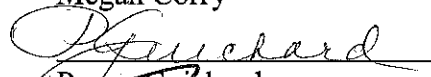


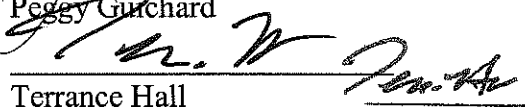
City College of San Francisco
Course Outline of Record

I. GENERAL DESCRIPTION

- A. Approval Date October 2013
B. Department Health Care Technology
C. Course Number EMTP 123
D. Course Title Trauma Emergencies
E. Course Outline Preparer(s) Megan Corry
F. Department Chairperson


Peggy Guichard

- G. Dean


Terrance Hall

Terry Hall, Dean
John Adams Campus/
College of Health & P.E.

II. COURSE SPECIFICS

- A. Hours Lecture – 52 total
Conference – 20 total
B. Units 4
C. Prerequisites Acceptance into Paramedic Program
Corequisites None
Advisories None
D. Course Justification The course content reflects the material outlined in the National EMS Education Standards.
E. Field Trips No
F. Method of Grading Letter
G. Repeatability 0

III. CATALOG DESCRIPTION

Pathophysiology, assessment and management of trauma emergencies in the field. Basic and advanced management principles and continuum of trauma care. Focus on prehospital and definitive management of patients with shock as the result of traumatic injury.

IV. MAJOR LEARNING OUTCOMES

Upon completion of this course a student will be able to:

- A. Integrate assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a treatment plan for an acutely injured patient.
- B. Analyze injury patterns based upon epidemiology mechanism of injury, and patient risk factors,
- C. Predict injury severity based upon clinical examination findings, mechanism of injury and organ system affected.
- D. Perform a rapid trauma assessment on a simulated critical trauma patient and a focused history and physical examination on a simulated stable trauma patient consistent with the current national standards for paramedics.
- E. Demonstrate proper basic and advanced life support management of critical and stable trauma patients within the scope of practice of a paramedic.
- F. Apply knowledge of pathophysiology of hemorrhagic shock to simulated patient scenarios and the clinical condition of the patient.

- G. Demonstrate foundational knowledge of the pathophysiology, differential clinical findings and treatment guidelines of various internal and external injuries to the head, face, neck, chest, abdomen, back and extremities.

V. CONTENTS

A. Introduction to Trauma Care

1. History of Trauma Care
 - a. Epidemiology
 - b. Current Trends
 - c. Phases of Trauma Care
2. Mechanism of Injury
 - a. Blunt trauma
 - b. Penetrating trauma
3. Kinematics of Traumatic Injury
4. Trauma Center Triage Criteria
 - a. Physiologic criteria
 - b. Anatomic criteria
 - c. Mechanism of injury criteria

B. Hemorrhage and Shock

1. External versus internal hemorrhage
2. Physiologic response to hemorrhage and shock
3. Capillary-cellular relationship in shock
4. Classifications of Shock
 - a. Hypovolemic
 - b. Cardiogenic
 - c. Septic
 - d. Neurogenic
 - e. Anaphylactic
5. Compensated, uncompensated and irreversible shock
6. Differential shock assessment findings
7. Key principles in shock management

C. Soft Tissue Injuries

1. Review of anatomy and pathophysiology of soft tissue
2. Inflammatory response
3. Types of wounds
4. Wound healing
5. Principles in management of soft tissue injuries
 - a. Bleeding control
 - b. Dressings and bandaging
 - c. Shock management
6. Special circumstances
 - a. Compartment syndrome
 - b. Crush injury and syndrome

