DATE OF LAST REVIEW: 02/2013

CIP CODE: 51.0904

SEMESTER: Departmental Syllabus

COURSE TITLE: Paramedic Concepts II

COURSE NUMBER: EMTC0228

CREDIT HOURS: 8

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

EMAIL: Departmental Syllabus

KCKCC-issued email accounts are the official means for electronically communicating with our students

PREREQUISITES: EMTC0227

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckccbookstore.com for the required text for your particular class

COURSE DESCRIPTION:
In this course the student will learn to identify, assess, and manage illnesses and injuries involving the following body systems:
- Respiratory
- Cardiovascular
- Endocrine
- Genitourinary
- Reproductive

Within the body systems, specific attention is given to the following topics:
- Acute Abdomen
- Anaphylaxis
- Toxicology
- Alcoholism and Drug Abuse
- Infectious Diseases
- Environmental Concerns
- OB/GYN
- Behavioral

Although this class covers the entire lifespan, special attention will be given to the geriatric and pediatric populations.

METHOD OF INSTRUCTION:
A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

Online Sections: Online courses rely on the use of the Internet and a course management

COURSE OUTLINE:
Per DOT National Standard Curriculum and Kansas Board of EMS requirements the following topics will be explored:

I. Trauma Systems
   A. Trauma center designation
   B. Transport decisions

II. Hemorrhage & Shock
   A. Clotting
   B. Hemorrhage assessment
   C. Stages of shock
   D. Shock assessment and management

III. Soft Tissue Trauma
   A. Pathophysiology of soft-tissue injury
   B. Dressing and bandage materials
   C. Assessment of soft-tissue injuries
   D. Management of soft-tissue injuries

IV. Burns
   A. Pathophysiology of burns
   B. Assessment of thermal burns
   C. Management of thermal burns
   D. Assessment and management of electrical, chemical, and radiation burns

V. Head, Facial, & Neck Trauma
   A. Pathophysiology of head, facial, and neck trauma
   B. Assessment of head, facial, and neck trauma
   C. Management of head, facial, and neck trauma

VI. Spinal Trauma
   A. Pathophysiology of spinal injury
   B. Assessment of spinal injury
   C. Management of spinal injury

VII. Thoracic Trauma
   A. Pathophysiology of thoracic trauma
   B. Assessment of thoracic trauma
   C. Management of thoracic trauma

VIII. Abdominal Trauma
   A. Pathophysiology of abdominal trauma
   B. Assessment of abdominal trauma
   C. Management of abdominal trauma

IX. Musculoskeletal Trauma
   A. Pathophysiology of musculoskeletal trauma
   B. Assessment of musculoskeletal trauma
   C. Management of musculoskeletal trauma

X. Blunt Trauma
   A. Kinetics of blunt trauma
   B. Blunt trauma

XI. Penetrating Trauma
   A. Physics of penetrating trauma
B. Specific tissue/organ injuries
C. Special concerns with penetrating trauma

XII. Shock Trauma Resuscitation
A. Pathophysiology of shock trauma resuscitation
B. Trauma critical care concepts

XIII. Pulmonology
A. Pathophysiology
B. Assessment of the respiratory system
C. Management of respiratory disorders
D. Specific respiratory diseases

XIV. Cardiology
A. Review of cardiovascular anatomy and physiology
B. ECG monitoring
C. Dysrhythmias
D. Assessment and management of the cardiovascular patient

XV. Neurology
A. Pathophysiology
B. General assessment findings
C. Management of specific nervous system emergencies

XVI. Endocrinology
A. Pathophysiology
B. Endocrine disorders and emergencies

XVII. Allergies & Anaphylaxis
A. Pathophysiology
B. Assessment findings in anaphylaxis
C. Management of anaphylaxis
D. Assessment findings in allergic reaction
E. Management of allergic reaction

XVIII. Gastroenterology
A. General pathophysiology, assessment, and treatment
B. Specific illnesses

EXPECTED LEARNER OUTCOMES:
1. The student will demonstrate a thorough understanding of trauma and its effects on the body.
2. The student will, given a specific traumatic injury, correctly manage the problem.
3. The student will demonstrate an understanding of the basic pathophysiology of pulmonary and cardiovascular emergencies.
4. The student will demonstrate knowledge of assessment and management of neurological emergencies.
5. The student will demonstrate knowledge of the commonly encountered endocrine disorders.
6. The student will demonstrate knowledge of the body’s reaction to various allergens.
7. The student will demonstrate an understanding of the mostly commonly encountered gastrointestinal issues.

COURSE COMPETENCIES:
The student will demonstrate a thorough understanding of trauma and its effects of the body.
1. The student will describe the criteria for transport to a trauma center.
2. The student will describe the criteria and procedure for air medical transport.
3. The student will define energy and force as they relate to trauma.
4. The student will describe each type of impact and its effect on unrestrained victims (e.g., “down and under”, “up and over”, compression, deceleration).
5. The student will describe the kinematics of penetrating injuries.
6. The student will list the motion and energy considerations of mechanisms other than motor vehicle crashes.
7. The student will define the role of kinematics as an additional tool for patient assessment.
8. The student will describe the epidemiology, including the morbidity/ mortality and prevention strategies, for shock and hemorrhage.
9. The student will predict shock and hemorrhage based on mechanism of injury.
10. The student will discuss the treatment plan and management of hemorrhage and shock
11. The student will differentiate between the administration rate and amount of IV fluid in a patient with controlled versus uncontrolled hemorrhage.
12. The student will describe the incidence, morbidity, and mortality of shock.
13. The student will relate orthostatic vital sign changes to perfusion status.
14. The student will discuss the assessment findings associated with decompensated shock.
15. The student will develop, execute and evaluate a treatment plan based on the field impression for the hemorrhage or shock patient.

