Foreign Pharmacy Graduate Equivalency Examination® (FPGEE®) Content Outline

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Overview

The Foreign Pharmacy Graduate Equivalency Examination® (FPGEE®) is administered by the National Association of Boards of Pharmacy® (NABP®) and focuses on knowledge from biomedical, pharmaceutical, behavioral, and clinical sciences. The FPGEE is used to evaluate foreign pharmacy graduates for the purposes of granting Foreign Pharmacy Graduate Examination Committee™ (FPGEC®) certification.

The FPGEE Content Outline is used to develop the FPGEE by identifying all content areas that will be addressed on the FPGEE and the approximate number of questions on the exam that will be asked in each major content area (content domain). Prospective examinees may use this outline to better understand how the FPGEE is developed and the content areas that the FPGEE assesses.

Content Outline Development

A draft of the FPGEE Content Outline was developed by a diverse panel of pharmacy educators who conducted a comprehensive analysis of content areas which are addressed in United States school of pharmacy curricula. The panel used several resources, including the *Accreditation Council for Pharmacy Education (ACPE) Standards 2025*, to determine the knowledge, skills, and abilities that are required for pharmacy practice and thus addressed in current US school of pharmacy curricula. The panel then organized the identified content areas into content domains, sub-domains, and in some instances, third levels falling within sub-domain areas. Using contact information collected through a survey sent to the deans of 145 US schools of pharmacy, the heads of pharmacy curriculum for 127 US schools of pharmacy were invited to complete an online survey designed to collect feedback on the draft content outline. A total of 49 heads of pharmacy curriculum completed the survey by rating the relevance of each content area and providing open-ended feedback on each content domain.

The panel used the survey results to make final revisions to the content outline and to establish content domain weights (ie, the percentage of exam questions that are scored and associated with each content domain).

Content Domains

The content areas on the FPGEE Content Outline are organized into four major content domains. Within each content domain are content sub-domains and third-level sub-sub-domains (where applicable). The full detailed content outline can be found beginning on page four.

Each exam question must be classified to a specific area on the content outline to be included on the FPGEE. The four content domains are listed in the table below.

FPGEE Content Domains
1. Foundational Biomedical Sciences
2. Pharmaceutical Sciences
3. Social, Behavioral, and Administrative Sciences
4. Pharmacy Practice and Clinical Sciences

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Exam Development

NABP conducts a rigorous process to develop FPGEE questions that correspond an area on the FPGEE Content Outline. To begin, a group of question writers is recruited from diverse pharmacy practice settings and trained on question writing best practices. Each question writer is then assigned to write questions for specific areas on the content outline that ensures a foreign pharmacist's education meets comparable requirements to pharmacists educated from US schools of pharmacy. Question writers must also provide a reference that validates the correct answer choice for each question. Next, the Foreign Pharmacy Graduate Examination Review Committee reviews, makes any necessary revisions, and approves each question for testing. Prior to testing, an NABP staff review is conducted to ensure adherence to NABP style.

Sample Questions

The following sample questions demonstrate how questions are classified to the FPGEE Content Outline.

Sertraline exerts its therapeutic effect on which of the following macromolecular targets?

A. Cytoplasmic enzyme
B. Deoxyribonucleic acid
C. Ligand-gated ion channel
D. Neurotransmitter transporter

Correct Answer: D
Classification: 2.C.2

Domain (2): Pharmaceutical Sciences
Sub-domain (C): Pharmacology and toxicology
Third-Level (2): Mechanisms of action of drugs, including biologics

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Graves' disease is characterized by:

A. hyperparathyroidism.
B. hyperthyroidism.
C. hypoparathyroidism.
D. hypothyroidism.

Correct Answer: B
Classification: 4.A

Domain (4): Pharmacy Practice and Clinical Sciences
Sub-domain (A): Clinical pathophysiology as it applies to treatment of disease processes

Content Domain Weights

The table below provides the exam weights (the percentage of scored exam questions associated with each content domain) for the FPGEE. These percentages represent the approximate number of 200 scored questions associated with each content domain that can be expected on the FPGEE.

