TAFT COLLEGE
West Kern Community College District

Reviewed by:	J. Fariss
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Health Education (HLED) 1535 Emergency Medical Technician (5.5 Units) CSU
[formerly Health Education 30; Health Education 1530]

Prerequisite: 18 years of age by end of course

Advisory: Eligibility for English 1000 and Reading 1005 strongly recommended

Total Hours: 48 hours lecture; 112 hours lab**;** (160 hours total)

Catalog Description: This course provides the skills and assessment techniques needed to care for an ill or injured person in the pre-hospital setting. It follows the National Emergency Medical Services Education Standards and prepares the student for the National Registry Emergency Medical Technician Exam. Completion of this course with an 80% is required for admittance to the National Registry Emergency Medical Technician Exam. Repeat as necessary for State EMS regulations. In order to be certified, a student must be 18 years of age by the end of this course.

Type of Class/Course: Degree Credit

Text: Limmer, Daniel and Michael F. O'Keefe. *Emergency Care*. 12th ed. Upper Saddle River: Pearson. 2012, Print.

Limmer, Daniel and Michael F. O'Keefe. *Workbook Emergency Care*. 12th ed. Upper Saddle River: Pearson, 2012. Print.

Course Objectives:

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

1. demonstrate comprehension of assessment techniques for ill and injured people in the pre-hospital setting**,**
2. demonstrate life-saving skills**,**
3. describe the basic roles and structures of body cells,
4. describe conditions that can threaten cardiopulmonary function,
5. describe the respiratory system and the importance of oxygenation and ventilation**,**
6. describe the physical and psychological characteristics, including normal vital signs, for individuals in all stages of life**,**
7. use knowledge of physical, physiological, and psychosocial development to anticipate the needs and concerns of patients of all ages**,**
8. describe the generic and common trade names; indications; contraindications; side effects and untoward effects; forms; routes of administration for each medication you may administer or assist a patient in self-administering**,**
9. know the basic human anatomy and physiology pertaining to each unit, and
10. have increased mastery of vocabulary by learning the correct medical terminology for each unit.

Course Scope and Content: (Lecture)

Unit I Introduction EMT-1

A. Role and Responsibilities
   1. Professionalism
   2. Responsibility to patient
   3. Legal aspects
B. EMS System Overview
   1. State and local
   2. Job description
      a. Functions of the EMT

Unit II Anatomy, Physiology and Patient Assessment

A. Terms
   1. Overview of medical terminology including anatomical terms
B. Human Systems
   1. Skeletal System
   2. Body Cavities
   3. Muscular System
   4. Circulatory System
   5. Respiratory System
   6. Digestive System
   7. Urinary System
   8. Endocrine System
   9. Reproductive System
   10. The Nervous System
   11. The Eye
   12. The Ear
C. Patient Assessment

   1. Approaching the patient and the scene
   2. Signs, symptoms and mechanism of injury
   3. Scene control
   4. Primary Survey
      a. Airway, breathing and circulation
      b. Diagnostic signs
   5. Secondary survey
      a. Head to toe survey
      b. Further diagnostic signs
   6. Physical application of skills
D. Pathophysiology

   1. Composition of Ambient Air
   2. Patency of the Airway
   3. Respiratory Compromise
   4. Alteration in Regulation of Respiration Due to Medical or Traumatic Conditions
   5. Ventilation/Perfusion (V/Q) Ratio and Mismatch

6. Perfusion and Shock
7. Microcirculation
8. Blood Pressure
9. Alteration of Cell Metabolism

E. Principles of Pharmacology

1. Medication safety
2. Kinds of Medications used in an Emergency
3. Basic Medication Terminology
4. Medication Administration

Unit III Basic Life Support

A. Understanding and evaluating the respiratory system
B. Assessment and diagnostic signs
C. Positioning
   1. Physical application of skills
D. Rescue breathing
   1. Obstructed airway overview
E. Ventilation equipment and oxygen therapy
   1. Airway adjuncts
   2. Suction
   3. Oxygen equipment and administration
F. Control of bleeding
   1. Understanding and evaluation of the circulatory system
   2. Management and emergency care
      a. Internal bleeding
      b. External bleeding
      c. Nosebleeds
   3. Physical application of skills
G. Shock
   1. Physiology
   2. Causes
   3. Types
   4. Stages
   5. Diagnostic signs
   6. Patient assessment
   7. Management and emergency care
   8. Prevention
   9. M.A.S.T. use and application
   10. Physical application of skills

