

# Northwest Arkansas Community College

## Division of Health Professions

### Discipline Code

EMTP

### Course Number

EMTP 1041

### Course Title

Paramedic Pharmacology Lecture

### Course Description

This is an introductory course covering the fundamentals of pharmacology and the administration of drugs and fluids. This entry level course teaches the student the skills necessary to begin their clinical phase of the paramedic program. Students must be enrolled and accepted into the paramedic program prior to taking this course. This class is a "Flipped" classroom and students will watch lecture away from the classroom and take quizzes and exams. Quizzes and exams will be discussed in class and material that needs further attention will be taught by the instructor.

### Prerequisite:

Admission by acceptance into the Paramedic Program only.

### Credit Hours

1

### Contact Hours

16

### Load Hours

1

### Semesters Offered

On Demand

### ACTS Equivalent

This course does not typically transfer

### Grade Mode

A-F

### Learning Outcomes:

Upon successful completion of this course the student should be able to:

- Define the term 'drug' using pharmacological terminology, describe how drugs are named & classified, identify and describe their common routes of administration to include the advantages & disadvantages associated with each route.
- Describe the four aspects of movement of drugs through the body (pharmacokinetic parameters-absorption, distribution, biotransformation, elimination), what biochemical & physiological factors affect each aspect and how each aspect will ultimately affect the drugs effect on the body.
- Define the term receptor and describe the molecular, biochemical, and/or physiological basis of how drugs interact with the body to cause their affects, side effects and adverse effects (pharmacodynamics).

- Identify and describe the differences in drug responses in pediatric and geriatric populations from the 'typical' adult.
- Use pharmacology data resources to identify and describe the following information of drugs: generic, trade and common names of drugs; its therapeutic or chemical type; its common indicated uses; what physiological effects it produces and mechanism of action; any contraindications, side and adverse effects; any drug interactions that are clinically significant; and any precautions for the patient or themselves while working with clients taking the medication.
- Describe the anatomical and physiological organization of the autonomic nervous system; giving the aspects of autonomic nervous system function (molecular, biochemical & physiological) that can be pharmacologically manipulated for therapeutic treatment
- Identify and utilize the correct drug dosage formula for a given drug administration situation.
- Memorize and reproduce in writing, the vital components of the major drugs used in the NW Region of Arkansas

### **General Education Outcomes Supported**

- Students develop higher order thinking skills.
- Students demonstrate Information literacy.

### **Standard Practices**

#### **Topics**

The following aspects of most of the drugs used in NW Arkansas EMS agencies

- Medication safety
- Medication legislation
- Naming
- Classifications
- Schedules
- Pharmacokinetics
- Storage and security
- Autonomic pharmacology
- Metabolism and excretion
- Mechanism of action
- Phases of medication activity
- Medication response relationships
- Medication interactions
- Toxicity

#### **Required assessment**

Students will record all evaluated skills into the electronic record system used by the program. Number of each skill will need to be completed by the conclusion of the summer session.

#### **Grading Guidelines**

Grades will be derived by the chapter exams, and written drug exams.