

The 2015 United States Schools and Colleges of Pharmacy Curricular Survey – *Summary Report*

Prepared By

The National Association of Boards of Pharmacy



The 2015 United States Schools and Colleges of Pharmacy Curricular Survey – Summary Report

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NABP Mission Statement

NABP is the independent, international, and impartial Association that assists its member boards and jurisdictions for the purpose of protecting the public health.

NABP Vision Statement

Innovating and collaborating today for a safer public health tomorrow.

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Introduction

In 2014 the National Association of Boards of Pharmacy[®] (NABP[®]) began developing the United States Schools and Colleges of Pharmacy Curricular Survey and conducted the survey in 2015. The curricular survey informs the Foreign Pharmacy Graduate Equivalency Examination[®] (FPGEE[®]) and Pharmacy Curriculum Outcomes Assessment[®] (PCOA[®]) content domain allocations. The methods to define examination content must align with the purpose and scope of the test. The FPGEE and PCOA test knowledge on subject matter taught in US pharmacy curricula.

Survey Purpose

The purpose of the 2015 curricular survey was to obtain measures and feedback from representatives of US pharmacy programs regarding various topics that are integral to coursework taught in the professional programs. The topics and subject matter were validated by an advisory panel of academicians who teach in US pharmacy programs. Results of the curricular survey were used to evaluate and inform the content domains and blueprints for the FPGEE and PCOA.

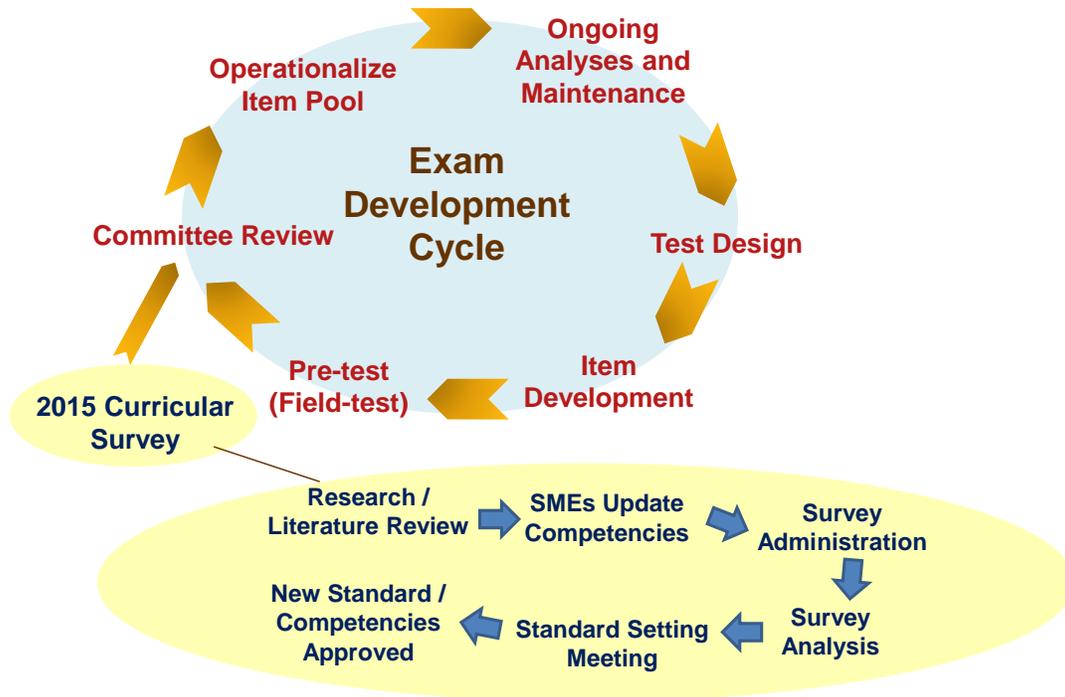
Target Respondents

The primary target respondents for this survey were the deans, administrators, and faculty (as assigned) associated with curricular evaluations and curriculum in US pharmacy programs. There were 133 programs that received the request to complete the survey. The programs were identified through a cross-reference of schools/colleges identified by the Accreditation Council for Pharmacy Education (ACPE) and the NABP database. Each program was either fully accredited or had been preliminarily assigned “Pre-candidate” status by ACPE. The survey was designed so that more than one individual could share the responsibility of responding to various sections of the survey.

Process

Test Development and Survey Process Flow

The following diagram shows the steps contributing to test development and how a domain survey analysis fits into that process.



Resource and Literature Review

Reviews of current literature addressing pharmacy curricula, educational trends, and the evolution of pharmacy education were conducted to provide insight into any trends that might need to be considered when constructing the survey. Examples of key literature and resources reviewed and evaluated by the advisory panel are listed in Appendix A.

Curricula Review

NABP conducted a review relating to various curricula of US colleges and schools of pharmacy using institution websites. Accessibility to capture course content, credit hours, contact hours, etc. varied among the programs. This background work was conducted to provide a foundational understanding of the structure of the varying approaches to addressing content in the PharmD

programs. Efforts were made to include public and private institutions along with a variety of curriculum designs. Prerequisites to the programs were also documented in order to make informed decisions regarding the direction that US programs are taking to align the professional curriculum with the accreditation standards.

