KIN G281: PREVENTION AND CARE OF ATHLETIC INJURIES

Item	Value
Curriculum Committee Approval Date	11/21/2023
Top Code	127000 - Kinesiology
Units	3 Total Units
Hours	54 Total Hours (Lecture Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S)
Local General Education (GE)	• Area 7E Lifelong Understanding and Self-Development (GE)

Course Description

This course applies the basic principles of anatomy, physiology, pathology and biomechanics to athletic injuries. Content includes introduction and application of basic principles to the prevention, assessment, treatment, and rehabilitation of athletic injuries. Transfer Credit: CSU; UC: Credit Limitation: KIN G101 and KIN G281 combined: maximum credit, 1 course.

Course Level Student Learning Outcome(s)

1. Course Outcomes
2. Discuss various responsibilities of the athletic trainer.
3. Summarize acute care for common athletic injuries.
4. Determine rehabilitation techniques for athletic injuries.
5. Distinguish signs, symptoms, and mechanisms of athletic injuries.

Course Objectives

- 1. Define the field of sports medicine, subcategories of the field, and the collaborative role as an allied health care professional.
- 2. Classify the organization and administration in athletic training.
- 3. Apply medical vocabulary and terminology.
- 4. Identify the major bony and soft tissue structures of the various joints in the human body.
- 5. Simulate the ability to apply bandaging, taping, and stretching techniques to the upper and lower extremities.
- 6. Assess signs, symptoms, and mechanisms for various athletic injuries.
- 7. Identify and assess physiological, anatomical, sociological, and psychological factors that are integral in the rehabilitation of athletic injuries.
- 8. Describe the concepts of rehabilitation and therapeutic modalities.
- 9. Assess vital signs, including blood pressure, respiratory, pulse, body temperature, height, and weight.
- 10. Demonstrate basic first aid, including temporary care for sprains, strains, bleeding, lacerations, fractures, and dislocations.
- 11. Differentiate the importance of nutrition in the role of fitness and health.

Lecture Content

The athletic training profession Professional development and responsibilities History and evolution of the athletic training profession Responsibilities of the athletic trainer and sports medicine team Athletic trainer qualifications, relationships and requirements for certification Health care administration and legal concerns in athletic training Medical record keeping Electronic Medical Records (EMR) Patient Progress notes Treatment records Insurance billing/forms Standards of reasonable care Assumption of risk Insurance Professional liability insurance Catastrophic insurance and third party reimbursement Risk management Nutritional considerations Nutrition basics and energy sources Physiological needs of the body for physical activity Weight control and body composition Environmental considerations Physiological effects on the body from excercising in extreme temperatures Hyperthermia and heat stroke Hypothermia Physiological effects on the body from exercising at altitude Lightning safety Protective sports equipment Selection and fitting of standard protective equipment Bandaging and taping Application of elastic bandages Application of nonelastic adhesive tape Pathology of sports injury Classification of injury based on the mechanical and physiological effects of trauma to human tissues Soft-tissue and skeletal muscle injuries Skeletal trauma Nerve trauma Physiological responses of the body to trauma and the tissue healing process

Soft tissue healing Inflammatory phase Fibroblastic repair phase Maturation-remodeling phase Bone healing Management skills Psychosocial intervention for sports injuries and illnesses The athlete's psychological response to injury The athlete and the sociological response to injury Providing social support Psychological factors in the rehabilitation process Mental training techniques Psychological techniques for coping with pain Tension reduction Attention diversion Relaxation techniques On the field acute care and emergency procedures The emergency action plan Primary and secondary survey Moving and transporting the injured athlete Emergency emotional care Off the field injury evaluation Evaluation of sports injuries Evaluation process Evaluation vs. diagnosis Documentation Bloodborne pathogens The physiology of virus and bloodborne pathogens Universal precautions in an athletic environment Hepatitis Human immunodeficiency virus (HIV) Methicillin-resistant Staphylococcus aureus (MRSA) Postexposure procedures Therapeutic modalities Physiological effects of thermal energy on the body's tissues Cryotherapy techniques and the physiological response Thermotherapy techniques and the physiological response Massage and traction and the physiological response Legal concerns Documentation of therapeutic modality treatment Physiology of therapeutic exercise and rehabilitation T herapeutic exercise versus conditioning exercise Physiological and psychological effects of injury, inactivity and immobility Developing a rehabilitation plan and its component Pain control Control of swelling Restoration of range of motion and muscular strength Psychological factors in the rehabilitation process Immediate post injury/postoperative Rehabilitation Return to activity Goal setting and mental training techniques Cognitive restructuring and imagery Pharmacology, Drugs and sports Physiological effects on the body from drugs Common over-the-counter (OTC) medications Prescription medications Protocols for using OTC medications Legal concerns in administering versus dispensing drugs Specific sports conditions Lower extremity The foot and ankle Specific bony anatomy Soft tissue structures Injury recognition,

evaluation and treatment The Knee Specific bony anatomy Soft tissue structures Injury recognition, evaluation and treatment The hip, thigh, groin and pelvis Specific bony anatomy Soft tissue structures Injury recognition, evaluation and treatment Upper extremity The hand, forearm and wrist Specific bony anatomy Soft tissue structures Injury recognition, evaluation and treatment The elbow Specific bony anatomy Soft tissue structures Injury recognition, evaluation and treatment The Shoulder complex Specific bony anatomy Soft tissue structures Injury recognition, ev aluation and treatment Head and spine Specific bony anatomy Soft tissue structures Injury recognition, evaluation and treatment Concussions and their long lasting lifelong consequences Thorax and abdomen Specific bony anatomy Soft tissue structures Injury recognition, evaluation and treatment Face, eyes, ears, nose and throat Specific bony anatomy Soft tissue structures Injury recognition, evaluation, and treatment General medical conditions Physiology of the immune system Viral infections Muscular system disorders Nervous, blood and lymphatic system disorders Diabetes and athletics Asthma and athletics

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)

Reading Assignments

Textbook reading and chapter review questions Peer-reviewed journal article(s) critique

Writing Assignments

Write a summary of sports medicine professional interview Write an emergency action plan (EAP) for a sport venue

Out-of-class Assignments

Interview a sports medicine professional Create a sports medicine facility layout Sports medicine facility fieldtrip

Demonstration of Critical Thinking

Lower leg evaluation demonstration to evaluate the students ability to assess an injury and identify involved bony or soft tissue structures.

Required Writing, Problem Solving, Skills Demonstration

Specific assignments to include papers, article review, demonstrating injury recognition assessment skills and demonstration of taping and bandaging skills.

Eligible Disciplines

Kinesiology: Master's degree in kinesiology, physical education, exercise science, education with an emphasis in physical education, kinesiology, physiology of exercise, or adaptive physical education OR Bachelor's degree in any of the above AND Master's degree in any life science, dance physiology, health education, recreation administration or physical therapy OR the equivalent. Physical education: Master's degree in physical education, exercise science, education with an emphasis in physical education, kinesiology, physiology of exercise, or adaptive physical education, OR bachelor's degree in any of the above AND master's degree in any life science, dance, physiology, health education, recreation administration, or physical therapy OR the equivalent. Master's degree required.

Textbooks Resources

1. Required William Prentice Ph.d, ATC, PT. Arnheim's Principles of Athletic Training, 17th ed. McGraw-Hill, 2021 2. Required Robert C. France. Introduction to Sports Medicine and Athletic Training, 3rd ed. Cengage, 2020