

NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY

HLT 250 GENERAL PHARMACOLOGY (3 CR.)

Course Description

Emphasizes general pharmacology for the health-related professions covering general principles of drug actions/reactions, major drug classes, specific agents within each class, and routine mathematical calculations needed to determine desired dosages. Lecture 3 hours per week.

Course Purpose

The purpose of this course is to educate nursing students and other ancillary medical personnel how to administer drugs in a responsible, safe, and effective manner dependent upon the area of their expertise and within the laws and scope of their areas of treatment and patient care. Emphasis is placed on knowledge of the major drug groups which includes the usage of the drug, drug dose, adverse drug reactions, and side effects that are pertinent to physiological and biochemical changes occurring during the disease and recovery state.

Course Prerequisites/Corequisites

All students should have a background in anatomy and physiology, chemistry, and a good concept of basic algebra. All students must possess basic computer skills including proficiency with Microsoft Office, keyboarding, web browsing, document preparation and submission, and the use of email. All students must be proficient in English.

Course Objectives

Upon successful completion of the course, the student will be able to:

- a) Describe sources of drugs, different forms in which drugs are dispensed, and the derivation of drug names.
- b) Discuss local and systemic effects of drugs and factors influencing the actions of drugs.
- c) Apply the techniques of ratio and proportion and dimensional analysis.
- d) Demonstrate an ability to accurately calculate correct dosages for adults and children.
- e) Discuss the effects of the major drug classes and their influence on the pathophysiologic and biochemical changes in disease states.
- f) Describe common indications, contraindications, precautions and interactions of various pharmaceutical agents.
- g) Discuss important points when educating patients about various pharmaceutical agents.

Major topics include

- a) History of pharmacology and the current trends in pharmacology
- b) Legal aspects of drug dispensing and administering of drugs by licensed personnel
- c) Discussion of prescription laws and hospital drug orders written
- d) Sources of drugs, different forms in which drugs are dispensed, and the derivation of drug names
- e) Local and systemic effects of drugs and factors influencing the actions of drugs; discuss calculation of drug doses
- f) Pharmacology of the autonomic nervous system, including agonists and antagonists of the sympathetic and parasympathetic nervous systems
- g) Pharmacology of the cardiovascular system
- h) Pharmacology of the respiratory system
- i) Pharmacology of the central nervous system, including sedative and stimulant medicines
- j) Pharmacology of the gastrointestinal system, including sedatives, antidiarrheal and anti-nausea agents
- k) Pharmacology of the genitourinary system
- l) Pharmacology of the kidney and its specific effects on the homeostasis of extracellular fluids to include the new insulins
- m) Drugs that affect the endocrine and reproductive systems
- n) Anti-infective drugs and drugs that affect the immune system, including anti-neoplastic agents
- o) Drugs that affect other body systems, including the musculoskeletal system, the skin, the eyes, the ears as well as fluids and electrolytes.
- p) Complementary and alternative medicine.
- q) Discuss the effects of the major drug classes and their influence on the pathophysiologic and biomechanical changes in various diseases