The following colleges and schools of pharmacy are represented in the curriculum comparison document:

- Albany College of Pharmacy and Health Sciences
- Chapman University School of Pharmacy
- Creighton University Medical Center School of Pharmacy and Health Professions
- Drake University College of Pharmacy and Health Sciences
- East Tennessee State University – Bill Gatton College of Pharmacy
- Howard University College of Pharmacy
- Idaho State University College of Pharmacy
- Lake Erie College of Osteopathic Medicine School of Pharmacy
- Loma Linda University School of Pharmacy
- Manchester University College of Pharmacy, Natural and Health Sciences – Worcester
- Ohio Northern University – Raabe College of Pharmacy
- Oregon State University College of Pharmacy
- Purdue University College of Pharmacy
- Roseman University of Health Sciences College of Pharmacy
- Samford University – McWhorter School of Pharmacy
- Shenandoah University – Bernard J. Dunn School of Pharmacy
- Southern Illinois University Edwardsville School of Pharmacy
- St Louis College of Pharmacy
- Temple University School of Pharmacy
- Texas A & M University Health Science Center – Irma Lerma Rangel College of Pharmacy
- University of California, San Francisco School of Pharmacy
- University of Colorado – Skaggs School of Pharmacy and Pharmaceutical Sciences
- University of Florida College of Pharmacy
- University of Illinois at Chicago College of Pharmacy
- University of Louisiana at Monroe College of Health and Pharmaceutical Sciences School of Pharmacy
- University of North Carolina Eshelman School of Pharmacy
- Western University of Health Sciences College of Pharmacy

To see the full results of the curriculum research, click on this link: [Curriculum Comparisons](#)

Committee Competencies Updates

Advisory panels comprised of FPGEE/PCOA Review Committee members and other faculty from US college/school of pharmacy programs were recruited from NABP's examination item writer database to review and recommend updates to the competencies. All of the individuals held faculty positions in US pharmacy programs and had volunteered to assist NABP with the review of US pharmacy program curricula. Each advisory panel member reviewed, discussed, and made recommendations for edits/changes to the competency areas they were most familiar with in terms of the scope of their teaching responsibilities and research.

The advisory panel reports were compiled and reviewed by the full FPGEE/PCOA Review Committee. A recommendation for changes to the exam content tested in the FPGEE and PCOA was presented to the NABP Advisory Committee for Examinations (ACE) and the NABP Executive Committee. The recommendation was approved, and the changes were reflected in NABP's 2015 US PharmD Curricular Survey. The complete FPGEE/PCOA Competency Statements are listed in Appendix B.

The survey presented topics in each of the four foundational sciences taught in US PharmD programs: Basic Biomedical Sciences, Pharmaceutical Sciences, Social/Behavioral/Administrative Sciences, and Clinical Sciences. Respondents were instructed to provide either contact hours or credit hours for each subject that was taught in the professional curriculum. If a subject area was not taught in the professional program (i.e., pre-pharmacy curriculum), the respondents were instructed to indicate zero credit/contact hours. Instructions and the 2015 curricular survey can be viewed by clicking on this link: [2015 Curricular Survey](#)

Survey Administration

The curricular survey was formatted in the survey tool and dissemination to 133 US pharmacy programs began on March 12, 2015. The survey remained open until June 15, 2015, with reminders being sent to the deans and other targeted participants on scheduled intervals. NABP

received responses from 105 pharmacy programs. Of these respondents, 99 submitted completed surveys, making for a 74% response rate.

Demographic Snapshot

Respondents self-reported their role at the colleges/schools as assistant or associate dean of a US colleges/schools of pharmacy (N = 67), dean (N = 12), curriculum committee chair (N = 10), director of assessment (N = 6), or other (N = 4).

Figures 1 through 4 contain descriptive information regarding the respondents and/or their respective colleges/schools of pharmacy (N = 99).

