

**J. Sargeant Reynolds Community College  
Course Content Summary**

**Course Prefix and Number:** EMS 202

**Credits:** 2

**Course Title:** Paramedic Pharmacology

**Course Description:** Focuses on advanced pharmacological interventions, medications and their effects. Prerequisites: EMS 125, EMS 126, EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142. Lecture 2 hours per week.

**General Course Purpose:** The purpose of this course is to continue to teach additional medications used and encountered by the Paramedic in treatment of patients. Focuses on the principles of pharmacokinetics, pharmacodynamics and drug administration.

**Course Prerequisites and Co-requisites:**

Prerequisites: EMS 125, EMS 126, EMS 135, EMS 136, EMS 137, EMS 138, EMS 139, EMS 140, EMS 141, EMS 142

**Student Learning Outcomes:**

Upon completion of the course, student will be able to

- a. Discuss pharmacokinetics and pharmacodynamics of drugs;
- b. Identify components of drug storage and security;
- c. Explain the effects of medications on the body;
- d. Discuss the classifications of medications and the mechanism of action for each; and
- e. Choose the appropriate pharmacological intervention based on patient complaint.

**Major Topics to be Included:**

- a. Advanced Pharmacologic Concepts
  - Pharmacokinetics and pharmacodynamics
  - Drug terminology
  - Sources of drugs
  - Drug forms
  - Schedules of medications
- b. Drug Storage and Security
  - Methods of storage and security
  - Factors affecting drug potency
  - Controlled substances
- c. Effects of Medications on the Body
  - Intestinal absorption
  - Biotransformation
  - Drug metabolism
  - Renal excretion
  - Toxicity

d. Medication Classifications

- Alkalinizing agents
- Analgesics
- Antibiotics
- Anticonvulsant–sedative
- Antihypertensives
- Beta–agonists
- Beta-blockers
- Calcium channel blockers
- Corticosteroids
- Diuretics
- Dysrhythmics
- Fibrinolytics
- Neuromuscular blocking agents
- Platelet inhibitors
- Sympathomimetics
- Xanthines

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