I. Basic Course Information

A. Course Number and Title: FITN 206 Acute Care of Illness & Injury

B. New or Modified Course: New

C. Date of Proposal: Semester: Fall Year: 2018

D. Effective Term: Spring 2019

E. Sponsoring Department: Health Science Education

F. Semester Credit Hours: 3

G. Weekly Contact Hours: Lecture: 2
Laboratory: 2
Out of class student work per week: 5

H. Prerequisites: FITN 123 – Prevention & Care of Athletic Injuries

I. Laboratory Fees: Yes

J. Name and Telephone Number or E-Mail Address of Department Chair and Divisional Dean at time of approval:
Beryl Stetson, beryl.stetson@raritanval.edu, 908 526-1200 x8208
Terence Lynn, Terence.lynn@raritanval.edu, 908 526-1200 x8512

II. Catalog Description

**Prerequisites: FITN 123 – Prevention & Care of Athletic Injuries**

This course is designed to introduce students to acute management skills for common injuries and illnesses experienced by athletes and the active population. Students will learn to evaluate and stabilize an athlete in a variety of emergency situations, including: catastrophic injury to the head and neck; cessation of breathing and circulation; shock; concussion; general medical emergencies; heat and cold illnesses; internal injuries; and other life threatening or serious injury. Course includes certification on first aid, CPR for the professional rescuer and AED use. A fee is collected to cover the costs incurred for certification from the American Red Cross.
III. Statement of Course Need

This course is designed to introduce the student to the recognition and care of acute injuries that are common to the active individual. Students will learn skills needed to evaluate, treat and stabilize athletes in a variety of emergency situations. Upon completion of this course students will earn certifications in First Aid, CPR for the Professional Rescuer and AED.

A. There is no lab with this course.

B. Please describe the transferability of this course.
   1. This course generally transfers as an Exercise Science/Athletic Training program requirement.
   2. This course generally transfers as a Health Science program elective.

IV. Place of Course in College Curriculum

A. Free Elective
B. This course meets a program requirement for the Associate Degree in Exercise Science Option in Sports Medicine & Rehabilitation.
C. To see course transferability: a) for New Jersey schools, go to the NJ Transfer website, www.njtransfer.org; b) for all other colleges and universities, go to the individual websites.

V. Outline of Course Content

COURSE OBJECTIVES (Athletic Training Education Competencies 5th Ed., NATA):
After reviewing previously learned concepts and skills, students will demonstrate their ability to use appropriate clinical reasoning during selected case based scenarios. Specifically, students will be able to:

Prevention and Health Promotion
1. Explain the principles of environmental illness prevention programs to include acclimation and conditioning, fluid and electrolyte replacement requirements, proper practice and competition attire, hydration status, and environmental assessment (e.g., sling psychrometer, wet bulb globe temperatures [WBGT], heat index guidelines).
2. Obtain and interpret environmental data (web bulb-globe temperature [WBGT], sling psychrometer, lightning detection devices) to make clinical decisions regarding the scheduling, type, and duration of physical activity.
3. Assess weight loss and hydration status using weight charts, urine color charts, or specific gravity measurements to determine an individual’s ability to participate in physical activity in a hot, humid environment.
4. Use a glucometer to monitor blood glucose levels, determine participation status, and make referral decisions.
5. Use a peak-flow meter to monitor a patient’s asthma symptoms, determine participation status, and make referral decisions.

6. Explain the etiology and prevention guidelines associated with the leading causes of sudden death during physical activity, including but not limited to:
   a. **PHP-17a.** Cardiac arrhythmia or arrest
   b. **PHP-17b.** Asthma
   c. **PHP-17d.** Exertional heat stroke
   d. **PHP-17g.** Anaphylactic shock

**Clinical Examination and Diagnosis**
7. Determine when the findings of an examination warrant referral of the patient.

**Acute Care of Injuries and Illnesses**
8. Explain the legal, moral, and ethical parameters that define the athletic trainer's scope of acute and emergency care.

