

EMC 130A Course Outline as of Fall 2015**CATALOG INFORMATION**

Dept and Nbr: EMC 130A Title: PARAMEDIC I

Full Title: Paramedic I - Introduction to Advanced Pre-hospital Care

Last Reviewed: 9/26/2022

Units	Course Hours per Week		Nbr of Weeks		Course Hours Total	
Maximum	12.00	Lecture Scheduled	10.00	17.5	Lecture Scheduled	175.00
Minimum	12.00	Lab Scheduled	6.00	10	Lab Scheduled	105.00
		Contact DHR	0		Contact DHR	0
		Contact Total	16.00		Contact Total	280.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 350.00

Total Student Learning Hours: 630.00

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:

First course in a series leading to the completion of paramedic didactic training. Emphasis is on preparatory, airway management, patient assessment and pharmacology in the pre-hospital environment. Meets standards for both the California Health and Safety Code, Title 22 regulations and the National Emergency Medical Services Education Standards (NEMSES) as published by U.S. Department of Transportation (DOT).

Prerequisites/Corequisites:

Course Completion of EMC 109 and EMC 114 and ANAT 40 OR Course Completion of EMC 109 and EMC 114 and ANAT 58. (Students must successfully complete each prior course in the sequence to avoid having to repeat the entire sequence)

Recommended Preparation:

Eligibility for ENGL 100 or ESL 100 and Course Completion of CSKLS 372 and EMC 105

Limits on Enrollment:

Valid California EMT Certificate; Current Cardiopulmonary Resuscitation for Health Care Providers (CPR-HCP); Ability to lift, carry and balance in excess of 125 pounds. Required immunizations in accordance with standard health care guidelines. Background screening mandated by federal and state regulations. California Department of Motor Vehicle Medical Examiner's certificate.

Schedule of Classes Information:

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Transfer Credit:

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:
IGETC:	Transfer Area	Effective:	Inactive:
CSU Transfer:		Effective:	Inactive:
UC Transfer:		Effective:	Inactive:

CID:

Certificate/Major Applicable:

Both Certificate and Major Applicable

COURSE CONTENT

Outcomes and Objectives:

1. Demonstrate skills required of the Emergency Medical Technician (EMT).
2. Integrate knowledge of the EMS system, the safety and well-being of the paramedic, medical-legal and ethical issues as it relates to self-care, care of patients and the community.
3. Discuss principles of public health and epidemiology as it relates to health emergencies, health promotion and illness and injury prevention.
4. Demonstrate written communication skills as required to function as a paramedic.
5. Demonstrate verbal communication skills that are culturally sensitive and intended to improve patient outcomes.
6. Discuss methodology of the collection and reporting of data used for epidemiological and research purposes.
7. Integrate knowledge of anatomy and physiology as it relates to the understanding of illness and injury.

8. Integrate scene and patient assessment findings to develop strategies to form a field impression through clinical reasoning.
9. Demonstrate completing an organized patient assessment utilizing hands on techniques and monitoring devices.
10. Discuss and demonstrate knowledge of basic and advanced airway management.
11. Discuss pathophysiology of adult respiratory illnesses.
12. Develop treatment plans and demonstrate management for a patient with a respiratory emergency.
13. Discuss the basic concepts of pharmacology to include legislation, drug classifications and review of physiology.
14. Define a list of key terms that pertain to pharmacology.
15. List and differentiate the concepts of drug activity, including pharmacokinetic and pharmacodynamic phases.
16. Describe the classifications, indications, contraindications, side effects, dosages and routes of administration for medications commonly administered by paramedics.
17. Discuss the specific anatomy and physiology pertinent to medication administration.
18. Describe and demonstrate indications, techniques, equipment needed, precautions and general principles pertaining to peripheral venous, intraosseous, and external jugular cannulation.
19. Review mathematical equivalents and discuss formulas as a basis for performing drug calculations.
20. Synthesize a pharmacologic management plan including medication administration.
21. Define the characteristics of the immune response.
22. Describe the inflammation response and its systemic manifestations.
23. Describe the assessment and management of a patient suspected or identified as having an infectious communicable disease.
24. Discuss the anatomy, physiology, and pathophysiology of the cardiovascular system as it relates to hypoperfusion and shock states.