Figure 1. *Accreditation Status*

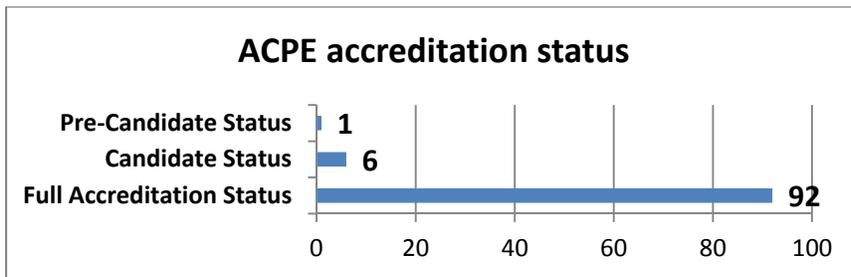


Figure 2. *Typical Size of Program Graduating Class*

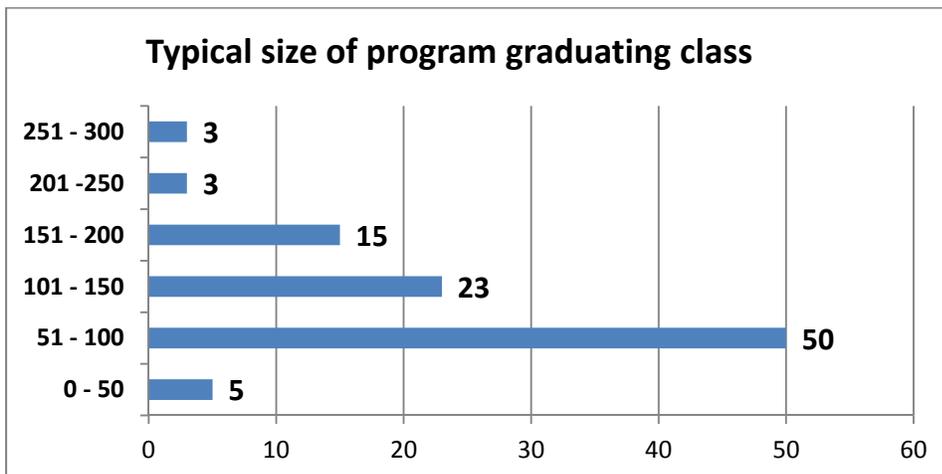


Figure 3. Program Structure: Quarter, Trimester, or Semester-based

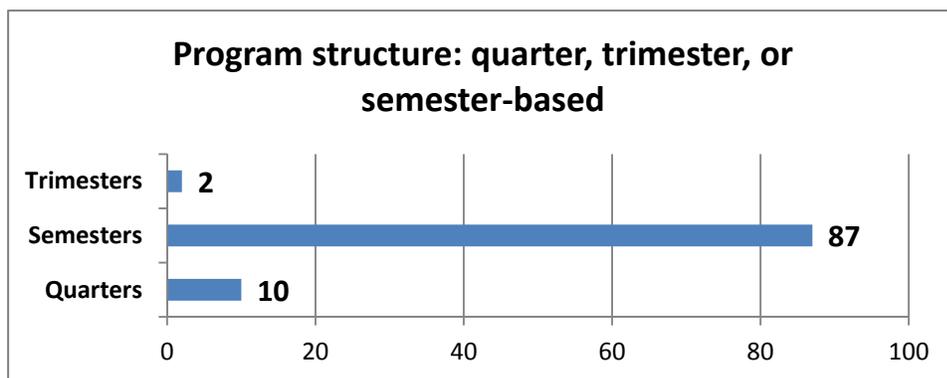
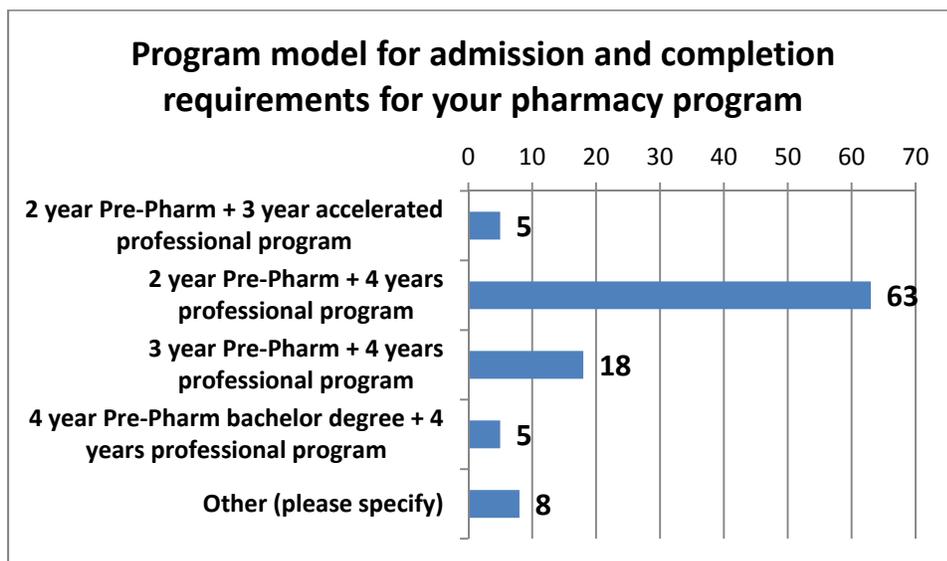


Figure 4. Program Model for Admission and Completion Requirements for Your Pharmacy Program



Other program responses:

- Our program is directly entry so we are a 0-6 program
- 0 - 6 Students enter as pharmacy majors and are introduced to courses beginning in Year 1
- Most students in 0-6 (2 pre-pharm, 4 professional pharm)
- BS not required but >90% of students have a BS on entry
- Our requirements can be completed in 2 years, but most students take 3 years to complete these requirements
- 4 year professional program (Undergrad degree not required but 99% of entering students have an undergraduate degree)
- 2-4 years Pre-pharmacy + 4 years professional program
- 90 credits or bachelor degree + 4 years professional program

The methodology to compute the average number of credit hours per competency area across all respondents (N = 99) transformed contact hours to credit hours using a conversion of 15 contact hours = 1 credit hour. Sums of these averages were then produced per main content domain (Areas 1-4) and at the subdomain areas.

Results were representative of aggregate responses from 99 US PharmD programs and were considered as a starting point for policy decisions regarding content allocation.

Figures 5 through 11 show the results of the survey for various elements of the curricula represented in the study. Not all 99 schools' results used in the analysis responded to all questions.

