Course Number and Title: EMT 215 Trauma Emergencies

Campus Location:
Dover

Effective Date:
2018-51

Prerequisite:
EMT 202, EMT 203, EMT 211, EMT 217

Co-Requisites:
EMT 213, EMT 227

Course Credits and Hours:
2.00 credits
2.00 lecture hours/week
0.00 lab hours/week

Course Description:
A comprehensive course that covers the pathophysiology, assessment, and management of patients who experience traumatic injuries.

Required Text(s):
Obtain current textbook information by viewing the campus bookstore - https://www.dtcc.edu/bookstores online or visit a campus bookstore. Check your course schedule for the course number and section.

Additional Materials:
none

Schedule Type:
Classroom Course

Disclaimer:
All students must be able to access the Internet and know how to retrieve information from the Learning Management System on the DTCC web page.

Core Course Performance Objectives (CCPOs):

1. Formulate an approach for management of trauma patients integrating mechanism of trauma, Kinematics, and trauma system structure. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4 5, 6)
2. Formulate a pre-hospital impression and implement treatment plans for patients exhibiting signs and symptoms consistent with hemorrhage or shock, integrating pathophysiologic principles and assessment findings. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4, 5, 6)
3. Formulate a pre-hospital impression and implement treatment plans for patients with soft tissue injuries, integrating pathophysiologic principles and assessment findings. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4, 5, 6)
4. Formulate a pre-hospital impression and implement treatment plans for patients with burns, integrating pathophysiologic principles and assessment findings. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4, 5, 6)
5. Formulate a pre-hospital impression and implement treatment plans for patients with head and facial trauma, integrating pathophysiologic principles, and assessment findings. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4, 5, 6)
6. Formulate a pre-hospital impression and implement treatment plans for patients with spinal trauma, integrating pathophysiologic principles and assessment findings. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4, 5, 6)
7. Formulate a pre-hospital impression and implement treatment plans for patients with thoracic trauma, integrating pathophysiologic principles and assessment findings. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4, 5, 6)
8. Formulate a pre-hospital impression and implement treatment plans for patients with abdominal trauma, integrating pathophysiologic principles and assessment findings. (CCC 1, 2, 3, 4, 5, 6; PGC 1, 2, 3, 4, 5, 6)
9. Formulate a pre-hospital impression and implement treatment plans for patients with musculoskeletal injuries, integrating pathophysiologic principles and assessment findings. (CCC-1, 2, 3, 4, 5, 6; PGC-1, 2, 3, 4, 5, 6)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):
Upon completion of this course, the student will:

1. Formulate an approach for management of trauma patients integrating mechanism of trauma, soft tissue injuries: contusion, hematoma, crush injuries, abrasions, lacerations, major kinematics and trauma system structure.
    1. Identify components of a trauma system.
    2. Identify criteria for transport to a trauma center.

3. Describe the role of injury prevention in trauma care.
4. Describe the laws of energy and motion as they apply to kinematics.
5. Describe the kinematics of: blunt, penetrating, motor vehicle crash, motorcycle crash, pedestrian, fall, sports and blast injuries and describe the pathologies and specific injuries associated with each.

