Northwest Arkansas Community College
Standard Course Outline / Division of Health Professions

Course Name and Number
EMTP 1003 Paramedic Pharmacology and Parental Meds

Course Description :
The course presents an introduction to the fundamental principles of basic and clinical pharmacology at the molecular, cellular, organ and whole body levels. It will cover the biochemical and physiological basis for drug actions & effects, therapeutic uses and adverse reactions with emphasis on autonomic nervous system pharmacology. Drug classifications, methods of administration, and aspects of patient education are discussed. Drug calculations, drug memorization of specific emergency drugs are expected.

Prerequisite -

EMTA 1013 First Responder
EMTA 1008 EMT Basic

Admission into the Paramedic Program

Although not required prerequisites, it is of great benefit to the student to have completed the following courses prior to entering the paramedic program:

BIOL 2214 Anatomy and Physiology I
BIOL 2224 Anatomy and Physiology II
AHSC 1001 Medical Terminology

Credit Hours
Three (3) credit hour that may not be transferable to other institutions. 48 hours of classroom instruction with another 26 hours of lab time

Target Audience
This course is geared for the entry level paramedic student.

Student Learning Objectives:
Upon successful completion of this course, the student will be able to:

1. 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.
2. 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.
3. 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).
4. Identify and describe the differences in drug responses in pediatric and geriatric populations from the 'typical' adult.
5. 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.
6. 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
7. Identify and utilize the correct drug dosage formula for a given drug administration situation.
8. Properly administer drugs utlizing: Intramuscular, Intraveinous, Subcutaneous, Oral, Rectal, and intradermal routes.
9. Properly insert a foley catheter into a manikin
10. Properly insert an NG tube into a manikin
11. Properly insert an IV into a manikin and an actual patient

Topics:

Topics for this course include drug calculation, metric usage, drug administration techniques, NG tube insertion, Foley catherter insertion, Medication handling techniques.

Required assessment:

Students will be given both written and practical exams that will be used as part of grading.