Figure 5. *Minimal Pre-requisite Requirements*

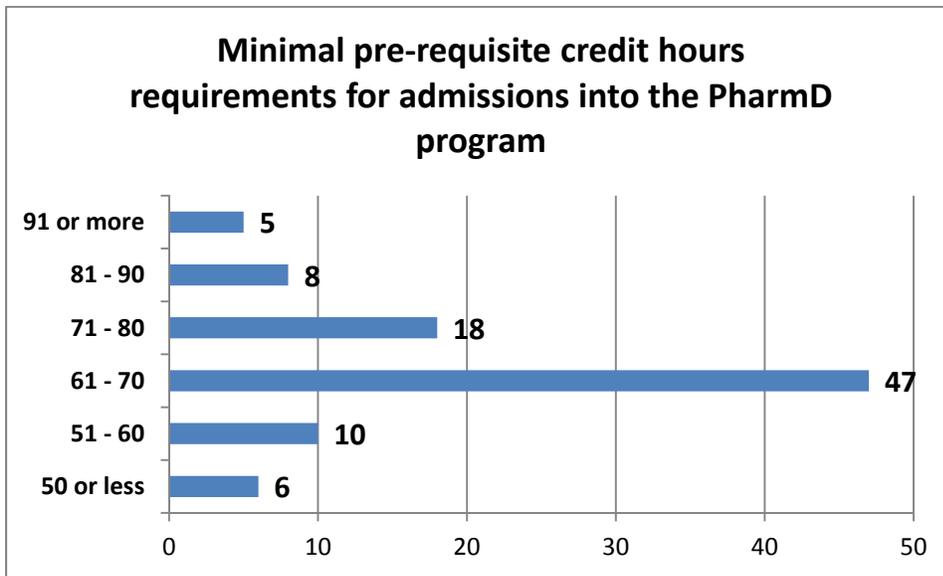


Figure 6. *Credit Hours Required for Personal and Professional Development*



Figure 7. *Introductory Pharmacy Practice Experience (IPPE) Hours*

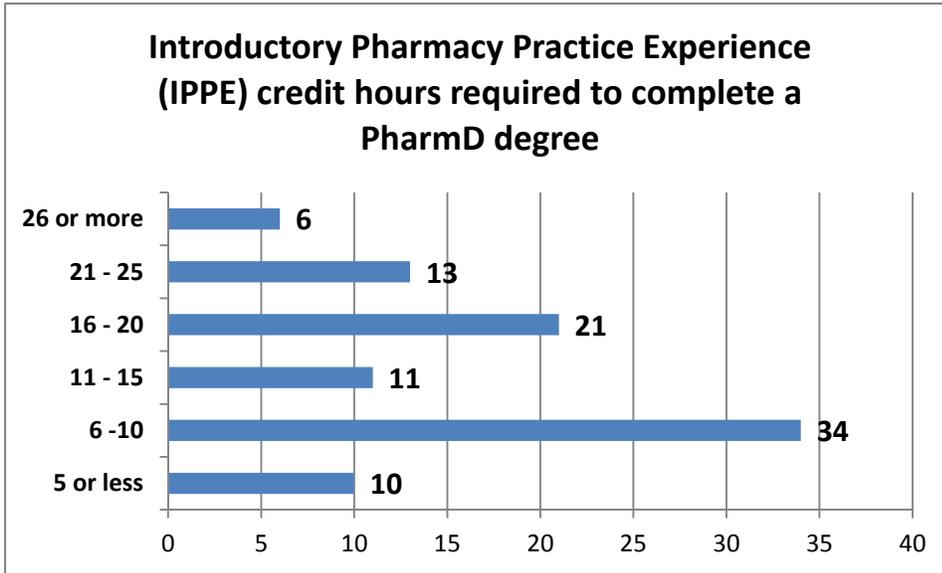


Figure 8. *Number of Hours of Structured Simulation*

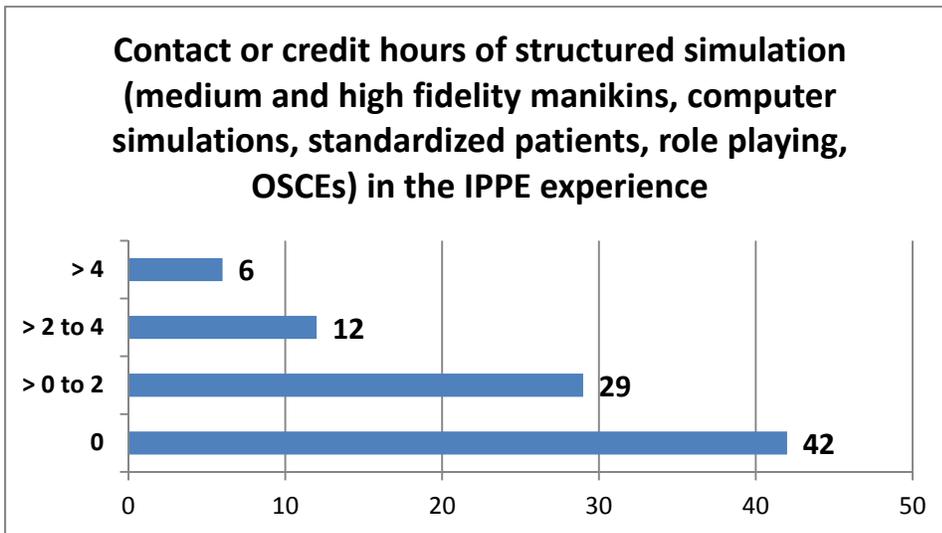


Figure 9. *Advanced Pharmacy Practice Experience (APPE) Hours*

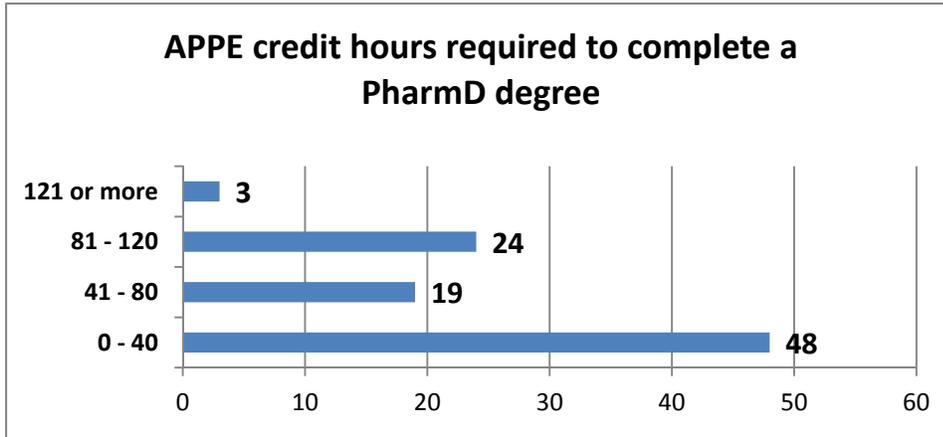


Figure 10. *For APPE's are there required experiential clerkships?*

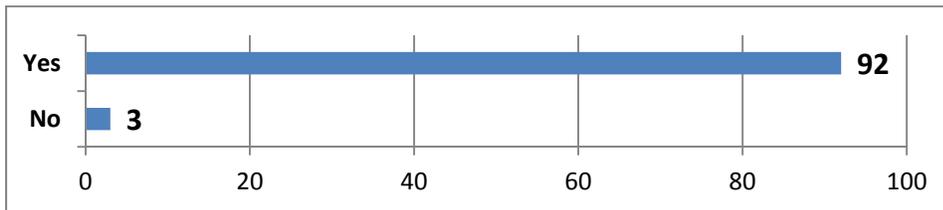
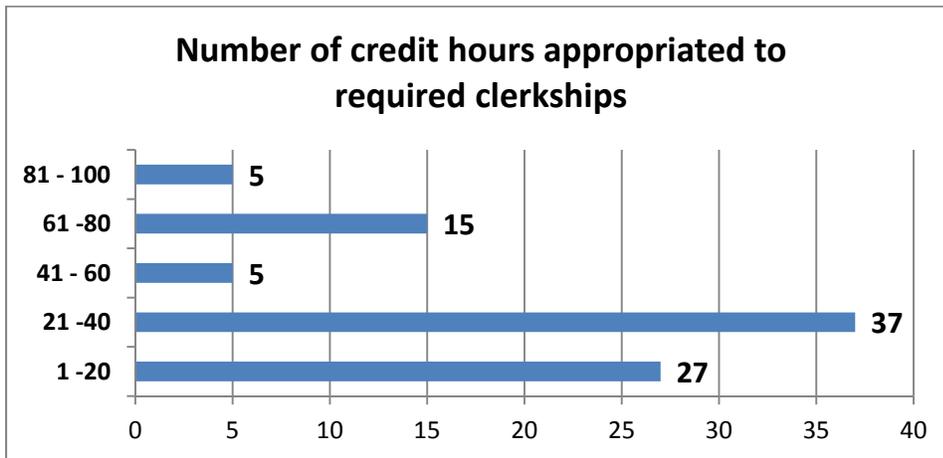


Figure 11. *Hours appropriated to required clerkships?*



Competency Rankings

Analysis of the results of the data provided rankings of the competencies in order of importance to the overall curricula. Table 1 shows the highest to lowest rankings by subdomain, and Table 2 shows all competencies in domain order. Rank ordering is for informational purposes.

Competencies adjacent to one another may have significant differences in terms of the number of contact/credit hours averaged over all responding programs. In other words, the interval between rankings is not fixed.

