Syllabus

HPE 190 Care and Prevention of Athletic Injuries

General Information

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Department
Physical Education and Integrated Health Care

Course Prefix
HPE

Course Number
190

Course Title
Care and Prevention of Athletic Injuries

Course Information

Credit Hours
3

Lecture Contact Hours
3

Lab Contact Hours
0

Other Contact Hours
0

Catalog Description
This course is designed to provide entry-level knowledge regarding the prevention and treatment of athletic injuries. This includes the recognition of signs and symptoms of injuries that occur during exercise, physical activity, or athletic participation. Students will also have the opportunity to earn a nationally recognized certification in First Aid, CPR, and AED use.

Key Assessment
This course contains a Key Assessment for the AS Physical Education and Exercise Science program
Prerequisites
None

Co-requisites
None

Grading Scheme
Letter

First Year Experience/Capstone Designation

This course DOES NOT satisfy the outcomes applicable for status as a FYE or Capstone.

SUNY General Education

This course is designated as satisfying a requirement in the following SUNY Gen Ed category
None

FLCC Values

Institutional Learning Outcomes Addressed by the Course

Vitality
Inquiry
Perseverance
Interconnectedness

Course Learning Outcomes

Course Learning Outcomes

1. Describe basic components of functional anatomy commonly associated with exercise and physical activity.

2. Identify the signs and symptoms of injuries/illnesses commonly associated with exercise and physical activity.

3. Describe techniques that can be used to improve performance and prevent injury or illness during exercise and physical activity.

4. Demonstrate the appropriate skills used in caring for injuries or illnesses, leading to a nationally recognized certification in First Aid, CPR, and AED.

Outline of Topics Covered

1. The Sports Medicine Team
   a. The history/evolution of sports medicine
b. The sports medicine umbrella

c. Sports Medicine professionals
   i. Education/Certification requirements
   ii. Scope of Practice
   iii. Roles and Responsibilities

II. Legal Concerns and Insurance Issues
   a. Liability
   b. Risk Management Planning
   c. Insurance considerations
      i. Professional Liability Insurance
      ii. Types of Medical Insurance

III. Fitness and Conditioning Techniques
   a. Principles of Conditioning
   b. Techniques of Cardiorespiratory Endurance
   c. Techniques of Muscular Strength
   d. Techniques of Muscular Endurance
   e. Techniques of Muscular Power
   f. Techniques to Flexibility
   g. Baseline Fitness Assessment

IV. Nutritional Considerations
   a. Nutrition basics and energy sources
   b. Roles and requirements for macronutrients
      i. Carbohydrates
      ii. Proteins
      iii. Lipids
      iv. Water
   c. Roles and requirements for micronutrients
      i. Vitamins
      ii. Minerals
   d. Eating and drinking practices for exercise and athletic performance
   e. Body composition and weight control
      i. Techniques to assess body composition
Caloric balance
Disordered eating behaviors
Safe techniques for weight management

V. Environmental Considerations
   a. Hyperthermia and heat illnesses
      i. Risk factors and prevention techniques
      ii. Signs and symptoms
      iii. First aid techniques
   b. Hypothermia and Cold illnesses
      i. Risk factors and prevention techniques
      ii. Signs and symptoms
      iii. First aid techniques
   c. Exercising at altitude
   d. Overexposure to the sun
   e. Lightning Safety
      i. Injuries associated with lightning strikes
      ii. Lightning safety plan
   f. Air pollution
   g. Circadian dysrhythmia

VI. Protective Equipment, Taping, and Bracing
   a. Safety standards and legal concerns for protective equipment
   b. Head and face protection
   c. Neck protection
   d. Trunk and thorax protection
   e. Lower extremity protection
   f. Upper extremity protection

VII. Mechanisms and Characteristics of Trauma
   a. Mechanical injury forces
   b. Musculoskeletal injuries
      i. Basic anatomy overview
      ii. Sprains
      iii. Strains
iv. Fractures
v. Dislocations/subluxations
vi. Injuries to other structures
c. Nerve trauma
d. First aid
   i. Musculoskeletal injuries
   ii. Neurological injuries
e. Biomechanics to prevent injuries

VIII. Tissue Response to Injury
   a. The healing process
   b. Signs and symptoms of inflammation
   c. Soft tissue healing
      i. Muscles
      ii. Ligaments
      iii. Tendons
d. Bone healing
e. Nerve healing

IX. Psychosocial Considerations of Exercise and Athletic Participation
   a. Psychological response to injury
   b. Sociological response to injury
   c. Psychosocial Predictors of injury
   d. Reacting to athletes with injuries
   e. Psychosocial factors during injury rehabilitation
   f. Mental wellness considerations
      i. Stress
      ii. Anxiety
      iii. Depression
      iv. Burnout
      v. Overtraining

X. Acute Injury Care and Emergency Procedures
   a. Emergency Action Plan
   b. On-field injury assessment
i. Primary survey

ii. Secondary survey

iii. Moving and transporting victims

XI. Off-the-Field Injury Evaluations
   a. Basic knowledge requirements
   b. Off-the-field injury evaluation process
   c. Progress Evaluations

XII. Bloodborne Pathogens
   a. Types of pathogens
   b. Infectious diseases
   c. Universal precautions
   d. Signs and symptoms of bleeding
      i. External bleeding
      ii. Internal bleeding
   e. Treatment of bleeding
   f. Preventing infection

XIII. Spinal injuries
   a. Anatomy of the spine
   b. Risk factors for spinal injuries
   c. Preventing injuries to the spine
   d. First aid techniques for injuries to the vertebral column

XIV. Injuries to the thorax and abdomen
   a. Anatomy
      i. Thoracic cavity
      ii. Abdominal cavity
   b. Risk factors for injuries to the thorax/abdomen
   c. Preventing injuries to the thorax/abdomen
   d. First aid techniques for injuries to the thorax/abdomen

XV. General Medical Conditions
   a. Sudden Illnesses
      i. Cardiovascular disease / cardiac abnormalities
      ii. Respiratory conditions
iii. Stroke
iv. Seizures
v. Diabetic emergencies
vi. Allergic reactions / anaphylaxis

b. First Aid techniques for Sudden Illnesses
   i. CPR
   ii. AED
   iii. Epinepherine Autoinjector
   iv. Inhalers for asthma

XVI. Concussion and Brain Injuries
   a. Anatomy of the head, skull, brain
   b. Risk factors for brain injuries
   c. Preventing injuries to the brain
   d. Signs and symptoms of concussion and brain injuries
   e. First Aid treatment for concussion and brain injuries
   f. NYSED guidelines for concussion management