

# **Introduction to Sports Medicine**

## **Rationale Statement:**

This course is designed to empower high school students to take charge of and set a course for their future. It will also prepare them to graduate with marketable skills and a real-world work connection. Careers in the healthcare industry are robust and growing nationwide; however, it is actually experiencing a shortage of workers. The Department of Labor predicts that 8 of the 20 fastest growing occupations are in healthcare services. The need for healthcare professionals in the United States is expected to increase by 27 percent by the year 2014. This class allows students to recognize their unique abilities relating to health care careers and assists them to find a pathway to success.

## **Course Description:**

Teaches students components of sports medicine, including exploration of the following: therapeutic careers, medical terminology, anatomy and physiology, first aid, injury prevention principles, the healing process, rehabilitation techniques, therapeutic modalities, sports nutrition, sports psychology, and performance enhancement philosophies.

**Suggested grade level:** 11-12

## **Topics covered:**

- **Psychology and Medical Terminology Related to Sports Medicine**
- **Injury Prevention Principles**
- **Performance Enhancement Philosophies**
- **Sports Nutrition**
- **Injury and Healing Process, including Injury Management**
- **Common Sports Injuries**
- **Therapeutic Modalities and other Rehabilitation Techniques**

<b>Indicator # 1: Identify fundamental aspects, psychology and medical terminology related to sports medicine.</b>	
<b>Bloom's Taxonomy Level</b>	<b>Standard and Examples.</b>
Understanding	<p><b>SM1.1 Explore the fundamental aspects of sports medicine.</b></p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Identify members of the sports medicine team</li> <li>• Explore a variety of therapeutic careers and describe the job duties and skills, education required, and potential salary</li> <li>• Explain legal issues and terminology</li> </ul>
Understanding	<p><b>SM1.2 Describe principles of sports psychology.</b></p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Identify the psychological implications of an injury to an athlete</li> <li>• Identify effective psychological interventions</li> <li>• Examine potential psychological problems associated with overtraining, including staleness and burnout</li> </ul>
Understanding	<p><b>SM1.3 Apply related medical terminology.</b></p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Identify and utilize anatomical positions, planes, and directional terms</li> <li>• Compare and contrast the various movements of the body and their counter-movements.</li> <li>• Define the terminology that describes common sports injuries</li> </ul>

<b>Indicator # 2: Understand injury prevention principles and performance enhancement philosophies</b>	
<b>Bloom's Taxonomy Level</b>	<b>Standard and Examples.</b>
Applying	<p><b>SM2.1 Students will apply injury prevention principles</b></p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Describe the basic principles and specialized equipment used in the prevention of athletic injury</li> <li>• Demonstrate the theory and principles of prophylactic taping</li> <li>• Identify principles of protective bracing</li> </ul>
Understanding	<p><b>SM2.2 Students will examine performance enhancement philosophies</b></p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Discuss general conditioning principles</li> <li>• Examine the roll the cardiovascular/respiratory systems and strength training have on fitness/athletic performance</li> <li>• Examine the effects of the environment on training</li> <li>• Examine the importance of flexibility in fitness</li> </ul>

<b>Indicator # 3: Explore sports nutrition and the injury and healing process.</b>	
<b>Bloom's Taxonomy Level</b>	<b>Standards and Examples.</b>
Applying	<p><b>SM3.1 Explore various aspects of sports nutrition.</b></p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Describe the basic components of nutrition, including essential components of a pre and post event meal</li> <li>• Examine the importance of fluid replacement and hydration</li> <li>• Recognize disorders associated with nutrition</li> <li>• Compare and contrast the physiological and psychological effects of ergogenic aids</li> </ul>
Understanding	<p><b>SM3.2 Describe the injury and healing process.</b></p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Discuss the inflammatory response</li> <li>• Categorize the stages of acute injury healing and explain the processes involved</li> <li>• Compare and contrast injury classifications</li> </ul>

<b>Indicator # 4: Explore and understand common injuries, certain sports-specific injuries, injury management and rehabilitation techniques.</b>	
<b>Bloom's Taxonomy Level</b>	<b>Standards and Examples.</b>
Understanding	<p><b>SM4.1 Recognize common injuries and explain injury management.</b></p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Explain an injury assessment</li> <li>• Identify soft tissue injuries and skin conditions</li> <li>• Recognize abdominal injuries, bleeding, and shock</li> <li>• Discuss immobilization techniques</li> <li>• Describe treatment for medical conditions such as seizures, fainting, asthma etc., as well as heat illness and cold exposure</li> </ul>
Understanding	<p><b>SM4.2 Explore specific sports injuries</b></p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Recognize common injuries to the head and neck, such as concussion, cervical spine fractures, brachial plexus injuries, and nose bleeds</li> <li>• Recognize common injuries to the upper extremity, such as clavicle fracture, impingement syndrome, rotator cuff injuries, glenohumeral dislocation, and AC joint separation</li> <li>• Recognize common injuries to the lower extremity, such as cruciate ligament sprains, meniscal injury, patella-femoral injuries, ankle sprains, and medial tibial stress syndrome</li> </ul>
Understanding	<p><b>SM4.3 Explain therapeutic modalities and rehabilitation techniques</b></p> <p>Examples:</p> <ul style="list-style-type: none"> <li>• Identify the purpose and how to properly select the correct therapeutic modality</li> <li>• Describe the physiological effects, indications, contraindications, and application of: cryotherapy, thermotherapy, electrotherapy, and massage</li> <li>• Discuss the components and goals of a rehabilitation program</li> </ul>