

COURSE OUTLINE

Pharmacology

Course Description

NR 245. Pharmacology. 3 hours credit. Prerequisite: NR 105 with a C or better or NR 108 with a C or better. This course will enable the student to develop an understanding of the concepts of pharmacology including pharmaceuticals, pharmacokinetics, pharmacodynamics, drug classifications, adverse reactions, and legal and ethical issues. The student will apply these underlying concepts to the nurse's role in medication administration.

Course Relevance

One of the professional nurse's responsibilities is to safely administer medications to individuals in the healthcare setting. Understanding the drug's use, action, adverse effects, nursing implications, and patient education is essential for medication administration. In addition, the nurse must understand the strategies that reduce the risk of harm to individuals receiving drug therapy. This information will be used by the student in his/her healthcare related practice.

Required Materials

Lilley, L.L., Harrington, S., Snyder, J.S. & Collins, E. R., *Pharmacology and the nursing process*. St. Louis, MO: Mosby Elsevier.

Supplemental Materials

Lilley, L.L., Harrington, S., Snyder, J.S. & Collins, E. R., *Study guide for pharmacology and the nursing process*. St. Louis, MO: Mosby Elsevier.

* For complete textbook information, refer to <http://www.butlercc.bkstr.com>

Butler Assessed Outcomes

The intention is for the student to be able to:

1. Apply the concepts of pharmacology and the nursing process to safely administering medications.

Learning PACT Skills that will be developed and documented in this course

Through involvement in this course, the student will develop ability in the following PACT skill area(s):

Analytical Thinking Skills

1. Critical thinking
 - Through the analysis of case studies and written discussion, the student will develop critical thinking skills.

Major Summative Assessment Task(s)

These learning outcome(s) and the Learning PACT skill(s) will be demonstrated by:

1. Developing an education plan for an individual receiving a specific drug therapy.

Course Content

- I. Skills or Competencies – Actions that are essential to achieve the course outcomes:
 - A. Apply teaching/learning principles to patient education
 - B. Utilize evidenced based practice/research
 - C. Demonstrate critical thinking (nursing process) in making clinical judgments
- II. Themes – Key recurring concepts that run throughout this course:
 - A. ANA Standards of Practice (nursing process)
 - B. Pharmaceutics
 - C. Pharmacokinetics
 - D. Pharmacodynamics
 - E. Pharmacotherapeutics
 - F. Alternative and complementary medicine
 - G. Drug classifications
 - H. Drug interactions
 - I. Adverse Effects
 - J. Medication safety
- III. Issues – Key areas of conflict that must be understood in order to achieve the intended outcome:
 - A. Legal/Ethical
 - B. Confidentiality
 - C. Accountability
 - D. Cultural, religious and spiritual influences on health
 - E. Nurse's versus client's values
- IV. Concepts – Key concepts that must be understood to address the issues:
 - A. ANA Code of Ethics
 - B. Professional Standards

Learning Units

- I. Pharmacology concepts
 - A. Drug names and classifications
 - B. Pharmaceutics
 - C. Pharmacokinetics
 - D. Pharmacodynamics
 - E. Pharmacotherapeutics
 - F. Life span considerations
 - G. Environmental and cultural influences
 - H. Legal and ethical
 - I. Over-the-counter medications, herbal and dietary supplements
 - J. Medication safety
- II. Drugs affecting central nervous system (CNS)
 - A. CNS depressants and muscle relaxants

- B. CNS stimulants
 - C. Antiseizure
 - D. Antiparkinson
 - E. Psychotherapeutic
 1. Antianxiety
 2. Antimanic
 3. Selective serotonin reuptake inhibitors
 4. Tricyclic antidepressants
 5. Monoamine oxidase inhibitors
 6. Antipsychotic
- III. Drugs affecting the autonomic nervous system
- A. Adrenergic and adrenergic blocking
 - B. Cholinergic and cholinergic blocking
- IV. Analgesic and anti-inflammatory drugs
- A. Opioid and nonopioid
 - B. Anti-inflammatory
 - C. Nonsteroidal anti-inflammatory
 - D. Corticosteroids
 - E. Antirheumatic
 - F. Antigout
- V. Anti-infective drugs
- A. Antibiotics
 - B. Antiviral
 - C. Antitubercular
 - D. Antifungal
 - E. Antimalarial, antiprotozoal and anthelmintic
 - F. Urinary antiseptics, anti-infectives
- VI. Drugs affecting immune response
- A. Antineoplastics
 - B. Immunosuppressant
 - C. Biologic response – modifying drugs
- VII. Drugs affecting cardiovascular and renal systems
- A. Cardiac glycosides
 - B. Antianginal
 - C. Antidysrhythmics
 - D. Diuretics
 - E. Antihypertensives
 - F. Antihyperlipidemics
 - G. Anticoagulants, antiplatelets and thrombolytics
 - H. Fluid and electrolyte replacement

- VIII. Drugs affecting respiratory system
 - A. Antihistamines, decongestants, antitussives and expectorants
 - B. Bronchodilators

- IX. Drugs affecting gastrointestinal system
 - A. Acid controlling drugs
 - B. Antidiarrheals and laxatives
 - C. Antiemetic and antinausea

- X. Drugs affecting endocrine system
 - A. Pituitary drugs
 - B. Thyroid and antithyroid
 - C. Antidiabetic
 - D. Adrenal drugs

- XI. Women and men health drugs
 - A. Female reproductive
 - 1. Female sex hormones
 - 2. Labor, delivery, and postpartum drugs
 - 3. Drug therapy for osteoporosis
 - B. Male reproductive
 - 1. Androgens
 - 2. Drug therapy for benign prostatic hypertrophy
 - 3. Drug therapy for erectile dysfunction

- XII. Drugs affecting sensory and integumentary
 - A. Ears
 - B. Eyes
 - C. Skin

Learning Activities

Learning activities will be assigned to assist the student to achieve the intended learning outcomes through textbook readings, tutorials, study guides, case studies, nursing journals and discussion participation with class members and instructor, and other activities at the discretion of the instructor.

Grade Determination

The student will be graded on learning activities and assessment tasks. Grade determinants may include the following: written assignments, quizzes, discussion participation, and other methods of evaluation at the discretion of the instructor.