

Sports Medicine Intermediate

#490025

Description: Sports Medicine Intermediate is a one credit course that teaches fundamental skills to include therapeutic exercise regimens within the field of sports medicine. Students will explore the study of sports medicine and the relationship to risk management and injury prevention. Students will demonstrate an understanding of anatomy and physiology, with emphasis on the musculoskeletal system. The importance of health promotion, wellness, injury and disease prevention will be emphasized. Students will examine sports medicine facilities, policies, procedures, and protocols utilized in patient care.

Career and technical student organizations are integral, co-curricular components of each career and technical education course. These organizations serve as a means to enhance classroom instruction while helping students develop leadership abilities, expand workplace-readiness skills, and broaden opportunities for personal and professional growth.

Students will:

Training and Conditioning Techniques

1. Understand the difference between rehabilitation and prehabilitation.
2. Discuss how prehabilitation can decrease the chance of injury.
3. Describe muscle fiber types and the proper use of each during activity.
4. Distinguish between anaerobic and aerobic exercise.
5. Describe the principles of strength training exercises.
 - Examples: isometric exercise, isotonic exercise, isokinetic exercise, circuit training, stretching and flexibility, and Proprioceptive Neuromuscular Facilitation (PNF)
6. Explain the benefits of cardiorespiratory training and relationship to disease prevention.
7. Demonstrate how to assess body strength, flexibility, and cardiorespiratory endurance.
8. Discuss the purpose and benefits of periodization in training and conditioning.
9. Create a well-rounded preseason conditioning program and describe the elements of the plan.

Legal and Ethical Concerns

10. Examine sports medicine facilities, policies, procedures, and protocols utilized in patient care.
11. Understand the legal and safety concerns of therapeutic modalities.
12. Discuss professional and ethical issues and concerns related to sports medicine careers.

Nutrition in Sports Medicine

13. Explain the importance of good nutrition in performance and preventing injuries.
14. Discuss the relationship of energy to food.
15. Describe the six classes of nutrients and their primary functions.
16. Identify and describe the various nutritional deficiencies, supplementations, and eating habits that impact athletes.
17. Differentiate between body weight and body composition.
18. Investigate ways to assess body composition.
 - Examples: Skin fold calipers, hydrostatic weighing, and BMI
19. Demonstrate the ability to create a balanced meal plan utilizing the current dietary guidelines and nutrient databases to promote health and wellness.
 - Examples: MyPlate Food Guide, U. S. Food and Drug Administration (FDA), and U. S. Department of Agriculture (USDA) Nutrient Database

Dietary Supplements and Performance Enhancers

20. Identify therapeutic medications, nutritional supplements, and performance enhancing substances used by athletes.
21. Identify the purpose of drug testing athletes.
22. Describe principles identified by the National Collegiate Athletic Association (NCAA), International Olympic Committee Medical Commission (IOC), and other current professional athletic standards.

Psychosocial Intervention for Sports Injuries and Illnesses

23. Research the psychological and sociological response to an injury or illness.
24. Identify the different psychological approaches used to assist an athlete during rehabilitation.

Assessment and Evaluation of Sports Injuries

25. Explain the difference between assessment, evaluation, and diagnosis of an injury.
26. Demonstrate the process for basic assessment, monitoring, and recording an athlete's health status and identify normal and abnormal values.
 - Examples: temperature, heart rate, respirations, blood pressure, height, and weight
27. Describe the various factors that influence the type and severity of athletic injuries.
28. Distinguish between the major biomechanical forces occurring in sports injuries.
29. Evaluate an athletic injury using a systematic approach to include primary injury survey and secondary injury survey.
30. Explain the different methods and reasons for documenting injuries.

Bandaging, Taping, and Wrapping

31. Describe the steps of application for a variety of bandages.
32. Identify the various materials and supplies utilized in taping and wrapping.

33. Describe the purpose, types, and application of non-elastic and elastic adhesive tape.
34. Perform basic wrapping procedures.
 - Examples: Prophylactic Taping of Ankle, Low-Dye Taping, Turf-Toe Taping, Achilles-Tendon Taping, Shin-Splint Taping, Wrist Taping, Thumb Taping, Finger Support, and Elbow Taping

Therapeutic Physical Modalities

35. Explain the use and effectiveness of physical modalities.
36. Describe therapeutic modalities utilized in a rehabilitation plan to include mechanical, thermal, and electrical modalities.
 - Examples: thermotherapy, cryotherapy, electrical stimulation, ultrasound, massage, traction, Graston Technique, and intermittent compression

Therapeutic Exercise in Rehabilitation

37. Describe the basic principles and concepts of rehabilitation.
38. Contrast the difference in therapeutic exercise and physical conditioning exercise.
39. Describe the effects of sudden inactivity and injury immobilization.
40. Discuss the concept of open versus closed kinetic chain exercises.
41. Identify additional therapeutic exercise techniques utilized in a rehabilitation plan.
 - Myofascial release, proprioceptive neuromuscular facilitation, joint mobilization, muscle energy, and aquatic exercise
42. List and discuss the guidelines, components, objectives, and phases of a rehabilitation plan.

Project Based Learning Experience

43. Create an individualized therapeutic exercise program.