

**CENTRAL TEXAS COLLEGE
SYLLABUS FOR EMSP 1271 SPORTS AND PHYSICAL TRAINING INJURIES**

Semester Hours Credit: 2

INSTRUCTOR:

OFFICE HOURS:

I. INTRODUCTION

- A. A thirty-two contact hour course for the pre-hospital care provider emphasizing musculoskeletal injuries incurred during physical activity. The course is designed to build upon and extend the knowledge gained by pre-hospital care providers during an EMT-B certification course, or similar training. To this aim the course focuses on the anatomy and physiology of the musculoskeletal system, the mechanics of human movement, and the study of commonly sustained musculoskeletal injuries.**
- B. The course is meant to advance the capability of pre-hospital care providers at the EMT-B level to deal with musculoskeletal injuries. The course will begin with the study of the components of the musculoskeletal system, an introduction to biomechanics, and then focus on musculoskeletal injuries region by region of the body.**
- C. This course is occupationally related and it may be used for continuing education credit to maintain certification in the field of Emergency Medical Technology at the Basic level.**
- D. Prerequisite: EMSP 1401/1160, or EMT-B licensure, or other training in pre-hospital medical care.**

II. LEARNING OUTCOMES

Upon successful completion of this course, EMSP 1291 Special Topics in EMT/Sports and Physical Training Injuries, the student will:

- A. Define the components of the musculoskeletal system. (C6, C7, F6)**
- B. Describe the function of the components of the musculoskeletal system. C6, C7, F6)**

- C. Define the terms fracture, dislocation, sprain, and strain. (C6, C7, F6)
- D. Relate mechanism of injury to commonly sustained fractures, dislocations, sprains, and strains. (C5, C6, C7, F6)
- E. List the signs and symptoms of fractures, dislocations, sprains, and strains. (C7, F2, F6)
- F. Given a patient with a specific musculoskeletal injury, describe the treatment rendered by the EMT-B the in the pre-hospital setting. (C5, C7, F2, F5, F6, F9)
- G. Given a simulated patient with a specific musculoskeletal injury, perform the treatment rendered by the EMT-B the in the pre-hospital setting. (C7, C18, C19, F6, F8, F9, F13, F17)
- H. List the two major categories of risk factors for sports injuries. (C7, F2, F6)
- I. Describe the major factors considered in the modification of common risk factors for sports injuries. (C6, F2, F6)

III. INSTRUCTIONAL MATERIALS

- A. Required Text: R. Pfeiffer and B. Magnus, Concepts of Athletic Training, Jones and Bartlett, Fourth Edition (076374820X)

IV. COURSE REQUIREMENTS:

- A. The course material is delivered through lecture, demonstration, and hands-on practice with students expected to actively participate. There will be a midterm and a final written exam.
- B. Students cannot miss any class sessions. Any missed class sessions must be made up well before the final exam. Excessive absenteeism may/will result in the student being asked to drop the class, or getting an F for the course.

NOTE: CTC Attendance Policy

The following statements are from the Central Texas College Student Handbook: “Students are required to attend regularly, all classes in which they enrolled. Students are required to be in class on time.”

“Absences from classes, for any reason, must not exceed College standards. Students may be administratively withdrawn from any

class when their absences exceed a total of four class meetings in a long semester, three class meetings for an eleven-week, eight-week semester, or for a six-week semester, and in the opinion of the instructor, they cannot satisfactorily complete the course. The final decision rest solely with the instructor.”

V. EXAMINATIONS

There will be one mid-term and one final written exam that will determine the letter grade the student obtains for the course.

VI. SEMESTER GRADE COMPUTATIONS

The grading scale is as follows:

A 90-100
B 80-89.9
C 70-79.9
D 60-69.9
F 0-59.9

VII. NOTES AND ADDITIONAL INSTRUCTIONS FROM THE INSTRUCTOR

- A. **Course Withdrawal:** It is the student’s responsibility to officially withdraw from a course if circumstances prevent attendance. Any student who desires to, or must, officially withdraw from a course after the first scheduled class meeting must file a Central Texas College Application for Withdrawal (CTC Form 59). The withdrawal form must be signed by the student.

CTC Form 59 will be accepted at any time prior to Friday of the 12th week of classes during the 16-week fall and spring semesters. The deadline for sessions of other lengths is:

10-week session Friday of the 8th week
8-week session Friday of the 6th week
5-week session Friday of the 4th week

The equivalent date (75% of the semester) will be used for sessions of other lengths. The specific last day to withdraw is published each semester in the Schedule Bulletin.

