

NOVA COLLEGE-WIDE COURSE CONTENT SUMMARY EMS 126 – BASIC PHARMACOLOGY LAB (1 CR.)

Course Description

Focuses on the safe administration of medications in the emergency setting. Includes drug dose calculation and covers multiple routes of administration including oral, intramuscular, subcutaneous, intravenous, and intraosseous and other methods within the scope of practice for the emergency care provider. Laboratory 2 hours. Total 2 hours per week.

General Course Purpose

The purpose of this course is to teach the novice student the skills related to intraosseous, 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 125.

Course Objectives

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

- a) Establish a minimum of two (2) intravenous (IV) catheters in a laboratory setting within 100% accuracy
- b) Demonstrate the ability to initiate an intravenous fluid bolus on a minimum of two (2) patients in a laboratory setting
- c) Demonstrate the ability to initiate a piggyback infusion on a minimum of two (2) patients in a laboratory setting
- d) Establish a minimum of two (2) intraosseous (IO) infusions within 100% accuracy.
- e) Administer a minimum of one (1) medication via the intramuscular (IM) route within 100% accuracy
- f) Administer a minimum of one (1) medication via the subcutaneous (SC) route within 100% accuracy
- g) Administer a minimum of two (2) medications via the intranasal (IN) route within 100% accuracy
- h) Administer a minimum of two (2) medications via a nebulizer within 100% accuracy
- i) Calculate various drug dosages within 100% accuracy

Major Topics to be Included

- a) Administration of Medication to a Patient
 - a. Routes of administration
 - b. The "Rights" of Drug Administration
 - c. Drug Dose Calculations
 - d. Preventing medication errors
- b) Intravenous Techniques
 - a. Aseptic technique
 - b. Safety measures
 - c. Establishing an IV
- c) Intraosseous Techniques
 - a. Safety measures
 - b. Concepts of humeral intraosseous
 - c. Concepts of tibial intraosseous
 - d. Establishing an IO

- d) Safety and Proper Techniques for Other Methods of Medications Administration
 - a. Oral/Sublingual
 - b. Transdermal
 - c. Nebulized
 - d. Intramuscular
 - e. Subcutaneous
 - f. Intravenous/Intraosseous Bolus
 - g. Intravenous/Intraosseous Piggybank
- e) Specific Medication
 - a. Albuterol
 - b. Aspirin
 - c. Dextrose
 - d. Epinephrine (Intramuscular or Subcutaneous)
 - e. Glucagon
 - f. Glucose
 - g. Intravenous Fluids
 - h. Naloxone
 - i. Nitroglycerin
 - j. Oxygen
 - k. Nitrous Oxide