Topics and Scope:

- I. History of Emergency Medical Services (EMS)
 - a. Prior to WWII
 - b. 1960-1980
 - c. 1990 to present
- II. EMS systems
 - a. Components
 - b. Medical direction
- III. Professionalism of EMS Personnel
 - a. Roles and responsibilities
 - b. Leadership/affective characteristics
 - c. Credentialing/licensing
 - d. Ethics
 - e. Continuing Education (CE)
 - f. Research
- IV. Skills Review of Emergency Medical Technician
 - a. Gurney operation
 - b. National Registry skills
- V. Workforce Safety and Wellness
 - a. Personal protective equipment
 - b. Stress management
 - c. Body dynamics

- d. Transportation equipment
- e. Principles of wellness
- f. Principles of public health
- VI. EMS Communication System
 - a. System components
 - b. Verbal
 - c. Written
 - d. Radio protocol
- VII. Therapeutic Communication
 - a. Interpersonal
 - b. Interview techniques
 - c. Difficult patients
- VIII. Medical Legal Issues
 - a. Consent and refusal of care
 - b. Types of consent
 - c. Confidentiality
 - d. Advanced directives
 - e. Tort and criminal actions
 - f. Statutory responsibilities
 - g. Mandatory reporting
 - h. Patient rights and advocacy
- IX. Review of Anatomy and Physiology
 - a. Medical terminology
 - b. Cellular and organ organization
 - c. Review of systems
- X. Airway Management
 - a. Basic adjuncts and techniques
 - b. Respiratory anatomy and physiology
 - c. Advanced adjuncts and techniques
- XI. Patient Assessment
 - a. Scene management
 - b. History taking
 - c. Physical exam techniques
 - d. Monitoring devices
- XII. Respiratory Emergencies
 - a. Review anatomy and physiology
 - b. Pathophysiology
 - c. Treatment and management
- XIII. Introduction to Pharmacology
 - a. Legislation
 - b. Classifications
 - c. Terminology
- XIV. Pharmacological Concepts
 - a. Pharmacokinetics
 - b. Pharmacodynamics
- XV. Medication Administration
 - a. Routes
 - b. Calculations
 - c. Techniques
 - d. Scope of practice medications
- XVI. Immunology
 - a. Pathophysiology

- b. Immune and inflammation response
- c. Allergic reaction/anaphylaxis
- XVII. Infectious Diseases
 - a. Modes of transmission and prevention
 - b. Recognition and management of specific diseases
 - c. Public health concerns
- XVIII. Shock
 - a. Fluids and electrolytes
 - b. Acid/base
 - c. Physiology and pathophysiology
 - d. Types of shock
 - e. Management

Assignment:

1. Reading 50-80 pages per week
2. Memorization of 15-20 treatment protocols
3. Memorization of 20-40 drug monographs
4. Demonstration of 20-40 skills (airway, medication administration, patient assessment)
5. 1-5 group projects
6. 5-10 patient care reports
7. 10-20 quizzes
8. 10-15 group scenarios
9. 2-4 substantive written examinations
10. 2-4 substantive skills performance examinations
11. Title 22 state mandated attendance

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Technical report writing (patient care reports)

Writing
5 - 10%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Group scenarios involving team leadership

Problem solving
10 - 20%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Including oral dynamic and static skills demonstration

Skill Demonstrations
30 - 40%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes, short answers, multiple choice, substantive exams

Exams
30 - 40%

Other: Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation

Other Category 15 - 25%

Representative Textbooks and Materials:

Prehospital Emergency Pharmacology (6th Ed). B. Bledsoe. Prentice Hall : 2005

Paramedic Care -5 (3rd). B. Bledsoe. Prentice Hall: 2008

Drug Reference for EMS Providers (3rd). R. Beck. Delmar: 2003

ALS Version EMS Field Guide (19th). Infor Med: 2011

Instructor prepared materials