Content Domain	Exam Weight (Approximate Number of Questions)
1. Foundational Biomedical Sciences	12% (24 questions)
2. Pharmaceutical Sciences	31% (62 questions)
3. Social, Behavioral, and Administrative Sciences	20% (40 questions)
4. Pharmacy Practice and Clinical Sciences	37% (74 questions)

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Detailed FPGEE Content Outline

Domain 1. Foundational Biomedical Sciences

A. Anatomy and physiology
B. Biochemistry
C. Medical microbiology
D. Immunology
E. Pathophysiological bases of diseases

Domain 2. Pharmaceutical Sciences

A. Pharmaceutical calculations (eg, dose adjustments, delivery, ionization, ionic strength, isotonicity, ratio/percentage strength, osmolarity)
B. Medicinal chemistry
    1. Physicochemical properties of drugs in relation to drug absorption, distribution, metabolism, and excretion (ADME)
    2. Pathways of drug metabolism
    3. Chemical bases for drug action, including bioorganic chemistry, structure-activity relationships, and fundamental pharmacophores related to drug-receptor interactions
    4. Applicability to making drug therapy decisions
C. Pharmacology and toxicology
    1. Pharmacodynamics, including drug-receptor interactions, agonists, antagonists, inverse agonists, and dose-response curves
    2. Mechanisms of action of drugs, including biologics
    3. Adverse effects and side effects of drugs
    4. Mechanisms of drug interactions, including drug-drug, drug-disease, drug-food, drug-allergy, and drug-laboratory interactions
    5. Mechanisms of acute and chronic toxic effects of xenobiotics, including drug and chemical overdose or exposure and antidotes
D. Pharmaceutics and biopharmaceutics
    1. Dosage form development and drug delivery systems such as immediate release, sustained release, and controlled release
    2. Disintegration and dissolution of solid oral dosage forms
    3. Physicochemical properties of drugs, excipients, solutions, and dosage forms
    4. Physical stability, chemical stability, and shelf-lives, including zero-, first-, second-, and pseudo-order reactions
    5. Interactions between drug formulation and biological effects
    6. Drug product manufacturing, including methods, processing, and quality assurance
E. Pharmacokinetics

1. Determining rates of absorption, distribution, metabolism, and excretion (ADME) of drugs
2. Factors affecting rates of ADME, including age, sex, genetics, diet, disease, and drug interactions
3. Biological half-lives of drugs and related dosing
4. Compartment models (one-, two-, and non-)
5. Linear and nonlinear pharmacokinetics
6. Principles of bioavailability, bioequivalence, and biosimilars

F. Pharmacogenomics (eg, population-based genetic influences on drug metabolism and efficacy, genetic testing, tumor genotyping, pharmacogenetic screening)

G. Extemporaneous compounding (eg, United States Pharmacopeia (USP) standards including Chapters <795>, <797>, and <800>; dosage form preparation calculations; techniques used to prepare and dispense sterile and nonsterile preparations)

Domain 3. Social, Behavioral, and Administrative Sciences

A. Pharmacy law and ethics
   1. Laws and regulations governing pharmacy
   2. Regulatory, oversight, and professional organizations
   3. Principles and application of biomedical ethics

B. Health care systems
   1. Organization, regulation, and financing of health care delivery in the United States
   2. Factors that influence delivery and use of health care (eg, social, political, economic, and technological)

C. Pharmacoeconomics (eg, analysis, interpretation, application, humanistic outcomes)

D. Population-based care, pharmacoepidemiology, and public health
   1. Data sources and analytic tools
   2. Application of epidemiological study design
   3. Health promotion, disease prevention, and infection control
   4. Continuous quality improvement
   5. Social determinants and drivers of health

E. Practice management
   1. Financial management and budgeting
   2. Personnel management
   3. Business and strategic planning
   4. Risk management
   5. Procurement and inventory control

F. Professional communication
   1. Verbal, nonverbal, written, and technology-based communication with patients, caregivers, providers, and stakeholders

    2. Health literacy
G. Biostatistics and research methods (eg, study design, statistical tests, data collection instruments, research ethics)
H. Social and behavioral aspects of practice
    1. Patient behavior including health-, illness-, and sick-role
    2. Principles of behavior modification
    3. Patient adherence
    4. Cultural awareness

Domain 4. Pharmacy Practice and Clinical Sciences

A. Clinical pathophysiology as it applies to treatment of disease processes
B. Data collection (eg, patient history, physical assessments, laboratory values, point-of-care testing)
C. Data assessment (eg, clinical calculations, interpretation of data, diagnosing)
D. Patient-care decision making, therapy recommendations, and education (eg, plan, implement, monitor, follow-up)
E. Patient safety (eg, drug interactions, toxicity, drug-induced disease, drug use disorders)
F. Disease prevention (eg, screenings, immunization, non-pharmacological therapies, lifestyle modifications)
G. Personalized medicine (eg, pharmacokinetics, pharmacogenetics)
H. Evidence-based practice
    1. Practice guidelines
    2. Drug information and evaluation
    3. Information source reliability
    4. Clinical trial evaluation
I. Self-care, including using natural products