

NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY EMS 125 – BASIC PHARMACOLOGY (1 CR.)

Course Description

Prepares students to demonstrate competency concerning basic principles of pharmacology, drug dosage calculations and medication administration. Introduces medications listed in the Advanced EMT (AEMT) scope of practice.

General Course Purpose

The purpose of this course is to introduce the novice student to the principles of pharmacology and skills related to intravenous therapy and medication administration.

Course Prerequisites/Corequisites

Prerequisite: Current Virginia EMT and CPR certification as approved by the Virginia Office of EMS.

Corequisite: EMS 126.

Course Objectives

Upon completing the course, the student will be able to:

- a) Discuss safe practices involved in medication administration
- b) Identify laws that regulate medications in the United States
- c) Outline types of medication by classification
- d) Define key terms related to pharmacology
- e) Determine drug dosages based on presenting factors
- f) Compare and contrast the advantages and disadvantages of different routes of medication administration
- g) Describe the pharmacological aspects of various medications

Major Topics to be Included

- a) Medication Safety
 - a. Safe practices in medication administration
 - b. Legislation related to medications
- b) Medication Overview
 - a. Types of names
 - b. Classifications
 - c. Storage and security
 - d. Terminology related to medications
- c) Pharmacological Concepts
 - a. Pharmacokinetics
 - b. Pharmacodynamics
 - c. Special Considerations in Pediatrics and Geriatrics
- d) Medication Administration
 - a. Routes of Administration
 - b. Methods of calculating drug doses
 - c. Advantages and disadvantages of administration techniques
 - d. Patient response to medications

- e. Documentation
- e) Specific Medications [for Advanced EMT (AEMT) - a mid-level certification between EMT and paramedic]
 - a. Albuterol
 - b. Aspirin
 - c. Dextrose
 - d. Epinephrine (Intramuscular or Subcutaneous)
 - e. Glucagon
 - f. Glucose
 - g. Intravenous Fluids
 - h. Naloxone
 - i. Nitroglycerin
 - j. Nitrous Oxide