

J. Sargeant Reynolds Community College
Course Content Summary

Course Prefix and Number: EMS 209

Credits: 4

Course Title: Advanced Pharmacology

Course Description: Focuses on the principles of pharmacokinetics, pharmacodynamics, and drug administration. Includes drug legislation, techniques of medication administration, and principles of math calculations. Emphasizes drugs used to manage respiratory, cardiac, neurological, gastrointestinal, fluid and electrolyte and endocrine disorders, and includes classification, mechanism of action, indications, contra-indications, precautions, and patient education. Incorporates principles related to substance abuse and hazardous materials. Applies principles during the assessment and management of trauma, medical, and specialty patients in a laboratory environment. Lecture 3 hours. Laboratory 2 hours. Total 5 hours per week.

General Course Purpose: This course provides students with advanced concepts related to pharmacology and how drugs influence the assessment and management of patients.

Course Pre-requisites and Co-requisites:

None

Course Objectives:

Upon completing the course, the student will be able to

- a. Understand their roles and responsibilities in drug administration;
- b. Apply advanced concepts of pharmacology to assessment and management of patients;
- c. Properly administer medications and communicate effectively with patients;
- d. Obtain an accurate history, including drugs taken and determine their influence on the physical assessment of any patient, and communicate the findings to others; and
- e. Integrate pharmacological principles to formulate a field impression and implement a treatment plan for trauma, medical, and specialty patients.

Major Topics to Be Included:

- a. Introduction
- b. Principles of pharmacology
- c. Drug therapy across patient lifespan
- d. Nervous system drugs
- e. Drug abuse
- f. Drugs that affect fluid and electrolyte balance
- g. Drugs that affect the heart
- h. Blood vessels and blood
- i. Drugs for endocrine disorders
- j. Immunologic drugs
- k. Drugs for bone and joint disorders
- l. Respiratory tract drugs
- m. Gastrointestinal tract drugs and toxicology

Effective Date of Course Content Summary: April 6, 2009