Table 1. *Competencies in Rank Order (highest to lowest)*

Ranking	Competency Number/Description
1	4.7 Clinical Pharmacology and Therapeutic Decision Making
2	2.2 Pharmacology and Toxicology
3	2.1 Medicinal Chemistry
4	4.1 Evidence-Based Practice
5	2.4 Pharmaceutics/Biopharmaceutics
6	4.2 Clinical Pathophysiology
7	4.6 Patient Assessment
8	1.1 Anatomy and Physiology
9	3.8 Professional Communication
10	2.5 Pharmacokinetics
11	3.1 Health Care Delivery Systems and Public Health
12	3.10 Medication Dispensing and Distribution Systems
13	1.2 Biochemistry
14	2.7 Sterile and Non-Sterile Compounding
15	3.4 Pharmacy Practice Management
16	3.5 Pharmacy Law and Regulatory Affairs
17	3.6 Biostatistics and Research Design
18	4.3 Clinical Pharmacokinetics
19	1.4 Molecular Cell Biology
20	1.5 Immunology
21	4.5 Disease Prevention and Population Health
22	3.7 Ethical Decision Making
23	1.3 Microbiology
24	3.3 Economic and Humanistic Outcomes of Health Care Delivery
25	3.9 Social and Behavioral Aspects of Pharmacy Practice
26	3.2 Population-based Care and Pharmacoepidemiology
27	2.6 Pharmacogenomics and Genetics
28	2.3 Pharmacognosy and Dietary Supplements
29	4.4 Clinical Pharmacogenomics
30	3.11 History of Pharmacy