D. Burn Injury

1. Incidence, sources and patterns of burn injury
2. Classification of burns

- a. Depth and extent of burn
 - b. Rule of nines, Lund and Browder Chart
 - c. Burn center criteria
- 3. Pathophysiology of burn shock
- 4. Principles of burn management
 - a. Airway considerations
 - b. Fluid replacement
 - c. Dressings and infection prevention
 - d. Body temperature maintenance
- 5. Special circumstances
 - a. Inhalation of toxins
 - b. Chemical burns and radiation injury
 - c. Electrical burns and lightning injury
- E. Head, Neck and Facial Trauma
 - 1. Maxillofacial trauma
 - 2. Eye, ear and dental trauma
 - 3. Anterior neck trauma
 - 4. Head trauma
 - a. Traumatic brain injury (TBI)
 - b. Skull fractures
 - c. Diffuse axonal injury classification
 - d. Intracranial hemorrhage classification by location
 - e. Intracranial pressure and cerebral blood flow
 - f. Injury rating systems: Glasgow coma scale and Revised trauma scores
 - g. Assessment and management principles of traumatic brain injury
- F. Spinal Trauma
 - 1. Review of spinal anatomy and physiology
 - 2. General assessment and determining the need for immobilization
 - 3. Classifications of spinal injury
 - 4. Spinal cord transections and lesions
 - 5. Evaluation and assessment of spinal cord injury (SCI)
 - 6. General management of spinal injury
 - 7. Neurogenic shock and spinal shock
- G. Musculoskeletal Trauma
 - 1. Review of musculoskeletal anatomy and physiology
 - 2. Classifications of musculoskeletal injuries
 - 3. Inflammatory and degenerative conditions
 - 4. Evaluation and assessment of musculoskeletal trauma
 - 5. Management of musculoskeletal trauma
- H. Thoracic Trauma
 - 1. Skeletal trauma
 - 2. Pulmonary injury
 - 3. Heart and great vessel injury
 - 4. Aortic rupture and dissection
 - 5. Other thoracic injury
 - 6. Evaluation and assessment of thoracic trauma

7. Management of thoracic trauma
- I. Abdominal Trauma
 1. Mechanisms and types of abdominal injury
 2. Solid versus hollow organ injury
 3. Peritoneal, retroperitoneal and pelvic organ injury
 4. Evaluation and assessment of abdominal trauma
 5. Management of abdominal trauma
- J. Trauma Case Review

VI. INSTRUCTIONAL METHODOLOGY

A. Assignments

1. In-class Assignments

- a. Trauma case review: Students will review written patient case scenarios in small group discussions. Cases will be based upon prehospital emergency care scenarios that involve patients with blunt and/or penetrating traumatic injuries. The focus is on problem-solving by using treatment protocols and policies that govern EMS care at the local and state level to guide prehospital management and transport destination decision-making.
- b. Trauma simulations: Students will participate in teams on realistic trauma patient simulations. Students will perform roles of responders, patients/actors, hospital personnel, and evaluators and rotate through each role in various simulations. Each student must complete a minimum of two written peer evaluations on the performance of the responder team on a trauma simulation.

2. Out-of-class Assignments

- a. Chapter reading from the textbooks as assigned on the course syllabus to be completed before the class session.
- b. Online assignments:
 1. Review of posted slides and quizzes.
 2. Take online multiple-choice quizzes associated with each Chapter before coming to class.
 3. Forum discussion: participate in message board discussion related to topics discussed in class as method of continuous study and peer-guided learning.

B. Evaluation

1. In class assignments (simulation evaluation forms, case review summaries) will be awarded points based upon completion and accuracy of content.
2. Written examinations including multiple choice, true/false, and short answer critical thinking questions within each topic area, designed to assess foundational knowledge, application and analytical skills in the cognitive domain.
 - a. In class quizzes: Weekly quizzes to assess the cognitive skills on subject matter discussed in previous week of class
 - b. Comprehensive final examination covering all assigned chapters and additional materials provided by the instructor.

3. Online participation: grading for quality of discussion on forum and completion of online quizzes by deadline.
- C. Textbooks and other instructional materials
1. Mosby's Paramedic Textbook, revised 3rd edition. Mosby/Elsevier publishing, St. Louis, Missouri, 2007.
 2. Handouts provided by the instructor of case studies and updated materials from EMS standards and guidelines on trauma care.
 3. Insight Learning Management System (Moodle), City College of San Francisco, 2011.

VII. TITLE 5 CLASSIFICATION

CREDIT/DEGREE APPLICABLE (meets all standards of Title 5. Section 55002(a)).