Unit IV Wounds and Fractures

A. Soft tissue injuries
   1. Types
   2. Assessment
   3. Emergency care
   4. Physical application of skills
B. Clamping and penetrating injuries
   1. Types

2. Assessment
3. Emergency care
4. Physical application of skills

C. Musculoskeletal injuries
1. Anatomy
2. Assessment
3. Types
4. Management and emergency care
5. Equipment
6. Physical application of skills

D. Head injuries
1. The nervous system
2. Physiology of brain injury
3. History, assessment and diagnostic signs
   a. physical
   b. neurological
4. Types
5. Management and emergency care
6. Physical application of skills

E. Injuries to the spine
1. Anatomy
2. Mechanisms of injury
3. Assessment and diagnostic signs
4. Management and emergency care
5. Equipment
6. Physical application of skills

F. Injuries to the eye
1. Assessment
2. Types
3. Emergency care
4. Physical application of skills

G. Injuries to the face and throat
1. Assessment
2. Types
3. Emergency care
4. Physical application of skills

H. Injuries to the chest
1. Anatomy
2. Types
3. Assessment and diagnostic signs
4. Management and emergency care
5. Physical application of skills

I. Injuries of the abdomen and genitalia
1. Anatomy
2. Types
3. Assessment and diagnostic signs
4. Management and emergency care
5. Physical application of skills

J. Farm injuries
1. Nature and causes
2. Types

3. Management and emergency care

Unit V Medical Emergencies

A. Poisoning emergencies
   1. Types
   2. Assessment and diagnostic signs
   3. Management and emergency care
B. Drug and alcohol emergencies
   1. Terminology
   2. Assessment and diagnostic signs
   3. Management and emergency care
   4. Physical application of skills
C. Bites and stings
   1. Types
      a. Poisonous
   2. Assessment and diagnostic skills
   3. Management and emergency care
   4. Physical application of skills
D. Cardiac emergencies
   1. Anatomy and physiology
      a. Risk factors
   2. Types
   3. Assessment and diagnostic skills
   4. Management and emergency care
   5. Physical application of skills
E. Stroke
   1. Causes
   2. Assessment and diagnostic skills
   3. Management and emergency care
F. Respiratory emergencies
   1. Types
   2. Assessment and diagnostic skills
   3. Management and emergency care
   4. Physical application of skills
G. Diabetic emergencies
   1. Causes
   2. Types
   3. Assessment and diagnostic skills
   4. Management and emergency care
H. Acute abdominal distress and related emergencies
   1. Causes
   2. Assessment and diagnostic skills
   3. Special examination procedures
   4. Management and emergency care
   5. Physical application of skills
I. Epilepsy, dizziness, and fainting
   1. Seizures and epilepsy
      a. Causes
      b. Types
   2. Dizziness, fainting and unconsciousness

3. Management and emergency care

J. Infectious disease control
1. Identification and types
2. Aseptic techniques
a. Precautions

Unit VI Pediatric, Geriatric and Childbirth

A. Pediatric emergencies
1. Management
a. Parent
b. Child
2. History, assessment and diagnostic signs
3. Trauma
4. Common emergencies
5. Emergency care
6. Transportation
7. Physical application of skills

B. Geriatric emergencies
1. How body systems change with age
2. History and assessment
3. Special considerations
a. Trauma
b. Medical
4. Physical application of skills

C. Childbirth and related emergencies
1. Normal pregnancy and stages of labor
2. Managing the obstetrics call
3. Emergency delivery
a. complications
4. Evaluation and care of the newborn
a. complications
5. Pregnancy and trauma
6. Equipment
7. Physical applications of skills

D. Life Span Development
1. Infancy (Birth to 1 Year)
2. Toddler (12 to 36 Months) and Preschool Age (3 to 5)
3. School-Age Children (6 to 12 Years)
4. Adolescence (13 to 18 Years)
5. Early Adulthood (20 to 40 Years)
6. Middle Adulthood (41 to 60 Years)
7. Late Adulthood (61 Years and Older)

Unit VII Environmental Emergencies

A. Burn emergencies
1. Types
2. Degrees
3. Rule of nines

4. Burn management
5. Assessment and diagnostic skills
6. Emergency care
7. Physical application of skills

B. Hazardous material emergencies
1. Identification
2. General procedures
3. Radiation
   a. Types
4. Scene management

C. Heat and cold emergencies
1. How the body adjusts
2. Hyperthermia
3. Hypothermia
4. Assessment and diagnostic skills
5. Management and emergency care
6. Physical application of skills