A student who officially withdraws will be awarded the grade of “W” provided the student’s attendance and academic performance are satisfactory at the time of official withdrawal. Students must file a

withdrawal application with the College before they may be considered for withdrawal.

A student may not withdraw from a class for which the instructor has previously issued the student a grade of “F” or “FN” for nonattendance.

- B. **Administrative Withdrawal:** An administrative withdrawal may be initiated when the student fails to meet College attendance requirements. The instructor will assign the appropriate grade on CTC Form 59 for submission to the registrar.
- C. **Incomplete Grade:** The College catalog states, “An incomplete grade may be given in those cases where the student has completed the majority of the coursework but, because of personal illness, death in the immediate family, or military orders, the student is unable to complete the requirements for a course.” Prior approval from the instructor is required before the grade of “I” for Incomplete is recorded. A student who merely fails to show for the final examination will receive a zero for the final and an “F” for the course.
- D. **Cellular Phones and Beepers:** Cellular phones and beepers will be turned off while the student is in the classroom or laboratory.
- E. **American’s With Disabilities Act (ADA):** Students requiring accommodations for disabilities are responsible for notifying the instructor. Reasonable accommodations will be granted in full compliance with federal and state law and Central Texas College policy.
- F. **Instructor Discretion:** The instructor reserves the right of final decision in course requirements.
- G. **Civility:** Individuals are expected to be cognizant of what a constructive educational experience is and respectful of those participating in a learning environment. Failure to do so can result in disciplinary action up to and including expulsion.

VIII. COURSE OUTLINE

- A. **Lesson One:** Anatomy and physiology of the musculoskeletal system.
 - 1. **Learning Outcomes:** Upon successful completion of this lesson, the student will:
 - a. List the components of the musculoskeletal system.

- b. List the function of each component of the musculoskeletal system.
- 2. **Learning Activities:**
 - a. View audio-visual aids and models of the musculoskeletal system. (C5, F6)
- 3. **Equipment and Materials:**
 - a. Computer-projector set-up.
 - b. Instructor-prepared handouts.
 - c. Model of the musculoskeletal system.
- 4. **Audio-Visual Aids:**
 - a. Instructor's Tool Kit Concepts of Athletic Training CD ISBN: 0-7637-0716-3
- 5. **Lesson Outline:**
 - a. Anatomy of the skeletal system.
 - b. Physiology of the skeletal system.
 - c. Anatomy of the muscular system.
 - d. Physiology of the muscular system.

B. Lesson Two: The Concept of Sports Injury

- 1. **Learning outcomes:** Upon successful completion of this lesson, the student will:
 - a. Define the various sprain degrees
 - b. Define the various strain degrees
 - c. Define a contusion
 - d. Define a fracture
 - e. Define a dislocation
 - f. List five signs and symptoms of a sprain
 - g. List five signs and symptoms of a strain
 - h. List five signs and symptoms of a fracture
 - i. List five signs and symptoms of dislocation
 - j. Give one example of an injury which may be sustained in each of the following sports: tackle football, basketball, baseball, wrestling, volleyball, and soccer
- 2. **Learning activities**
 - a. View audio-visual aids or material of sports injuries. (C5, C6, F1, F5)
 - b. Practice assessment of musculoskeletal injuries on moulaged, simulated patients. (C7, F8, F9, C18, C19)
- 3. **Equipment and Materials:**
 - a. Computer-projector set-up.
 - b. Instructor-prepared handouts.
 - c. Moulage kit.
- 4. **Audio-Visual Aids:**
 - a. Instructor's Tool Kit CD ISBN: 0-7637-1265-5

5. Lesson Outline:

- a. Definition of Sports Injury
- b. Injury classification
- c. Injury recognition
- d. Epidemiology of Sports injuries
- e. Classification of Sports
- f. Examples of Sports injuries

C. Lesson Three: The Injury Process

1. Learning outcomes: Upon successful completion of this lesson, the student will:

- a. List the mechanical forces of injury
- b. Relate the mechanics of human movement to injury
- c. List the phases of healing following an injury to the musculoskeletal system
- e. List short and long term intervention procedures following a sport injury.

2. Learning activities

- a. View audiovisual material depicting movements, forces, and possible injuries. (**C5, F5**)
- b. Practice pre-hospital treatment of sports injuries. (**C7, C18, C19, F8, F9**)

3. Equipment and Materials:

- a. Computer-projector set-up.
- b. Instructor-prepared handouts
- c. Locally used equipment for the treatment of musculoskeletal injuries

4. Audio-Visual Aids:

- a. Instructor's Tool Kit CD ISBN: 0-7637-1265-5

5. Lesson Outline:

- a. The physics of sport injury
- b. The Mechanical forces of injury
- c. The physiology of sports injury
- d. Pain and acute injury
- e. Intervention procedures.

