

Southeast Missouri State University

Department of Nursing
Advanced Pharmacology

Course No. NS625
Revision

I. Catalog Description and Credit Hours of Course: A comprehensive study for advanced practice nurses who manage drug therapy for a variety of patients. A disease state approach is used. Designed to meet the requirements for prescription writing by advanced practice nurses. Four (4) credit hours.

II. Prerequisite: Completion of a Bachelor's Degree in Nursing or Instructor Consent

III. Objectives of the Course:

- A. Describe the basic principles of pharmacokinetics and pharmacodynamics and how these principles might affect pharmacological therapeutics and issues related to special populations.
- B. Analyze the effects of patient parameters for example: age, gender, disease states, and lab results.
- C. Demonstrate an understanding of the etiology, pathogenesis, clinical manifestations, and complications of common disease states.
- D. Explain the mechanism of action, place in therapy, drug-drug interactions, laboratory values and adverse effects for various drugs.
- E. Select appropriate drug therapy for a particular disease state in terms of dosage, route of administration, frequency and duration of therapy.
- F. Describe factors influencing safe and effective prescriptive practices within the scope of advanced practice nurses.

IV. Expectations of Students:

- A. Regular class attendance
- B. Required reading assignments completed prior to class
- C. Class participation
- D. Satisfactory completion of all quizzes, exams and case studies

V. Course Content Outline:

- A. Basic Principles of Pharmacology - 4 hrs**
 - Orientation to Pharmacology – 30 min
 - Pharmacokinetics – 1 hr

Pharmacodynamics – 1 hr
Drug interactions – 30 min
Application of Pharmacology to Nursing Practice--1 hr
 Drug Regulation, Development, Names and Information
 Adverse Reactions

B. Drug Therapy Across the Lifespan – 4 hrs

Individual Variation in Drug Response - 1 hr
Drug Therapy in Pediatric Patients - 1 hr
Drug Therapy in Geriatric Patients - 1 hr
Drug Therapy in Pregnancy and Breastfeeding – 1 hr

C. Central and Peripheral Nervous System – 4 hrs

Parkinson's Disease – 1.5 hrs
Alzheimer's Disease – 1.5 hrs
Physiology of Central and Peripheral Nervous System – 1 hr
 Introduction to Cholinergic and Adrenergic Drugs

D. Exam 1 – 1 hr

E. Pain Management – 3 hrs

Non-opioid analgesics – 1 hr
Opioid analgesics – 1 hr
Drugs for Headaches – 1 hr
 Adjuvant Pain Therapy (Neuropathic pain control)

F. Cardiology I – 4 hrs

Drug Classifications – 3 hrs
 Diuretics
 Drugs Acting on RAAS
 Calcium Channel Blockers
 Vasodilators
 Alpha-adrenergic antagonists
 Beta-adrenergic antagonists
 Adrenergic blocking agents
Review of hemodynamics – 1 hr
 Review of hypertension

G. Cardiology II – 4 hrs

Antidysrhythmic Drugs – 1 hr
Cholesterol Agents – 1 hr
Anticoagulant, Antiplatelet and Thrombolytic Drugs – 1 hr
Drugs for Heart Failure – 30 min
Drugs for Angina – 30min

- H. Diabetes – 3 hr in class**
 - Drugs for Thyroid Disorders – 1 hr**
- I. Exam 2 – 1 hr**
- J. GI Drugs – 3 hrs**
 - Drugs for Peptic Ulcer Disease – 1 hr
 - Laxatives and Antidiarrheals – 1 hr
 - Drugs for nausea and vomiting – 1 hr
- K. Pulmonology I – 4 hrs**
 - Drugs for Asthma – 3 hrs
 - Drugs for Chronic Obstructive Lung Disease – 1 hr
- L. Pulmonology II – 4 hrs**
 - Drugs for Allergic Rhinitis, Cough and Cold – 3 hrs
 - Tobacco Cessation – 1 hr
- M. Contraception and Obstetrics – 4 hrs**
 - Estrogens and Progestins – 1.5 hr
 - Birth control – 1.5 hr
 - Erectile Dysfunction – 30 min
 - Benign Prostatic Hyperplasia – 30 min
- N. Exam 3 – 1 hr**
 - Legal and ethical considerations and responsibilities in prescribing and dispensing of medications – 2 hrs**
 - Proper prescription writing – 1 hr**
- O. Infectious Disease I – 4 hrs**
 - Antibiotics – 3 hrs
 - Antifungals – 1 hr
- P. Infectious Disease II – 4 hrs**
 - Antiviral Drugs – 3 hrs
 - Immunizations – 1 hr
- Q. Neurology – 4 hrs**
 - Antidepressants – 1.5 hr
 - Anti-anxiety – 45 min
 - ADHD medications – 45 min
 - Introduction to antipsychotic agents – 30 min
 - Introduction to bipolar agents – 30 min

Total Hours = 4 hr/week x 15 weeks = 60 hours

VI. Textbook(s) and/or Other Required Materials or Equipment:

- A. Lehne, RA. (2006). *Pharmacology for nursing care* (6th ed.). Elsevier: Saunders.
- B. Guidelines and articles as assigned.

VII. Basis for Student Evaluation:

- A. 10 quizzes = 5%
- B. 5 Case Studies (**group participation a must**) = 40%
- C. 3 Examinations = 30%
- D. Final Exam = 25% (**Comprehensive**)

VIII. Grading Scale:

100% - 90%	=	A
89% - 80%	=	B
79% - 70%	=	C
69% - 0%	=	F

The weight of the evaluation criteria may vary according to each instructor and will be communicated at the beginning of the course.

IX. Academic Policy Statement:

Students will be expected to abide by the University Policy for Academic Honesty regarding plagiarism and academic honesty. Refer to:
<http://www6.semo.edu/judaffairs/code.html>

X. Student with Disabilities Statement:

If a student has a special need addressed by the Americans with Disabilities Act (ADA) and requires materials in an alternative format, please notify the instructor at the beginning of the course. Reasonable efforts will be made to accommodate special needs.