9. Differentiate the roles and responsibilities of the athletic trainer from other pre-hospital care and hospital-based providers, including emergency medical technicians/paramedics, nurses, physician assistants, and physicians.

10. Describe the hospital-trauma level system and its role in the transportation decision-making process.

11. Demonstrate the ability to perform scene, primary, and secondary surveys.

12. Obtain a medical history appropriate for the patient’s ability to respond.

13. When appropriate, obtain and monitor signs of basic body functions including pulse, blood pressure, respiration, pulse oximetry, pain, and core temperature. Relate changes in vital signs to the patient’s status.

14. Differentiate between normal and abnormal physical findings (eg, pulse, blood pressure, heart and lung sounds, oxygen saturation, pain, core temperature) and the associated pathophysiology.

15. Explain the indications, guidelines, proper techniques, and necessary supplies for removing equipment and clothing in order to access the airway, evaluate and/or stabilize an athlete’s injured body part.

16. Differentiate the types of airway adjuncts (oropharyngeal airways [OPA], nasopharyngeal airways [NPA] and supraglottic airways [King LT-D or Combitube]) and their use in maintaining a patent airway in adult respiratory and/or cardiac arrest.

17. Establish and maintain an airway, including the use of oro- and nasopharyngeal airways, and neutral spine alignment in an athlete with a suspected spine injury who may be wearing shoulder pads, a helmet with and without a face guard, or other protective equipment.

18. Determine when suction for airway maintenance is indicated and use according to accepted practice protocols.

19. Identify cases when rescue breathing, CPR, and/or AED use is indicated according to current accepted practice protocols.

20. Utilize an automated external defibrillator (AED) according to current accepted practice protocols.

22. Utilize a bag valve and pocket mask on a child and adult using supplemental oxygen.
23. Explain the indications, application, and treatment parameters for supplemental oxygen administration for emergency situations.
24. Administer supplemental oxygen with adjuncts (e.g., non-rebreather mask, nasal cannula).
25. Assess oxygen saturation using a pulse oximeter and interpret the results to guide decision-making.
26. Explain the proper procedures for managing external hemorrhage (e.g., direct pressure, pressure points, and tourniquets) and the rationale for use of each.
27. Select and use the appropriate procedure for managing external hemorrhage.
28. Explain aseptic or sterile techniques, approved sanitation methods, and universal precautions used in the cleaning, closure, and dressing of wounds.
29. Select and use appropriate procedures for the cleaning, closure, and dressing of wounds, identifying when referral is necessary.
30. Use cervical stabilization devices and techniques that are appropriate to the circumstances of an injury.
32. Perform patient transfer techniques for suspected head and spine injuries utilizing supine log roll, prone log roll with push, prone log roll with pull, and lift-and-slide techniques.
33. Select the appropriate spine board, including long board or short board, and use appropriate immobilization techniques based on the circumstance of the patient’s injury.
34. Explain the role of core body temperature in differentiating between exertional heat stroke, hyponatremia, and head injury.
35. Differentiate the different methods for assessing core body temperature.
36. Assess core body temperature using a rectal probe.
37. Explain the role of rapid full body cooling in the emergency management of exertional heat stroke.
38. Assist the patient in the use of a nebulizer treatment for an asthmatic attack.
39. Determine when use of a metered-dose inhaler is warranted based on a patient’s condition.
40. Instruct a patient in the use of a meter-dosed inhaler in the presence of asthma-related bronchospasm.
41. Explain the importance of monitoring a patient following a head injury; including the role of obtaining clearance from a physician before further patient participation.
42. Demonstrate the use of an auto-injectable epinephrine in the management of allergic anaphylaxis. Decide when auto-injectable epinephrine use is warranted based on a patient’s condition.
43. Identify the signs, symptoms, interventions and, when appropriate, the return-to-participation criteria for:
   a. sudden cardiac arrest
b. brain injury including concussion, subdural and epidural hematomas, second impact syndrome and skull fracture

