



## **Exercise Science/Sports Medicine**

*This full-year course is designed to teach students components of exercise science/sports medicine; including exploration of therapeutic careers, medical terminology, anatomy and physiology, first aid, injury prevention principles, the healing process, rehabilitation techniques, therapeutic modalities, sport nutrition, sport psychology, and performance enhancement philosophies.*

**Grade Level: 11-12 Year**

**Prerequisite: Medical Anatomy and Physiology recommended**

**State Certification Skills Test #701**

***Students will explore the fundamental aspects of Exercise Science/Sports Medicine.***

Standard 1 Identify members of the Sports Medicine team.

Standard 2 Explore a variety of therapeutic careers and describe the job duties and skills, education required, job settings, and potential salary.

Standard 3 Explain legal issues and legal terminology.

### ***Performance Skill***

SOAP Note

***Students will describe principles of sports psychology***

Standard 1 Identify the psychological implications of an injury to an athlete.

Standard 2 Identify effective psychological intervention skills.

Standard 3 Identify potential problems associated with overtraining.

Standard 4 Describe anxiety.

Standard 5 Describe depression.

***Students will describe the injury and healing process.***

Standard 1 Discuss the inflammatory response and the healing process.

Standard 2 Compare and contrast injury classifications.

Standard 3 Compare and contrast common fractures.

Standard 4 Understand the associated vocabulary.





## DAVIS ESSENTIAL SKILLS & KNOWLEDGE

### ***Students will explore specific sports injuries of the head and neck and apply athletic injury prevention principles.***

Standard 1 Review the anatomy of the head and neck.

Standard 2 Recognize common injuries to the head and neck.

Standard 3 Describe the basic principles and specialized equipment used in the prevention of athletic injury.

Standard 4 Understand the associated vocabulary.

### ***Students will explore various aspects of sports nutrition.***

Standard 1 Describe the basic components of nutrition and the sources of the following nutrients.

Standard 2 Examine the importance of fluid replacement and hydration.

Standard 3 Identify the components of a pre and post event meal and explain the value of each.

### ***Students will explore the fundamentals of body composition and diseases and disorders related to body issues.***

Standard 1 Describe basic body composition.

Standard 2 Recognize disorders associated with nutrition.

### ***Students will explore specific sports injuries of the lower extremities and apply athletic injury prevention principles.***

Standard 1 Review the anatomy of the lower extremities.

Standard 2 Recognize common injuries to the lower extremities.

Standard 3 Demonstrate theory and principles of prophylactic taping.

Standard 4 Identify principles of protective bracing.

Standard 5 Understand the associated vocabulary.

#### ***Performance Skill***

Competently tape an ankle using the standard prophylactic taping method.

(Optional) Completely tape an arch using the standard prophylactic taping method.

### ***Students will examine performance enhancement philosophies.***

Standard 1 Define terms associated with performance enhancement.

Standard 2 Discuss general conditioning principles.





## DAVIS ESSENTIAL SKILLS & KNOWLEDGE

Standard 3 Examine the role the cardiovascular/respiratory systems have on fitness/athletic performance.

Standard 4 Examine the effects of the environment on training and performance.

Standard 5 Understand the associated vocabulary.

### ***Students will examine strength training principles, flexibility, and ergogenic aids.***

Standard 1 Examine the role strength training plays on fitness/athletic performance.

Standard 2 Examine the importance of flexibility in fitness/athletic performance.

Standard 3 Compare and contrast the physiological and psychological effects of ergogenic aids.

#### ***Performance Skill***

Demonstrate the proper techniques of static stretching for ALL major muscle groups.

### ***Students will explore specific sports injuries of the upper extremities and apply athletic injury prevention principles.***

Standard 1 Review the anatomy of the upper extremities.

Standard 2 Recognize common injuries to the upper extremities.

Standard 3 Understand the associated vocabulary.

#### ***Performance Skill***

Competently tape a thumb using the standard prophylactic taping method.

(Optional) Completely tape a wrist using the standard prophylactic taping method.

### ***Students will be able to recognize common injuries and administer injury management.***

Standard 1 Explain an injury assessment. (HIPS)

Standard 2 Identify soft tissue injuries and skin conditions.

Standard 3 Recognize abdominal injuries, bleeding, and shock.

Standard 4 Discuss immobilization techniques.

Standard 5 Recognize and provide treatment for environmental conditions.

Standard 6 Describe the treatment for a variety of medical conditions.

Standard 7 Understand the associated vocabulary.

#### ***Performance Skill***

Demonstrate crutch fitting to any size individual.





## DAVIS ESSENTIAL SKILLS & KNOWLEDGE

### ***Students will explain therapeutic modalities and rehabilitation techniques.***

Standard 1 Explore therapeutic modalities.

Standard 2 Describe the physiological effects, indications, contraindications, and applications.

Standard 3 Discuss the components and goals of a rehabilitation program.

Standard 4 Understand the associated vocabulary.

### ***Performance Skill***

Prepare an ice bag /pack for a variant of uses and describe the R.I.C.E. method for acute injuries

Apply a compression wrap to an ankle.

Apply a compression wrap to a knee.

