



Syllabus

HPE 190 Care and Prevention of Athletic Injuries

General Information

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Author

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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

- I. 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

- ii. Caloric balance
- iii. Disordered eating behaviors
- iv. 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. Epinephrine 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