Table 2: *Competency Rankings by Domains*

Overall Ranking	Competency Number/Description
	Area 1
8	1.1 Anatomy and Physiology
13	1.2 Biochemistry
19	1.4 Molecular Cell Biology
20	1.5 Immunology
23	1.3 Microbiology
	Area 2
2	2.2 Pharmacology and Toxicology
3	2.1 Medicinal Chemistry
5	2.4 Pharmaceutics/Biopharmaceutics
10	2.5 Pharmacokinetics
14	2.7 Sterile and Non-Sterile Compounding
27	2.6 Pharmacogenomics and Genetics
28	2.3 Pharmacognosy and Dietary Supplements
	Area 3
9	3.8 Professional Communication
11	3.1 Health Care Delivery Systems and Public Health
12	3.10 Medication Dispensing and Distribution Systems
15	3.4 Pharmacy Practice Management
16	3.5 Pharmacy Law and Regulatory Affairs
17	3.6 Biostatistics and Research Design
22	3.7 Ethical Decision Making
24	3.3 Economic and Humanistic Outcomes of Health Care Delivery
25	3.9 Social and Behavioral Aspects of Pharmacy Practice
26	3.2 Population-based Care and Pharmacoepidemiology
30	3.11 History of Pharmacy
	Area 4
1	4.7 Clinical Pharmacology and Therapeutic Decision Making
4	4.1 Evidence-Based Practice
6	4.2 Clinical Pathophysiology
7	4.6 Patient Assessment

18	4.3 Clinical Pharmacokinetics
21	4.5 Disease Prevention and Population Health
29	4.4 Clinical Pharmacogenomics

Final Recommendation

Results of the analysis were reviewed by the FPGEE/PCOA Review Committee, which facilitated recommendations regarding two subdomain areas. In Area 1, Basic Biomedical Sciences, the committee recommended that NABP collapse content area 1.2 (Molecular Cell Biology) and integrate the appropriate content into content area 1.2 (Biochemistry). The committee felt that ACPE’s broader definition of Biochemistry to include structure, properties, function, and metabolic rate of macromolecules essential to life (protein, lipids, carbohydrates, and nucleic acids) provided a good fit to integrate some of the subtopics formerly in Molecular Cell Biology into Biochemistry. This reduced the subdomains in Area 1 from five to four. In addition, the committee recommended that 3.11 (History of Pharmacy) be removed from the Social/Administrative/Behavioral Sciences subdomain. This content area is currently not represented in the FPGEE or PCOA competencies and ranked very low in time spent on this topic in the curricular survey.

The ACE and Executive Committee approved the following content domain allocations for the FPGEE and PCOA. Each of the programs will implement the changes at a scheduled time frame in 2016.

- Area 1 10%**
- Area 2 33%**
- Area 3 22%**
- Area 4 35%**

The results of the curricular survey inform test development for both the FPGEE and PCOA programs. Though each program is unique in relation to the purpose of the examination, the programs share content domain intended to measure an individual’s knowledge of the topics taught in US pharmacy school curriculums.

Recent updates to the ACPE 2016 *Standards* require US programs to report performance on the PCOA when students are near the end of the didactic curriculum. The timing of the curricular survey was critical to ensure that the PCOA content domains were reflective of the most current information in relation to contemporary US pharmacy curriculum. The ACPE *Standards* were implemented in July 2016. The PCOA blueprint and content allocations were updated for the 2016-2017 academic year and all examination forms will reflect the new content allocations until such time that NABP will conduct a follow-up curricular survey.

Appendix A: Literature Review References

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Appendix B: Competency Statements

Area 1.0 – Basic Biomedical Sciences 10%

1.1 Physiology

1.1.1 Function of the major body systems and homeostatic impact at organ and system level

1.2 Biochemistry

1.2.1 Chemistry and utilization of biomacromolecules including proteins, lipids, carbohydrates, nucleic acid, intermediary metabolism of energy and nutritional molecules

1.2.2 Enzymology and coenzymes and kinetics

1.2.3 Cell chemistry, signal transduction pathways

1.2.4 Transport and mobility

1.2.5 Recombinant DNA and molecular biotechnology

1.2.6 mRNA translation and protein synthesis

1.3 Microbiology Related to Human Disease

1.3.1 Structure, function, and characteristics of microorganisms:
microbe classification, structure, metabolism, genetics

1.3.2 Pathogenic microorganisms of humans

1.4 Immunology

1.4.1 Innate and adaptive immunity

1.4.2 Principles of antibody actions

1.4.3 Hypersensitivity and types of reactions

Area 2.0 – Pharmaceutical Sciences 33%

2.1 Medicinal Chemistry

2.1.1 Physicochemical properties of drugs in relation to drug absorption, distribution, metabolism, and excretion (ADME)

2.1.2 Chemical basis for drug action

2.1.3 Fundamental pharmacophores for drugs used to treat diseases

2.1.4 Structure-activity relationships in relation to drug-target interactions

2.1.5 Chemical pathways of drug metabolism

2.1.6 Applicability to making drug therapy decisions

2.2 Pharmacology and Toxicology

2.2.1 Mechanisms of action of drugs of various categories including biologics

2.2.2 Pharmacodynamics of drug binding and response

2.2.3 Adverse effects and side effects of drugs

- 2.2.4 Mechanisms of drug-drug interactions
- 2.2.5 Drug discovery and development
- 2.2.6 Acute and chronic toxic effect of xenobiotics, including drug and chemical overdose and antidotes

2.3 Pharmacognosy and Dietary Supplements

- 2.3.1 Concepts of crude drugs, semi-purified, and purified natural products
- 2.3.2 Classes of pharmacologically active natural products
- 2.3.3 Science and regulation of dietary supplements (vitamins, minerals, and herbals)

