

SOUTHEAST COMMUNITY COLLEGE
HEALTH SCIENCES DIVISION
PARAMEDIC
Revision Date: 12/2023

I. CATALOG DESCRIPTION

Course Number: PARM 1121
Course Title: Pharmacology
Prerequisite(s): Enrollment in Paramedic program or by instructor approval.

Catalog Description: This course is a fundamental, drug-class oriented course that focuses on the pharmacodynamics and pharmacokinetics of drug therapy, drug calculations, and the pharmaceutical interventions of common EMS medications. The course will also cover roles and responsibilities and ethical considerations of drug administration, as well as acid-base imbalance.

Credit Hours: 3
Class Hours: 45
Lab Hours: 0
Total Contact Hours: 45

II. COURSE OBJECTIVES: *Course will:*

1. Provide students with drug pharmacokinetics and pharmacodynamics.
2. Prepare students to perform accurate drug calculations.
3. Review medicolegal concepts as they relate to drug administration.
4. Discuss various classes of medications that are used to treat medical conditions such as cardiac, respiratory, neurological and endocrine disorders.
5. Prepare students to perform appropriate medication administration via the intravenous, subcutaneous and intramuscular routes.
6. Introduce various toxicological substances encountered in the pre-hospital environment.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *Students will be able to:*

1. Research, write and present to the class a toxicological presentation.
2. Describe the techniques for successful medication administration via the intravenous, subcutaneous and intramuscular routes.
3. Demonstrate the ability to perform accurate and timely drug calculations.
4. Demonstrate understanding of didactic material by completing written examinations, quizzes, homework and projects with a cumulative score of $\geq 75\%$.
5. Demonstrate the professional traits as outlined in the *EMT Oath and Code of Conduct*.

B. GENERAL EDUCATION LEARNING OUTCOMES

GELO 3: Critical Thinking & Problem Solving

Outcome 2: Synthesize information to arrive at reasoned solutions to problems

1. The student will demonstrate the ability to create and/or solve scenarios given to them by the instructor formulating medication treatments including, doses, route of administration, action of medication and side effects

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

- A. Pharmacokinetics and pharmacodynamics
- B. Medication administration and medication math
- C. Fluids and electrolytes
- D. Cardiac pharmacology
- E. Respiratory pharmacology
- F. Endocrine pharmacology
- G. Neurological pharmacology
- H. Special considerations (pediatrics, geriatrics, pregnancy and renal dysfunction)
- I. Acid-base balance
- J. Toxicology

V. INSTRUCTIONAL MATERIALS

A. Required Text(s):

Bledsoe, B.E., Clayden, D. E. *Prehospital Emergency Pharmacology*, current ed., Upper Saddle River: Prentice Hall

B. Other Resources:

EMS Field Guide (latest edition)

Mosby's Drug Consult for Health Professions (or similar)

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Group discussion
3. Demonstrations

VII. METHODS OF EVALUATION

A. Methods of evaluation are provided in the Course Information Document (CID) found in the course canvas shell.

SCC STANDARD GRADING SCALE POLICY:

A+	95-100	C+	75-79
A	90-94	C	70-74
B+	85-89	D+	65-69
B	80-84	D	60-64
		F	Below 60

VIII. SPECIFIC COURSE REQUIREMENTS

- A.** Students must complete course with a score of Passing $\geq 75\%$ (C+) to continue in the Paramedic Program.
- B.** The expectations of students are to abide by the policies and procedures found within the CID and program handbook.