



## **Trauma Management (EMSP 1355)**

**Credit:** 3 semester credit hours (2 hours lecture, 2 hours lab)

**Prerequisite:** Submit a copy of a course completion certificate from an EMT-Basic Course or a copy of EMT-Basic certification.

**Co-requisite:** EMSP 1338, EMSP 1356, EMSP 1260, EMSP 1149.

### **Course Description**

A detailed study of the knowledge and skills in the assessment and management of patients with traumatic injuries.

### **Required Textbook and Materials**

1. EMS Program Student Handbook.
  - a. Nancy Caroline's Emergency Care in the Streets, 6<sup>th</sup> edition, **ISBN: 9780763764692**
2. Required Program Uniform
  - a. Program Uniform T-Shirt
  - b. EMT / Paramedic Pants (dark blue or black)
  - c. Conservative Black leather belt (no designs)
  - d. Black leather shoes or boots (not tennis shoes)
  - e. Stethoscope, Pen light, BP cuff, Trauma shears

### **Course Objectives<sup>1</sup>**

Upon completion of this course, the student will be able to:

1. Integrate the pathophysiological principles and assessment findings to formulate a field impression and implement the treatment plan for the trauma patient.

(SCANS: F1.5, F2.5, F3.5, F4.5, F5.5, F6.5, F7.5, F8.5, F9.5, F10.5, F11.5, F12.5, F13.5, F14.5, F15.5, F16.5, F17.5 C1.5, C2.5, C3.5, C4.5, C5.5, C6.5, C7.5, C8.5, C9.5, C10.5, C11.5, C12.5, C13.5, C14.5, C15.5, C16.5, C17.5, C18.5, C19.5, C20.5)

### **SCANS Skills and Competencies**

Beginning in the late 1980's, the U.S. Department of Labor Secretary's Commission on Achieving Necessary Skills (SCANS) conducted extensive research and interviews with business owners, union leaders, supervisors, and laborers in a wide variety of work settings to determine what knowledge workers needed in order to perform well on a job.

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<sup>1</sup> Curriculum based on Department of Transportation National Standard Curriculum

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### Course Syllabi

In 1991 the Commission announced its findings in *What Work Requires in Schools*. In its research, the Commission determined that “workplace know-how” consists of two elements: foundation skills and workplace competencies.

### **Course Outline**

- I. Welcome to LIT EMS Program
  - A. Introduction of EMS Staff, Instructors and students
  - B. EMS program policies
  - C. Registering an account with JB Course Manager
- II. Introduction to advanced pre-hospital care
  - A. Roles and responsibilities to advanced pre-hospital care
  - B. Medical legalities and ethical issues in advanced pre-hospital care
- III. The Human Body
  - A. Major human body systems (anatomy and physiology)
- IV. General Histology
  - A. Anatomy and Physiology at the cellular level.
- V. Acid based balance
  - A. Blood Gases
- VI. Respiratory Acidosis
  - A. Signs, symptoms and treatment
  - B. Range of blood gas values
  - C. Scenario training with patients in respiratory acidosis.
- VII. Respiratory Alkalosis
  - A. Signs, symptoms and treatment
  - B. Range of blood gas values
  - C. Scenario training with patients in respiratory alkalosis
- VIII. Metabolic Acidosis
  - A. Signs, symptoms and treatment
  - B. Range of blood gas values
  - C. Scenario training with patients in metabolic acidosis
- IX. Metabolic Alkalosis
  - A. Signs, symptoms and treatment
  - B. Range of blood gas values
  - C. Scenario training with patients in metabolic alkalosis
- X. General overview of pathophysiology
  - A. Respiratory diseases and the effects on body’s functions.
  - B. Cardiovascular diseases and the effects on the body’s functions.
  - C. Endocrine diseases and the effects on the body’s functions.
- XI. General principles of Pharmacology
  - A. Origin of medications
  - B. Classifications of medications
  - C. 50, Thiamine, Narcan
- XII. Intraosseous Infusion
  - A. Intraosseous skills practice and instruction.
  - B. Different types of Intraosseous infusion equipment and insertion techniques.
- XIII. Medical Mathematics
  - A. Drug calculations on dosages.

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- B. IV infusion rates
- XIV. Airway Management & Ventilation
  - A. Endotracheal Intubation techniques
  - B. Intubation skills practice
  - C. Caponography
- XV. Therapeutic Communications
  - A. Scenarios
- XVI. Trauma and Trauma Systems
  - A. Blunt Trauma / Penetrating Trauma
  - B. Hemorrhage & Shock
  - C. Burns/Musculoskeletal trauma
  - D. Head, face, neck and spinal trauma
  - E. Thoracic and abdominal trauma.

### **Grade Scale**

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

### **Course Evaluation**

Final grades will be calculated according to the following criteria:

- |                        |     |
|------------------------|-----|
| 1. Major Exams         | 40% |
| 2. Quizzes             | 20% |
| 3. Professionalism     | 20% |
| 4. Comprehensive Final | 20% |

### **Course Requirements**

1. Accountability for all classroom hours of instruction, as required by the Texas Department of State Health Services EMS Regulator.
2. Must maintain a minimum of 75% course average, as required by the Texas Department of State Health Services EMS Regulator.
3. Must pass all practical skills exams, as required by the Texas Department of State Health Services EMS Regulator.

### **Course Policies**

1. Student must be in the proper class uniform.
2. Attendance Policy. Texas Department of State Health Services Bureau of EMS makes the student accountable for all rotation requirements. If you miss any classroom hours then it is the student's responsibility to contact the lead instructor to see how the hours can be rescheduled, or made up.

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3. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an 'F' in the course.
4. Additional class policies as defined by the EMS Program Student handbook.

### **Disabilities Statement**

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building.

### **Course Schedule**

<b>Week</b>	<b>Topic</b>	<b>Reference</b>
Week 1	Course introduction and policies	Ch 1 - 3
Week 2	The Human Body	Ch 4
Week 3	Acid Base Balance	Ch 5
Week 4	Alkalosis and Acidosis	Ch 6 -7
Week 5	Pathophysiology	Ch 8
Week 6	General Pharmacology	Ch 9
Week 7	IV Therapy	Ch 10
Week 8	IV Therapy	Ch 10
Week 9	Medical Mathematics	Ch 11
Week 10	Medical Mathematics	Ch 11
Week 11	Airway Management & Ventilation	Ch 12
Week 12	Airway Management & Ventilation	Ch 12
Week 13	Hemorrhage & Shock	Ch 13-16
Week 14	Head & Neck Trauma	Ch17-20
Week 15	Chest & Abdominal Trauma	Ch 21-24
Week 16	Finals Week	