

COURSE INFORMATION

COURSE PREFIX/NO: EMS 120
COURSE TITLE: PHARMACOLOGY
LECTURE HOURS/WEEK: 2
LAB HOURS/WEEK: 3
CREDIT HOURS: 3

[Distance Learning Attendance/VA Statement](#)
[Textbook Information](#)

COURSE DESCRIPTION

This course is a study of concepts related to the pharmacological actions of groups of drugs and includes the development of skills related to the administration of medications and intravenous therapy. Physiology of systems affected drug action is also included in the course.

COURSE COMPETENCIES

Upon successful completion of EMS 120, the student will be able to:

Module 1: Introduction to Prehospital Emergency Pharmacology

Section 1: General Information

Define common pharmacological terminology and abbreviations.

Explain the legal regulations that apply to drugs, including the scheduling of controlled substances.

Section 2: Pharmacokinetics and Pharmacodynamics

Define drug absorption, drug distribution, drug biotransformation, mechanisms of drug actions, and drug elimination.

Section 3: Administration of Drugs

Integrate the six rights of drug administration into the administration of medications to different age groups of patients.

Describe the advantages and disadvantages of different routes of drug administration.

Section 4: Drug Dosage Calculations

Solve a basic prehospital drug or fluid order word problem using ratio and proportion, cross multiplication, or formula method.

Section 5: Fluids, Electrolytes, and Intravenous Therapy

List the various fluid replacement products, intravenous (IV) and intraosseous (IO) devices, and fluid administration devices and describe the advantages and disadvantages of each for prehospital use.

Section 6: The Autonomic Nervous System

Describe the anatomy and physiology of the autonomic nervous system as it applies to prehospital medication administration.

Section 7: Drugs Used in the Treatment of Cardiovascular Emergencies

Describe and list the pharmacokinetics, indications, contraindications, and dosages for the common prehospital cardiovascular emergencies medications.

Section 8: Drugs Used in the Treatment of Respiratory Emergencies

Describe and list the pharmacokinetics, indications, contraindications, and dosages for the common prehospital respiratory emergencies medications.

Section 9: Drugs Used in the Treatment of Metabolic-Endocrine Emergencies

Describe and list the pharmacokinetics, indications, contraindications, and dosages for the common prehospital metabolic-endocrine emergencies medications.

Module 2: Prehospital Emergency Pharmacology

Section 10: Drugs Used in the Treatment of Neurological Emergencies

Describe and list the pharmacokinetics, indications, contraindications, and dosages for the common prehospital neurological emergencies medications.

Section 11: Drugs Used in the Treatment of OB/GYN Emergencies

Describe and list the pharmacokinetics, indications, contraindications, and dosages for the common prehospital OB/GYN emergencies medications.

Section 12: Toxicological Emergencies in Prehospital Care

Describe and list the pharmacokinetics, indications, contraindications, and dosages for the common prehospital toxicological emergencies medications.

Section 13: Drugs Used in the Treatment of Behavioral Emergencies

Describe and list the pharmacokinetics, indications, contraindications, and dosages for the common prehospital behavioral emergencies medications.

Section 14: Drugs Used in the Treatment of Gastrointestinal Emergencies

Describe and list the pharmacokinetics, indications, contraindications, and dosages for the common prehospital gastrointestinal emergencies medications.

Section 15: Drugs in Pain Management

Describe and list the pharmacokinetics, indications, contraindications, and dosages for the common prehospital pain management medications.

Section 16: Weapons of Mass Destruction

Describe and list the pharmacokinetics, indications, contraindications, and dosages for the common prehospital medications utilized in the event of the deployment of weapons of mass destruction.

COURSE REQUIREMENTS:

1. Students are expected to adhere to the policies regarding student conduct as stated in the current York Technical College Catalog and Handbook.
2. Students are responsible for attending all scheduled classes in EMS 120. Regular attendance and class participation are essential to student success in EMS 120. Students who are absent from scheduled classes/clinical for more than 10% of the scheduled hours will be withdrawn.
3. Students are responsible for all material covered and for completing all assignments.
4. Students must satisfactorily complete all required skill competencies.
5. Students must complete the pretest and posttest with a minimum score of 80%. **Students must have a MINIMUM SCORE OF 80% TO SUCCESSFULLY COMPLETE THIS COURSE!**

ATTENDANCE

This course is taught from the current NHTSA DOT Paramedic curriculum. Students are responsible for attending all scheduled classes in EMS 120. Students must attend a minimum of 90% of all scheduled activities. Students who are absent from scheduled classes/clinical for greater than 10% of the scheduled hours will be withdrawn

ACADEMIC INTEGRITY

Any student found guilty of cheating, dishonesty, or plagiarism will be given a grade of "0" on an exam or written work and will be subject to further disciplinary action. Plagiarism refers to "The act of appropriating the literary composition of another, on parts or passage of his writings, on the ideas or language of the same, and passing them off as the product of one's own mind."

METHODS OF INSTRUCTION

Lecture, assigned readings, audiovisuals, handouts, written assignments, discussion, demonstration, and lab experience.

MINIMAL STANDARDS

Attendance/Participation: Given a course outline, the student will attend and actively participate in a minimum of 90% of scheduled class sessions. All current SC DHEC EMS Division Policies and Procedures, and current NHTSA DOT Paramedic curriculum will apply to the EMT-P Training Program.

Performance: Upon completion of assigned readings, classroom presentations/demonstrations/practice, out-of-class activities, and other assigned course activities. The student will demonstrate all competencies as required by current SC DHEC EMS Division Policies and Procedures, and current NHTSA DOT Paramedic curriculum.

EVALUATION STRATEGIES/GRADING:

A. Lab/Clinical Component

Satisfactory completion of the following skill competencies:

Medication Administration	Chemstrip/Glucometer BGL Determination
Intravenous Access	External Jugular Cannulation
Intraosseous Access	Auto-injector Medication Administration

B. Theory Component

The final grade in EMS120 will be determined by averaging the scores on the following:

Quizzes/Homework	25%
Module Exams	75%
*Combination of above	100%

Must have a *MINIMUM SCORE OF 80% TO SUCCESSFULLY COMPLETE THIS COURSE!

Grading Scale for EMS 120

A	91-100%
B	86-90%
C	80-85%
D	70-79%
F	Below 69%

ENTRY-LEVEL SKILLS:

Students must be an Intermediate EMT prior to course and must be affiliated with an Emergency Medical Services (EMS) or Rescue Squad/Fire Department SC DHEC EMS Provider through course completion.

Students must maintain current SC DHEC EMS Division Intermediate EMT status through course completion.

Students must maintain current BCLS credential as per SC DHEC EMS Division through course completion.

Students must successfully complete ASSET or HOBET *prior to* entrance into course.

Students must meet all above criteria and must meet all requirements for function as an Emergency Medical Technician as outlined in the current Americans with Disabilities Act.

PREREQUISITES: Admission to York Technical College
Completion of Anatomy and Physiology as per SC DHEC EMS Policy
SC DHEC EMS Intermediate EMT

CO-REQUISITES: EMS 111, EMS 115, EMS 116, and EMS 220

Disabilities Statement: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Offices (SR) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.

Effective: Spring 2009