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 advance 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:

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.