, and/or interprofessional collaboration goals. Exploration of technology-based communication tools and their impact on healthcare delivery, healthcare access, healthcare information, and patient empowerment.

Professional Development

- Development of professional self-awareness, capabilities, responsibilities, and leadership.

Research Design

- Evaluation of research methods and protocol design required to conduct valid and reliable studies to test hypotheses or answer research questions, and to appropriately interpret/apply the validity and reliability of the conclusions of published research studies.

Social and Behavioral Aspects of Practice

- Understanding of, or experience with, contemporary practice roles and innovative opportunities, and inculcation of professional attitudes, behaviors, and dispositions.

Clinical Sciences

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.

Digital Health

- The use of information and communications technologies to manage illnesses and health risks and to promote wellness.

Health Informatics

- 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.

Health Information Retrieval and Evaluation

- 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.

Medication Dispensing, Distribution, and Administration

- Preparation, dispensing, and distribution of prescriptions, administering medications including injectable medications, identification, and prevention of medication errors and interactions, maintaining and using patient profile systems, prescription processing technology and/or equipment, including oversight of support personnel, and ensuring patient safety. Educating about appropriate medication use and administration for various disease states, including substance abuse disorder.

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.

Patient Safety

- 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.

Pharmacotherapy

- Evidence-based clinical decision making, therapeutic treatment planning, 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.

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.

Self-Care Pharmacotherapy

- As appropriate for the scope of pharmacy practice in the country and/or region, therapeutic needs assessment, including the need for patient assessment and treatment recommendations including the need to triage to other health professionals, assist with drug product recommendation/selection, and counseling of patients on non-prescription drug products, natural products, and dietary supplements, non-pharmacologic treatments, and health/wellness strategies.