c. cervical, thoracic, and lumbar spine trauma

d. heat illness including heat cramps, heat exhaustion, exertional heat stroke, and hyponatremia

e. exertional sickling associated with sickle cell trait

f. rhabdomyolysis

g. internal hemorrhage

h. diabetic emergencies including hypoglycemia and ketoacidosis

i. asthma attacks

j. systemic allergic reaction, including anaphylactic shock

k. epileptic and non-epileptic seizures

l. shock

m. hypothermia, frostbite

n. toxic drug overdoses

o. local allergic reaction

44. Select and apply appropriate splinting material to stabilize an injured body area.

45. Apply appropriate immediate treatment to protect the injured area and minimize the effects of hypoxic and enzymatic injury.

46. Select and implement the appropriate ambulatory aid based on the patient’s injury and activity and participation restrictions.

47. Determine the proper transportation technique based on the patient’s condition and findings of the immediate examination.

48. Identify the criteria used in the decision-making process to transport the injured patient for further medical examination.

49. Select and use the appropriate short-distance transportation methods, such as the log roll or lift and slide, for an injured patient in different situations.

50. Instruct the patient in home care and self-treatment plans for acute conditions.

Health Care Administration

51. Explain typical administrative policies and procedures that govern first aid and emergency care.

VI. General Education and Course Learning Outcomes

A. General Education Learning Outcomes:

At the completion of the course, students will be able to:

1. Demonstrate proper protocol for emergency first aid care for both illness and injury and express both orally and in writing. (GE-NJ 1)*

2. Demonstrate the use of Evidence Based Practice in treatment of specific injuries and explain both written and orally using scholarly sources. (GE-NJ, NJ IL)*
*embedded Critical Thinking

B. **Course Learning Outcomes:**

At the completion of the course, students will be able to:

1. Identify emergency situations, as well as potential dangers that can lead to injury, and demonstrate the skills needed to respond to these emergencies and/or prevent them from happening.
2. Create and explain, both written and orally, an Emergency Action Plan appropriate for emergencies of acute injuries and illnesses, including, documentation, and policy development.
3. Identify and explain the components of a functioning EMS system and the role of the professional rescuer, first responder, physician, EMT, hospital personnel, and other associated individuals, including the athletic trainer.
4. Demonstrate, explain and pass the American Red Cross test of skills required to earn certification in CPR for the professional rescuer, AED, first aid, and bloodborne pathogens.
5. Demonstrate proficient skills in trauma assessment of athletic injuries and employ appropriate clinical decision-making skills.
6. Demonstrate safe methods of transportation in the movement of victims and in the selection of associated emergency equipment.
7. Demonstrate and explain, both written and orally, effective evidence-based medicine practice in the topics covered.

C. **Assessment Instruments**

1. laboratory products
2. case study
3. practical skills demonstrations
4. Tests and quizzes

VII. **Grade Determinants**

A. written product
B. practical exams
C. tests/quizzes
D. lab reports

Given the goals and outcomes described above, LIST the primary formats, modes, and methods for teaching and learning that may be used in the course:

A. lecture/discussion
B. small-group work
C. laboratory
D. simulation/role playing
E. Homework Assignments

VIII. Texts and Materials


Position/Consensus Statements

- NATA Position – Emergency Planning in Athletics
- NATA Position – Preventing Sudden Death
- Inter-Asssociation Task Force Consensus – Sudden Cardiac Arrest
- NATA Position – Sport Related Concussion
- Zurich Consensus Statement – Sport Related Concussion
- NATA Position – Heat Illness
- Inter-Asssociation Task Force Consensus – Exertional Heat Illness
- NATA Position – Fluid Replacement
- NATA Position – Cold Illness
- NATA Consensus – Lightning
- NATA Position – Asthma in Athletes
- NATA Position – Athlete with Type 1 Diabetes Mellitus
- NATA Consensus – Sickle Cell Trait and the Athlete

(Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.)

IX. Resources

A. RVCC Library
B. RVCC Exercise Science Lab

X. Honors Options: n/a