The student will, given a specific traumatic injury, correctly manage the problem.

16. The student will demonstrate the assessment and management of a patient with signs and symptoms of external hemorrhage.
17. The student will demonstrate the management and management of a patient with signs and symptoms of internal hemorrhage.
18. The student will discuss the assessment findings associated with closed soft tissue injuries.
19. The student will discuss the management of a patient with a blast injury.
20. The student will describe the anatomy and physiology pertinent to burn injuries.
21. The student will identify and describe methods for determining body surface area percentage of a burn injury including the "rules of nines," the "rules of palms," and other methods described by local protocol.
22. The student will differentiate criteria for determining the severity of a burn injury between a pediatric patient and an adult patient.
23. The student will discuss conditions associated with burn injuries, including trauma, blast injuries, airway compromise, respiratory compromise, and child abuse.
24. The student will describe the pathophysiology of an electrical burn injury.
25. The student will value the changes of a patient's self-image associated with a burn injury.
26. The student will perform management of an inhalation burn injury, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
27. The student will perform management of a radiation exposure, including airway and ventilation, circulation, pharmacological, non-pharmacological, transport considerations, psychological support/ communication strategies, and other management described by local protocol.
28. The student will predict other injuries commonly associated with facial injuries based on mechanism of injury.
29. The student will describe the assessment findings associated with spinal injuries.
30. The student will demonstrate a clinical assessment to determine the proper management modality for a patient with a suspected non-traumatic spinal injury.
31. The student will demonstrate documentation of assessment after spinal immobilization.
32. The student will discuss the pathophysiology of thoracic injuries.
33. The student will identify the need for rapid intervention and transport of the patient with myocardial injuries.
34. The student will discuss the pathophysiology of traumatic asphyxia.
35. The student will value the implications of failing to properly diagnose thoracic trauma.
36. The student will demonstrate the following techniques of management for thoracic injuries: needle decompression, fracture stabilization, elective intubation, ECG monitoring, and oxygenation and ventilation.
37. The student will describe the management of abdominal injuries.
38. The student will formulate a field impression based upon the assessment findings for a patient
39. The student will demonstrate the proper use of PASG in a patient with suspected pelvic fracture.
40. The student will list the six "P"s of musculoskeletal injury assessment.

The student will demonstrate an understanding of the basic pathophysiology of pulmonary and cardiovascular emergencies.

41. The student will identify the epidemiology, anatomy, physiology, pathophysiology, assessment findings, and management for the following respiratory diseases and conditions: adult respiratory distress syndrome, bronchial asthma, chronic bronchitis, emphysema, pneumonia, pulmonary edema, pulmonary embolism, lung neoplasms, upper respiratory infections, spontaneous pneumothorax, and hyperventilation syndrome.
42. The student will describe the anatomy of the heart, including the position in the thoracic cavity, layers of the heart, chambers of the heart, and location and function of cardiac valves.
43. The student will describe the clinical significance of Starling's law.
44. The student will describe the process of differentiating wide QRS complex tachycardias.
45. The student will explain what each setting and indicator on a transcutaneous pacing system represents and how the settings may be adjusted.
46. The student will describe the epidemiology, morbidity and mortality, and pathophysiology of angina pectoris.
47. The student will identify what is meant by the OPQRST of chest pain assessment.
48. The student will describe the epidemiology, morbidity and mortality of myocardial infarction.
49. The student will describe the physiological effects of heart failure.
50. The student will list the mechanisms by which cardiac tamponade may be produced by traumatic and non-traumatic events.
51. The student will define the term "hypertensive emergency".
52. The student will develop, execute, and evaluate a treatment plan based on field impression for the patient in need of a pacemaker.

The student will demonstrate knowledge of assessment and management of neurological emergencies.

53. The student will discuss the pathophysiology of seizures.
54. The student will perform an appropriate assessment of a patient with coma or altered mental status.
55. The student will relate syncope to a neurological issue.

The student will demonstrate knowledge of the commonly encountered endocrine disorders.

56. The student will discuss the management of diabetic emergencies.
57. The student will discuss the management of Cushing’s syndrome.
58. The student will explain the condition called a “thyroid storm”.

The student will demonstrate knowledge of the body’s reaction to various allergens.

59. The student will differentiate manifestations of an allergic reaction from anaphylaxis.
60. The student will develop a treatment plan based on field impression in the patient with allergic reaction and anaphylaxis.

The student will demonstrate an understanding of the most commonly encountered gastrointestinal issues.

61. The student will discuss the signs and symptoms of local inflammation relative to acute abdominal pain.
62. The student will discuss the signs and symptoms of peritoneal inflammation relative to acute abdominal pain.
63. The student will discuss the pathophysiology of acute gastroenteritis.
64. The student will discuss the pathophysiology and signs and symptoms of appendicitis.

ASSESSMENT OF LEARNER OUTCOMES:
Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

**SPECIAL NOTES:**

This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

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