Course Information

Division: Allied Health
Course Number: HCE 171
Title: Introduction to Pharmacology
Credits: 3
Developed by: Robert Richman, M.D.
Lecture/Lab Ratio: 3 Lecture/0 Lab
Transfer Status:

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<th>School</th>
<th>ASU</th>
<th>NAU</th>
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<td>Non Transferable</td>
<td>HS Departmental Elective</td>
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Activity Course: No
CIP Code: 51.0800
Assessment Mode: Pre/Post Test (50 Questions/50 Points)
Semester Taught: Fall
GE Category: None
Separate Lab: No
Awareness Course: No
Intensive Writing Course: No

Prerequisites
None

Educational Value
TO GENERAL EDUCATION: Provides opportunity for students to explore pharmacology concepts.
TO MAJOR/PROGRAM: This course is open to anyone who is interested in pharmacology.
TO OTHER COURSES OR CURRICULA: This course is interrelated with other allied health courses.

Description
This is an introductory course in pharmacology beginning with the history of the evolution of the science of pharmacology. The course develops into two major components: the principles and general aspects of pharmacology and discussion of the pharmacology of some specific organ systems and infections. The course will provide a good foundation of knowledge for those students who want to become a healthcare deliverer.

Supplies
None
Competencies and Performance Standards

1. Describe basic principles of pharmacology.
   
   Learning objectives
   What you will learn as you master the competency:
   a. Describe general aspects of pharmacology.
   c. Describe pharmacodynamics, which includes mechanisms of drug actions.
   d. Discuss pharmacokinetics.
   e. Discuss different drug effects, drug interactions and unexpected drug responses.
   f. Describe drug dosing.
   g. Discuss factors that influence drug action especially the patient profile.

   Performance Standards
   Competence will be demonstrated:
   o in completion of class assignments and activities
   Criteria - Performance will be satisfactory when:
   o learner participates in class discussions and activities
   o learner provides acceptable verbal responses to questions about principles of drug action

2. Define antimicrobials and describe their use in medicine.
   
   Learning objectives
   What you will learn as you master the competency:
   a. Identify symptoms and signs of some common bacterial infections.
   b. Discuss names, mechanism of actions, possible side effects, and adverse effects of antibiotic treatment.
   c. Discuss classes of antibiotics.
   d. Describe antiviral drugs in relationship to the specific viral diseases for which they are indicated.
   e. Discuss antifungal drugs in relationship to the specific fungal diseases for which they are used.

   Performance Standards
   Competence will be demonstrated:
   o in completion of tests
   o in completion of class activities and assignments
   Criteria - Performance will be satisfactory when:
   o learner participates in class discussions and activities
   o learner provides acceptable verbal responses to questions

3. Outline the pharmacology of the central nervous system.
   
   Learning objectives
   What you will learn as you master the competency:
   a. Describe neurotransmitters.
b. Discuss antidepressants.
c. Describe stimulants.
d. Describe drugs used as anti-psychotics.
e. Describe antiemetics.
f. Describe drugs used for Parkinson’s disease.
g. Discuss central acting (opioids) analgesics.
h. Describe anti-anxiety drugs and sedatives.
i. Discuss anticonvulsants.
j. Explain the concept of general anesthesia.
k. Discuss antimigraine therapy.

Performance Standards
Competence will be demonstrated:
- in completion of the assignments
- in completion of tests
Criteria - Performance will be satisfactory when:
- learner participates in class discussions and activities

4. Outline the pharmacology of the peripheral nervous system.
Learning objectives
What you will learn as you master the competency:

a. Describe the anatomy and physiology of the autonomic nervous system.
b. Identify the drug classes used in manipulating the autonomic nervous system.
c. Discuss drugs used in the peripheral nervous system.
d. Describe local anesthetics.
e. Describe neuromuscular blocking agents.

Performance Standards
Competence will be demonstrated:
- in completion of tests
- in completion of class activities and assignments
Criteria - Performance will be satisfactory when:
- learner participates in class discussions and activities
- learner provides acceptable verbal responses to questions

5. Explain the pharmacology of cardiovascular drugs.
Learning objectives
What you will learn as you master the competency:

a. Identify the common names, actions, possible side effects and adverse effects of diuretic drugs.
b. Identify the different classes of antihypertensive drugs.
c. Discuss drugs used for coronary artery disease.
e. Describe drug therapy for dysrhythmias.
f. Explain how antihyperlipidemic drugs work to lower blood lipid levels.
g. Describe drugs that affect blood clotting.
h. Discuss the new oral anticoagulants.

Performance Standards

Competence will be demonstrated:
- in completion of tests
- in completion of class activities and assignments

Criteria - Performance will be satisfactory when:
- learner participates in class discussions and activities
- learner provides acceptable verbal responses to questions

Types of Instruction
Classroom Presentation & Demonstration

Grading Information
Grading Rationale
Quizzes count as 60% of the final grade. Written assignments count as 10% of the final grade. The final exam is worth 30% of the final grade.

Grading Scale
A 90-100% of total point value
B 80-89.99% of total point value
C 70-79.99% of total point value
D 60-69.99% of total point value
F 0-59.99% of total point value