

UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

GRADUATE SCHOOL OF NURSING

Course Syllabus

Course Title:	Pharmacology for Nurse Practitioners – Didactic
Course Number:	GSN 0630
Credits:	4 Credits
Prerequisites or Taken Concurrently:	Health Assessment, Physiology
Placement:	Fall through Spring, First Year
Course Coordinator:	Diane Seibert, CRNP – Onsite program coordinator CAPT Bonnie Pyle, CRNP – Distance Learning program coordinator
Faculty:	Dr. Frank Pucino, Pharm D Dr. Fred Lombardo, Pharm D

Course Description:

The purpose of this course is to assist nurse practitioner students in obtaining the essential pharmacological information required by nurses functioning in an advanced practice role. This program was developed in concordance with national guidelines developed by the National Organization of Nurse Practitioner Faculties (NONPF) for Nurse Practitioner programs. The focus of this course will be on the major categories of drugs, their effects, side effects, toxicity and dosages. The principles of pharmacodynamics (action of drugs) and pharmacokinetics (absorption, distribution, metabolism and excretion) will be emphasized, along with necessary modifications required for age, weight and race differences among patients.

Course Rationale

Pharmacology includes the elucidation of molecular mechanisms of drug response, the development of new drugs and the formulation of clinical guidelines for safe and effective use to include drugs in therapy or prevention of disease states and in relief of symptoms. This course provides this knowledge and is essential for Advanced Nurse Practitioners.

Course Objectives:

At the conclusion of this course, the student will be able to meet selected objectives from the following NONPF clinical competency Domains

Domain 1: Management of Client Health/Illness Status

Domain 2: The Nurse-Client Relationship

Domain 3: The Teaching-Coaching Function

Domain 6: Monitoring and Ensuring the Quality of Health Care Practice

Detailed objectives designed to meet the above domains are described below. The student will:

- A. Utilize general principles of pharmacology and their application in the safe administration and monitoring of drug therapy.
 - 1. Define pharmacokinetic process of absorption, distribution, metabolism and excretion and factors that alter pharmacokinetics.
 - 2. Identify the concept of and potential for drug interactions.
 - 3. List significant adverse drug reactions and appropriate interventions.
 - 4. Describe issues related to bioavailability and bioequivalence of different drugs.

- B. Describe the major classifications, action and side effects of drugs and chemotherapeutic agents in current medical treatments and drug therapy for selected disorders.
 - 1. Identify the indications and rationale for pharmacotherapeutic agents.
 - 2. Contrast drugs used to treat individuals with specific conditions based on factors such as pharmacokinetics, cost, genetic characteristics, etc.
 - 3. Analyze the relationship between pharmacodynamic mechanisms and physiologic responses
 - 4. Describe essential client education for expected effects, potential adverse effects, proper administration and cost of medications
 - 5. Determine correct dosages, dosage form, route and frequency of administration of medications based on relevant individual client characteristics (e.g., age, culture, gender and illness).
 - 6. Identify appropriate monitoring for specific drugs
 - 7. Describe ethical and legal standards and ramifications of pharmacotherapeutics.

- C. Demonstrate understanding of the teaching-learning process required in the nurse practitioner's role.
 - 1. Is able to assess patient's learning needs.
 - 2. Can utilize multiple teaching strategies to present information.
 - 3. Understands how to evaluate a patient's learning.

Topical Outline

- Introductions and Mechanisms of Drug Actions
- Absorption & Distribution
- Pharmacokinetics
- Drug Metabolism
- Autonomic Neurotransmitters
- Cholinergics/Anticholinergics/Ganglionics
- Anticholinesterase Agents/Oximes
- Adrenergics
- Histamines/Antihistamines
- GI Drugs
- Non-Steroidal Anti-Inflammatory Drugs (NSAIDS)
- Antiparkinson Drugs
- Antipsychotic Drugs
- Sedative-Hypnotics
- Alcohol/Alcoholism
- Xanthines/Antiasthmatics
- Anticonvulsant Drugs
- Antidepressant Drugs
- Treatment of Pain: Opiate Drugs
- Drugs of Abuse

Thyroid
Adrenal Hormones
Androgens/Estrogens
Insulin
Vasodilator Drugs
Antianginal Drugs
Diuretics
CHF Drugs
Antiarrhythmic Drugs
Thrombolytics
Anticoagulants
Clinical Aspects of CHF
Antihypertensive Drugs
Hypolipdemics
Antibiotics
Chemotherapy of Mycobacteria Infections
Clinical Aspects of Antibiotic Use
Antiparasitics
Antivirals/Antifungals
Clinical Aspects of AIDS Therapy
Self-Study-Gout
Antibiotics
Dermatopharmacology
Geriatric Pharmacology

Teaching Methods

Lecture, Guest Speakers

Course Requirements:

1. Attendance at all class sessions with quality participation and preparation.
2. Successful completion of four written examinations

Student Evaluation:

Four Examinations (20% each)

80%

Textbooks:

Required:

McKenry, L. and Salerno, E. (1998), Pharmacology in Nursing, 20th Ed., Mosby.