2. Formulate a prehospital impression and implement treatment plans for patients exhibiting signs and symptoms consistent with hemorrhage or shock, integrating pathophysiologic principles and assessment findings.
    1. Review anatomy and physiology of cardiovascular system.
    2. Identify common pathologic events resulting from hemorrhage and shock.
    3. Formulate management plans for internal and external hemorrhage.
    4. Differentiate between compensated and decompensated shock.
    5. Develop management plan incorporating equipment and techniques commonly used to assess and manage a variety of patient presentations involving internal and external hemorrhage, compensated shock and decompensated shock.
3. Formulate a pre-hospital impression and implement treatment plans for patients with soft tissue injuries, integrating pathophysiologic principles and assessment findings.
    1. Review the anatomy and physiology of the integumentary system.
    2. Review the pathology of wound healing.
    3. Identify assessment findings and management techniques associated with the following arterial lacerations, avulsions, impaled objects, amputations, incisions, crush injuries, blast injuries.
    4. Review assessment of patients with hemorrhage.
    5. Identify rationale for placing life threats ahead of soft tissue injuries during patient care.
    6. Develop management plan incorporating equipment and techniques commonly used to assess and manage a variety of patient presentations with soft tissue injuries.
4. Formulate a pre-hospital impression and implement treatment plans for patients with burns, integrating pathophysiologic principles and assessment findings.
    1. Review anatomy and physiology pertinent to burn injuries.
    2. Differentiate classifications of burn injuries.
    3. Use techniques such as “Rule of 9s” and “Rule of Palms” to determine body surface area burn involvement.
    4. Identify anatomic, pathologic, assessment, and treatment considerations for the following types of burns: thermal, inhalation, chemical, electrical and radiation.
    5. Formulate plan incorporating equipment and techniques commonly used to assess and manage a variety of patient presentations with burn injuries.
5. Formulate a pre-hospital impression and implement treatment plans for patients with head and facial trauma, integrating pathophysiologic principles, and assessment findings.
    1. Review anatomy and physiology related to head and facial trauma.
    2. Identify types of injuries and related mechanisms associated with head and facial trauma.
    3. Identify anatomic, pathologic, assessment, and treatment considerations for the following types of head and facial trauma: eye injuries, ear injuries, nose injuries, throat injuries, oral injuries and cranial injuries.
    4. Analyze assessment findings in order to formulate management plans for patients with the following head injuries: concussion, diffuse axonal injury, contusion, epidural hematoma, subdural hematoma, intracerebral hemorrhage and subarachnoid hemorrhage.
    5. Formulate plan incorporating equipment and techniques commonly used to assess and manage a variety of patient presentations with head and facial injuries.
6. Formulate a prehospital impression and implement treatment plans for patients with spinal trauma, integrating pathophysiologic principles and assessment findings.
    1. Review anatomy and physiology of the spine and associated structures.
    2. Identify types of injuries and related mechanisms associated with spinal trauma.
    3. Identify signs, symptoms and pathophysiology associated with the following conditions or presentations: spinal shock, neurogenic shock, quadriplegia and paraplegia, central cord syndrome, anterior cord syndrome, Brown-Sequard syndrome, low back pain and herniated intervertebral disk injury.
    4. Analyze assessment findings to formulate management plans incorporating equipment and techniques commonly used to manage a patient with spinal trauma. trauma, integrating pathophysiologic principles and assessment findings.
7. Formulate a pre-hospital impression and implement treatment plans for patients with thoracic trauma, integrating pathophysiologic principles and assessment findings.
    1. Review anatomy and physiology of the thorax and associated structures.
    2. Identify types of injuries and related mechanisms associated with thoracic trauma.
    3. Identify signs, symptoms and pathophysiology associated with the following conditions or presentations: rib fracture, flail segment, sternal fracture, simple pneumothorax, tension pneumothorax, hemothorax, hemopneumothorax, pulmonary contusion, pericardial tamponade, myocardial contusion, myocardial rupture, major vessel trauma, esophageal injury, tracheal-bronchial injury and traumatic asphyxia.
    4. Analyze assessment findings in order to formulate a management plan for incorporating equipment and techniques commonly used to manage patients with thoracic trauma.
8. Formulate a prehospital impression and implement treatment plans for patients with abdominal trauma, integrating pathophysiologic principles and assessment findings.
    1. Review anatomy and physiology of the abdomen and associated structures.
    2. Identify types of injuries and related mechanisms associated with abdominal trauma.
    3. Identify signs, symptoms and pathophysiology associated with the following injuries or presentations: solid organ injuries, hollow organ injuries, vascular injuries, pelvic fractures and other related abdominal injuries.
    4. Analyze assessment findings in order to formulate a management plan for incorporating equipment and techniques commonly

used to manage patients with abdominal trauma.

9. Formulate a prehospital impression and implement treatment plans for patients with musculoskeletal injuries, integrating pathophysiologic principles and assessment findings.
    1. Review anatomy and physiology of the musculoskeletal system and associated structures.
    2. Identify types of injuries and related mechanisms associated with musculoskeletal trauma.
    3. Identify signs, symptoms and pathophysiology associated with the following injuries or presentations: fractures, dislocations, sprains and strains.
    4. Analyze assessment findings in order to formulate a management plan for incorporating equipment and techniques commonly used to manage patients with musculoskeletal trauma. Demonstrate use of equipment and techniques commonly used to assess and manage a variety of patient presentations or scenarios that contain signs and symptoms consistent with a variety of musculoskeletal injuries.

Evaluation Criteria/Policies:
Students must demonstrate proficiency on all CCPOs at a minimal 75 percent level to successfully complete the course. The grade will be determined using the Delaware Tech grading system:

92	–	100	=	A
83	–	91	=	B
75	–	82	=	C
0	–	74	=	F

Students should refer to the Student Handbook - https://www.dtcc.edu/handbook for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):

1. Perform all psychomotor, paramedic skills in the National Emergency Medical Services Education Standards consistent with acceptable practice for an entry-level paramedic.
2. Conduct complete, accurate and timely patient assessments, to include history and physical exam, and communicate findings.
3. Interpret assessment findings in order to accurately identify a differential diagnosis and integrate pathophysiologic principles and legal responsibilities to formulate a treatment plan.
4. Effectively perform the role of Team Leader to include: timely decision making, effective resource utilization, implementing appropriate plan of action for a given situation, adapting the plan to changing conditions and communicate.
5. Assess a scene or situation in order to identify threats to operating safely.
6. Apply communication and ethical decision-making skills required for an entry-level paramedic.
7. Exhibit professional, affective behavior.
8. Function effectively as an entry-level paramedic in the pre-hospital working environment in the roles of Team Leader and Team Member.

Disabilities Support Statement:
The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the disabilities services - https://www.dtcc.edu/disabilitysupport web page or visit the campus Advising Center.