D. Lesson Four: Injuries to the Head, Neck, and Face.

1. Learning outcomes: Upon successful completion of this lesson, the student will:

- a. Define a concussion
- b. List the types of intracranial injuries
- c. Define the second impact syndrome
- d. List the signs and symptoms of a concussion
- e. List the signs and symptoms of an intracranial injury
- f. Describe the pre-hospital treatment of a head injury

- g. Provide pre-hospital treatment to a simulated patients with a head injury
- h. Relate mechanical forces to types of spine injuries
- i. List the possible signs and symptoms of a spinal injury
- j. Describe the pre-hospital treatment of a spinal injury
- k. Provide pre-hospital treatment to a simulated patient with a spinal injury
- l. Relate facial injuries to the ocular and respiratory systems
- m. Describe the pre-hospital care of facial injuries
- n. Provide pre-hospital treatment to a simulated patient with facial injuries.

2. **Learning activities**

- a. View audiovisual material depicting head, neck, and face injuries. **(C5, F5)**
- b.- Practice pre-hospital treatment of simulated patients with head, neck, and facial injuries. **(C7, C18, C19, F8, F9)**

3. **Equipment and Materials:**

- a. Computer-projector set-up.
- b. Instructor-prepared handouts
- c. Locally used equipment for the treatment of musculoskeletal injuries

4. **Audio-Visual Aids:**

- a. Instructor's Tool Kit CD ISBN: 0-7637-1265-5

E. **Lesson Five: Injuries to the Spine.**

1. **Learning outcomes:** Upon successful completion of this lesson, the student will:

- a. Describe the possible effects of vertebral fractures on the nervous system
- b. Describe the possible effects of intervertebral disc injuries on the nervous system
- c. Relate mechanical forces to fractures and other injuries of the vertebrae
- d. List the signs and symptoms of a vertebral fracture.
- e. Provide pre-hospital care to a simulated patient with a vertebral injury

2. **Learning activities**

- a. View audiovisual material depicting spinal injuries. **(C5, F5)**
- b. Practice pre-hospital treatment of spinal injuries on simulated patients. **(C7, C18, C19, F8, F9)**

3. **Equipment and Materials:**

- a. Computer-projector set-up.
- b. Instructor-prepared handouts
- c. Locally used equipment for the treatment of musculoskeletal injuries

4. Audio-Visual Aids:

a. Instructor's Tool Kit CD ISBN: 0-7637-1265-5

F. Lesson Six: Injuries to the Extremities.

1. **Learning outcomes:** Upon successful completion of this lesson, the student will:

- a. List the common sports injuries affecting the shoulder
- b. Provide pre-hospital care to a simulated patient with a shoulder injury
- c. List the common sports injuries affecting the upper extremity
- d. Provide pre-hospital care to a simulated patient with simulated upper extremity injury
- e. List examples of common sports injuries affecting the pelvis
- f. Provide pre-hospital care to a simulated patient with a pelvic injury
- g. Provide examples of sports injuries affecting the femur
- h. Provide pre-hospital care to a simulated patient with femur fracture
- i. Provide examples of sports injuries affecting the lower leg and foot
- j. Provide pre-hospital treatment to a simulated patient with lower leg and foot injuries

2. **Learning activities**

- a. View audiovisual material depicting extremity injuries. (**C5, F5**)
- b. Practice pre-hospital treatment of extremity injuries on simulated patients. (**C7, C18, C19, F8, F9**)

3. **Equipment and Materials:**

- a. Computer-projector set-up.
- b. Instructor-prepared handouts
- c. Locally used equipment for the treatment of musculoskeletal injuries

4. **Audio-Visual Aids:**

a. Instructor's Tool Kit CD ISBN: 0-7637-1265-5

G. Lesson Seven: Sports Injury Prevention.

1. **Learning outcomes:** Upon successful completion of this lesson, the student will:

- a. Define the two general categories of risk factors for injuries during physical activity
- b. List the risk factors within each general risk category
- c. Provide examples of intervention strategies for the prevention of sports injuries

2. **Learning activities**

a. Discuss specific intervention strategies for the prevention of injuries that may be sustained in specific sports and types of physical activity (**C7, C15, C18, C19 F1, F5, F6, F8, F9, F12**)

3. **Equipment and Materials:**

a. Computer-projector set-up.

b. Instructor-prepared handouts

4. **Audio-Visual Aids:**

a. Instructor's Tool Kit CD ISBN: 0-7637-1265-5