



Western Technical College

## 10531914 Advanced Prehospital Pharmacology

### Course Outcome Summary

#### Course Information

|                            |   |
|----------------------------|---|
| <b>Description</b>         | This course provides the paramedic student with the comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the overall health of the patient. |
| <b>Career Cluster</b>      | Law, Public Safety, Corrections and Security  |
| <b>Instructional Level</b> | Associate Degree Courses  |
| <b>Total Credits</b>       | 3   |
| <b>Total Hours</b>         | 72  |

#### Textbooks

*Bledsoe's Paramedic Care: Principles and Practice MyLab BRADY with Pearson eText -- Combo Access Card.* 6th Edition. Copyright 2023. Bledsoe, Bryan. Publisher: Pearson. **ISBN-13:** 978-0-13-766443-6. Required.

*Prehospital Emergency Pharmacology.* 8th Edition. Copyright 2019. Bledsoe, Bryan E. Publisher: Pearson. **ISBN-13:** 978-0-13-487409-8. Required.

*Basic Arrhythmias.* 8th Edition. Copyright 2017. Walraven, Gail. Publisher: Pearson. **ISBN-13:** 978-0-13-438099-5. Required.

*Platinum Planner: Paramedic – Student Access Card.* Copyright 2016. Platinum Educational Group. Publisher: Pearson. **ISBN-13:** 978-0-13-444223-5. Required.

[EMStesting.com](http://EMStesting.com): *Paramedic – Student Access Card.* Copyright 2012. Platinum Educational Group. Publisher: Pearson. **ISBN-13:** 978-0-13-289660-5. Required.

## Learner Supplies

Program Clothing. **Vendor:** To be discussed in class. Required.

## Success Abilities

1. Cultivate Passion: Expand a Growth-Mindset
2. Cultivate Passion: Increase Self-Awareness
3. Refine Professionalism: Improve Critical Thinking
4. Refine Professionalism: Participate Collaboratively
5. Refine Professionalism: Practice Effective Communication

## Program Outcomes

1. Integrate pathophysiological principles and assessment findings to provide appropriate patient care
2. Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters
3. Communicate effectively with others
4. Demonstrate professional behavior
5. Meet state and national competencies listed for paramedic certification(s)

## Course Competencies

### 1. Apply principles of emergency medicine pharmacology.

#### Assessment Strategies

- 1.1. Oral, Written or Graphic Assessment

#### Criteria

*Your performance will be successful when:*

- 1.1. you answer questions related to the learning objectives on a test
- 1.2. you achieve the threshold identified by your Training Center on the assessment

#### Learning Objectives

- 1.a. Describe the importance of medication safety in providing quality EMS care.
- 1.b. Describe legislative acts controlling drug use and abuse in the United States.
- 1.c. Differentiate between the chemical, generic (nonproprietary), official (USP), and trade (proprietary) names of a drug.
- 1.d. List authoritative sources of drug information.
- 1.e. List the classifications of drugs based upon either mechanism of action or the body system affected.
- 1.f. Differentiate between the substances included in Schedules I through V of the Controlled Substances Act.
- 1.g. Discuss factors affecting drug potency.
- 1.h. Discuss considerations for storing and securing medications and controlled substances.
- 1.i. List the phases of medication activity.
- 1.j. Describe various medication interactions.

- 1.k. Describe toxicity concerns regarding medication administration.
- 1.l. Define pertinent terms related to EMS utilization and administration of drugs.
- 1.m. List the four main sources of drug products.
- 1.n. List the physical forms of various drug products.
- 1.o. Discuss the process of pharmacokinetics and pharmacodynamics.
- 1.p. discuss standardization of drugs.
- 1.q. Describe how drugs are classified.

## **2. Examine medication administration.**

### **Assessment Strategies**

- 2.1. Oral, Written or Graphic Assessment

### **Criteria**

*Your performance will be successful when:*

- 2.1. you answer questions related to the learning objectives on a test
- 2.2. you achieve the threshold identified by your Training Center on the assessment

### **Learning Objectives**

- 2.a. Differentiate between the percutaneous and parenteral routes of medication administration.
- 2.b. Identify the six "rights" of drug administration.
- 2.c. Explain the proper technique for administering medications via various routes (including advantages and disadvantages associated with each route).
- 2.d. Explain the need for patient reassessment after medication administration.
- 2.e. Describe the need for proper documentation of medication administration activities.
- 2.f. Discuss physiological changes of aging that impact pharmacokinetics.
- 2.g. Discuss polypharmacy as related to aging.

## **3. Administer medication.**

### **Assessment Strategies**

- 3.1. Skill Demonstration

### **Criteria**

*Your performance will be successful when:*

- 3.1. you follow the published protocol provided by your Training Center

### **Learning Objectives**

- 3.a. Apply vascular access procedures.
- 3.b. Demonstrate proficiency in calculating drug dosages.
- 3.c. Apply appropriate use of pharmacology.
- 3.d. Administer medications.

## **4. Identify the properties of various emergency medicine drugs.**

### **Assessment Strategies**

- 4.1. Oral, Written or Graphic Assessment

### **Criteria**

*Your performance will be successful when:*

- 4.1. you answer questions related to the learning objectives on a test
- 4.2. you achieve the threshold identified by your Training Center on the assessment

### **Learning Objectives**

- 4.a. List the names, mechanism of action, indications, contraindications, complications, routes of administration, side effects, interactions, doses, and any specific administration considerations for medications and intravenous fluids available for administration within the Wisconsin paramedic scope of practice.