2.4 Pharmaceutics/Biopharmaceutics

- 2.4.1 Biopharmaceutical principles of drug delivery to the body via dosage forms: liquid, solid, semisolid, controlled release, patches, implants
- 2.4.2 Materials and methods used in preparation of drug forms
- 2.4.3 Physicochemical properties relating to drug entities and dosage forms
- 2.4.4 Principles of drug and dosage form stability, including chemical degradation and physical instability

2.5 Pharmacokinetics

- 2.5.1 Basic principles of in-vivo drug kinetics (linear and nonlinear)
- 2.5.2 Principles of bioavailability and bioequivalence
- 2.5.3 Physiologic determinates of drug onset and duration, including disease and dietary influences on absorption, distribution, metabolism, and excretion

2.6 Pharmacogenomics and Genetics

- 2.6.1 Molecular genetics, genomic, proteomic, and metabolomic principles that serve as a foundation for pharmacogenomics and the genetic basis of disease
- 2.6.2 Genetic variants affecting drug action and metabolism, adverse drug reactions, and disease risk that influence the practice of personalized medicine

2.7 Sterile and Nonsterile Compounding

- 2.7.1 United States Pharmacopeia guidelines on sterile and nonsterile compounding, hazardous drugs, and FDA regulation of compounding
- 2.7.2 Techniques and principles used to prepare and dispense individual extemporaneous prescriptions, including dating of compounded dosage forms
- 2.7.3 Dosage form preparation calculations
- 2.7.4 Sterile admixture techniques, including stability, clean-room requirements, sterility testing, and dating

Area 3.0 – Social/Behavioral/Administrative Sciences 22%

3.1 Health Care Delivery Systems and Public Health

- 3.1.1 Organization of health care delivery systems at the national, state, and local levels: various settings where pharmacy is practiced and the structure of health care delivery systems such as managed care organizations, accountable care organizations, health departments
- 3.1.2 Health care delivery financing in the United States
- 3.1.3 Social, political, and economic factors that influence the delivery of health care in the United States
- 3.1.4 Public Health and Wellness: chronic disease prevention, health promotion, infectious disease control, demographics, physical, social, and environmental factors leading to disease, comparing and contrasting public health with individual medical care
- 3.1.5 The health care delivery system compared and contrasted with that of other industrialized nations

3.2 Population-based Care and Pharmacoepidemiology

- 3.2.1 Data sources and analytic tools that provide an estimate of the probability of beneficial or adverse effects of medication use in large populations
- 3.2.2 Application of epidemiological study designs to evaluate drug use and outcomes in large populations
- 3.2.3 Methods for continually monitoring unwanted effects and other safety-related aspects of medication use in large populations

3.3 Economic and Humanistic Outcomes of Health Care Delivery

- 3.3.1 General microeconomic and general macroeconomic principles
- 3.3.2 Pharmaco-economic analysis and its application to improve the allocation of limited health care resources
- 3.3.3 Humanistic outcomes and their application to improve the allocation of limited health care resources

3.4 Pharmacy Practice Management

- 3.4.1 Management principles (planning, organizing, directing, and controlling pharmacy resources) applied to various pharmacy practice setting and patient outcomes
- 3.4.2 Personnel management
- 3.4.3 Planning, including delineation between business and strategic planning
- 3.4.4 Marketing of goods and services: product versus service pricing, distribution, promotion

- 3.4.5 Accounting and financial management
- 3.4.6 Budgeting
- 3.4.7 Risk management

3.5 Pharmacy Law and Regulatory Affairs

- 3.5.1 Legal and regulatory principles applied to pharmacy practice:
dispensing, professional services, drug use control
- 3.5.2 Administrative, civil, and criminal liability
- 3.5.3 Authority, responsibilities, and operation of agencies and entities that promulgate or administer laws, regulations, or guidances related to practice and prescription and nonprescription medications

3.6 Biostatistics and Research Design

- 3.6.1 Research study designs used in medical research
- 3.6.2 Application and interpretation of statistical tests and data collection instruments

3.7 Ethical Decision Making

- 3.7.1 Principles of biomedical ethics
- 3.7.2 Ethical dilemmas in the delivery of patient, centered care including, conflicts of interest, end-of-life decision making, use of codes of ethics, oaths of the pharmacist
- 3.7.3 Research ethics

3.8 Professional Communication

- 3.8.1 Communication abilities (appropriate verbal, nonverbal, visual, and written) with patient and caregivers, including empathetic communication
- 3.8.2 Communication abilities with other health care providers
- 3.8.3 Assertiveness and problem-solving techniques in relation to difficult social and professional conflicts and situations
- 3.8.4 Measurement and use of health literacy in pharmacy communications
- 3.8.5 Development of cultural competency in pharmacy personnel such that services are respectful of and responsive to the health beliefs, practices, and cultural and linguistic needs of diverse patient populations

3.9 Social and Behavioral Aspects of Pharmacy Practice

- 3.9.1 Health-, illness-, and sick-role behaviors of patients
- 3.9.2 Principles of behavior modification
- 3.9.3 Patient adherence to therapies and recommendations
- 3.9.4 Caregiving throughout the lifecycle
- 3.9.5 Death and dying