D. Water emergencies
1. Drowning and near drowning
2. Diving emergencies
3. Management and emergency care
4. Physical application of skills

Unit VIII Psychological Emergencies

A. Psychological emergencies
1. Principles
2. Emotional responses
3. Family, friends and bystanders
4. Special communication needs
5. Management and emergency care
6. Stress and burnout

B. Crisis intervention
1. Types
   a. emotional
   b. hostile
2. Management
   a. scene
   b. patient
   c. family
   d. friends

Unit IX Patient Packaging and Triage

A. Emergency moves
1. Types
2. Guidelines
3. Lifts and carries
4. Positions

B. Triage

C. Disaster management

1. What is a disaster
2. Phases
3. Developing a plan
4. Communications
5. Psychological impact
6. Stress

Unit X Stabilization and Transportation

A. Vehicle stabilization
   1. Principles
   2. Equipment
   3. Management
      a. Scene
      b. Rescuers
B. Patient extrication
   1. Access
   2. Stabilization and immobilization
   3. Removal
   4. Special situations
   5. Physical application of skills
C. Overview of ambulance operations
   *CPR--8 hours
   *Observe Emergency Department--8 hours
   *Observe Ambulance--8 hours

Unit XI Communications

A. Overview of Communications
B. Patient Report Form

Course Scope and Content: (Laboratory)

Unit I Roles and Responsibilities

A. Professionalism

Unit II Assessment

A. Vital Signs
B. Scene Size Up
C. Initial Assessment
D. Focused Assessment
E. Rapid Trauma Assessment
F. Rapid Medical Assessment
G. On Going Assessment

Unit III Basic Life Support

A. Airway Adjuncts

B. Suction
C. Oxygen equipment and administration
D. Control of Bleeding

Unit IV Wounds and Fractures

A. Bandaging
B. Splinting
C. Hare Traction Splint

Unit V Medical Emergencies

A. Poisonings
B. Drug and Alcohol
C. Bites and Stings
D. Cardiac
E. Stroke
F. Respiratory
G. Diabetic
H. Acute Abdomen
I. Epilepsy – Dizziness – Fainting
J. Infectious Disease Control

Unit VI Environmental Emergencies

A. Burn Management

Unit VII Patient Packaging and Triage

A. Lifting and Moving
B. Triage

Unit VIII Stabilization and Transportation

A. Patient Extrication
B. Spinal Immobilization (Kendrick Extrication Device)
C. Spinal Immobilization (Long Backboard)
D. CPR
E. Clinical Participation (Off Site Observation)

All laboratory components are hands-on activities that support the learning goals of this course. Utilizing principles presented in lecture, students will perform several techniques utilized by Emergency Medical Technicians.

Learning Activities Required Outside of Class:

The students in this class will spend a minimum of 6 hours per week outside of regular class time doing the following:

1. Skills Syllabus - Review of procedures as assigned

2. Design a written plan for emergency medical care for a group of ten people involved in a serious accident. Describe the injuries, triage procedures and transportation problems that need to be addressed. Add a bibliography to support your decisions.

Methods of Instruction:

1. Lecture and discussion periods (8 hours per week)
2. Demonstrations
3. Hands on Skills

Methods of Evaluation:

1. The course primarily involves skill demonstrations and problem solving
   a. Computational or non-computational problem-solving demonstrations including exams, quizzes and field work
   b. Skill demonstrations, including class performance(s), field work, and skills performance exam(s)
   c. Objective examinations, including multiple choice, and true/false

Laboratory Category: Extensive Laboratory

Pre delivery criteria: All of the following criteria are met by this lab.

1. Curriculum development for each lab.
2. Published schedule of individual laboratory activities.
3. Published laboratory activity objectives.
4. Published methods of evaluation.
5. Supervision of equipment maintenance, laboratory setup, and acquisition of lab materials and supplies.

During laboratory activity of the laboratory: All of the following criteria are met by this lab.

1. Instructor is physically present in lab when students are performing lab activities.
2. Instructor is responsible for active facilitation of laboratory learning.
3. Instructor is responsible for active delivery of curriculum.
4. Instructor is required for safety and mentoring of lab activities.
5. Instructor is responsible for presentation of significant evaluation.

Post laboratory activity of the laboratory: All of the following criteria are met by this lab.

1. Instructor is responsible for personal evaluation of significant student outcomes (lab exercises, exams, practicals, notebooks, portfolios, etc.) that become a component of the student grade that cover the majority of lab exercises performed during the course.
2. Instructor is responsible for supervision of laboratory clean up of equipment and materials.