3.10 Medication Dispensing and Distribution Systems

3.10.1 Systems for safe and effective preparation and dispensing of medications in all types of practice settings

3.10.2 Role of automation and technology:
pharmacy informatics, information management

3.10.3 Continuous quality improvement programs or protocols in the medication-use process, including identification and prevention of medication errors, and establishment of error reduction programs

Area 4.0 – Clinical Sciences 35%

4.1 Evidence-based Practice

4.1.1 Interpret and evaluate drug information

4.1.2 Apply drug-information skills for the delivery of medication therapy management

4.1.3 Evaluate the reliability of various sources of information

4.1.4 Interpret guidelines as they apply in a clinical setting

4.1.5 Utilize core scientific and systems-based knowledge in the patient care decision-making process

4.1.6 Utilize basic science principles in the development and/or implementation of drug treatment protocols and clinical practice guidelines

4.1.7 Evaluate clinical trials that validate clinical appropriateness

4.2 Clinical Pathophysiology

4.2.1 Apply concepts of pathophysiology to clinical decision making

4.3 Clinical Pharmacokinetics

4.3.1 Utilize pharmacokinetics to calculate, evaluate, and individualize drug therapy

4.3.2 Interpret clinical pharmacokinetics of commonly used and low-therapeutic-index drugs

4.4 Clinical Pharmacogenomics

4.4.1 Utilize pharmacogenomics to calculate, evaluate, and individualize drug therapy

4.5 Disease Prevention and Population Health

4.5.1 Recognize the proper use of nonpharmacologic therapies, including complementary and alternative medicines

4.5.2 Describe measures to promote wellness and disease prevention

4.5.3 Identify the role of immunizations in disease prevention and health promotion

4.6 Patient Assessment

- 4.6.1 Describe techniques for obtaining a comprehensive patient history
- 4.6.2 Describe how to perform patient physical assessments:
inspection, palpation, percussion, auscultation
- 4.6.3 Differentiate between normal physical assessment findings and modifications caused by common disease states and drug therapy
- 4.6.4 Interpret common clinical laboratory values and diagnostic tests
- 4.6.5 Perform calculations related to patient assessment:
BMI, CrCl, lab adjustments
- 4.6.6 Describe the use of OTC point-of-care testing devices:
glucometers, pregnancy tests, home testing for HbA1c, drug screening

4.7 Clinical Pharmacology and Therapeutic Decision Making

- 4.7.1 Make therapy recommendations based on dosage calculations, specific uses and indications of drugs, and nutritional and support therapy
- 4.7.2 Interpret therapeutic drug concentrations
- 4.7.3 Assess pharmacotherapy considering contraindications, therapeutic duplications, dietary interactions, adverse drug reactions and interactions, and allergies
- 4.7.4 Triage and identify when to refer patients to other health professionals
- 4.7.5 Design patient-centered, culturally-relevant treatment plans
- 4.7.6 Apply evidence-based decision making to patient care
- 4.7.7 Recommend nonprescription and natural product therapies
- 4.7.8 Identify and manage drug toxicity, drug-induced diseases, and misuse or abuse
- 4.7.9 Monitor drug therapy for misuse, abuse, and non-adherence

Glossary of Terms

Advisory Committee on Examinations (ACE)

An appointed National Association of Boards of Pharmacy[®] (NABP[®]) committee charged with regular review and policies of all NABP examination programs. The committee of board of pharmacy affiliates, pharmacy program academicians, and representatives of exam review committees report and make recommendations regarding the examination programs to the NABP Executive Committee.

Competency statements

Statements of subject areas taught in United States pharmacy program didactic curricula and the foundation for examination content for the Foreign Pharmacy Graduate Equivalency Examination[®] (FPGEE[®]) and Pharmacy Curriculum Outcomes Assessment[®] (PCOA[®]).

Curricular survey

The curricular survey is administered at least every five years to inform NABP on current topics being taught at the didactic level in the US colleges and schools of pharmacy.

Domain survey analysis

The analysis of the curricular survey performed to provide NABP with the necessary statistical data to provide information to the governing bodies to establish a test blueprint for the FPGEE and PCOA.

Executive Committee

The governing body of NABP.

Foreign Pharmacy Graduate Equivalency Examination (FPGEE)

The Foreign Pharmacy Graduate Equivalency Examination, or FPGEE, is required as part of the FPGEC Certification Program. This exam is administered to individuals who have obtained degrees of pharmacy outside of the US and is intended to measure knowledge and comprehension of US pharmacy program curricula.

FPGEE/PCOA Review Committee

The FPGEE/PCOA Review Committee is an appointed NABP committee overseeing the FPGEE and PCOA programs. FPGEE/PCOA Review Committee members are subject matter experts in the overarching content domains taught in US pharmacy programs (Basic Biomedical Sciences, Pharmaceutical Sciences, Social/Behavioral/Administrative Sciences, and Clinical Sciences) as well as various subdomains within said disciplines. Committee members provide input and insight to the program along with facilitating at item writing workshops and reviewing items to be included in the exams as well as the approval of all examination forms.

Pharmacy Curriculum Outcomes Assessment (PCOA)

The Pharmacy Curriculum Outcomes Assessment (PCOA) is a comprehensive tool for schools and colleges of pharmacy to use as they assess individual student performance in the curricula as well as cohort performance in relation to peer programs.

Test blueprint

A distribution of testing weights for subject matter in the FPGEE and PCOA. The test blueprint guides the assembly of examination forms and dictates the number of test items in each of the sub-competencies as well as the overarching content domains.