

Sports Medicine Advanced

#490026

Description: Sports Medicine Advanced is a one credit course with strong emphasis on musculoskeletal injuries as well as the psychological and sociological responses to injuries and illness. Students will demonstrate critical thinking skills, patient care skills related to prevention, rehabilitation, and management, and communicate appropriate outcomes through oral and written communication. Course content will include an understanding of basic pathophysiology, kinesiology, and principles of treatment. An analysis of a variety of health situations involved in the sports medicine pathway will be conducted through project based learning, laboratory, simulation, and clinical experiences.

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:

Kinesiology

1. Explain the study of kinesiology.
2. Define the articular system and describe the relationship to movement.
3. Discuss the three classifications of joints.
4. Identify the various types of diarthroses joints and the degree of movement.
5. Define the different movements of synovial joints.
6. Describe the anatomical planes and the importance to sports medicine.
7. Discuss the concept of open versus closed kinematic chains.

Psychological Responses

8. Discuss the importance of sports psychology to athletic performance.
9. Discuss the importance of understanding psychological and sociological responses to an athlete with injury or illness.

Bleeding and Shock

10. Describe the cardiorespiratory system.
11. Discuss the cardiac conduction system.
12. Explain the OSHA Guidelines for Infectious Disease Control.
13. Define the three basic types of bleeding and recommended care.
14. Explain the signs, symptoms, and dangers associated with shock.

Bones and Soft Tissues

15. Explain the difference between the axial and appendicular skeleton.
16. Understand the different classifications of fractures and classify by the degree of injury.
17. Describe the difference between skeletal, smooth, and cardiac muscle.
18. Explain the physiology of a muscle injuries.
19. Recognize the importance of identifying nerve injuries and prompt treatment.
20. List the different types of soft tissue injuries and treatment.
21. Describe each phase of the healing process and the basic physiological events.

Lower Extremity Injuries and Concerns

22. Identify the anatomy, muscular structure, and vascular structure of the lower extremity.
23. Demonstrate safe and practical simulation of Passive Range of Motion (PROM) and Active Range of Motion (AROM) tests to the lower extremities.
24. Describe how to assess the lower extremities using Manual Muscle Tests (MMT).
25. Discuss common injuries to the lower body to include prevention, evaluation, rehabilitation, and overall management of injuries.
 - Example: devices associated with orthotic management for plantar fasciitis

Upper Extremity Injuries and Concerns

26. Identify the anatomy, muscular structure, and vascular structure of the upper extremity.
27. Demonstrate safe and practical simulation of Passive Range of Motion (PROM) and Active Range of Motion (AROM) tests to the upper extremities.
28. Describe how to assess the upper extremities using Manual Muscle Tests (MMT).
29. Discuss common injuries to the upper body to include prevention, evaluation, rehabilitation, and overall management of injuries.

Head and Facial Injuries and Concerns

30. Identify the anatomy, muscular structure, and vascular structure of the head and face.
31. Demonstrate assessment of cranial nerves.
32. Investigate common injuries that occur to the head and face.
33. Discuss how to establish a systematic process for evaluating head and facial injuries including concussions.
34. Propose a plan to help prevent, evaluate, and treat specific injuries to the head and related structures.

Thoracic and Abdominal Injuries and Concerns

35. Understand the anatomy and physiology of the thoracic and abdominal regions.
36. Discuss the techniques used for assessing thoracic and abdominal injuries.
37. Categorize specific injuries to the structures of the thoracic and abdominal regions.

Spine and Nerve Injuries and Concerns

38. Describe the anatomy and physiology of the cervical, thoracic, and lumbar spine.
39. Understand how the nerve roots from the spinal cord combine to form specific peripheral nerves.
40. Discuss specific cervical, thoracic, and lumbar injuries and how they may be prevented, evaluated, rehabilitated, and the overall management plan of each injury.
41. Categorize specific spinal injuries in terms of etiology, signs and symptoms, and management.

Special Considerations in Sports Medicine

42. Discuss environmental conditions that may have a negative effect on athletic performance.
43. Identify the signs, symptoms, and treatment of bacterial, fungal, and viral infections of the skin.
44. Describe the two major types of Diabetes Mellitus, Type I Diabetes and Type II Diabetes.
45. Explain diabetic emergencies, signs, symptoms, and treatment to include insulin shock and diabetic coma.
46. Describe the female athlete triad.
47. Describe the causes of epilepsy and explain the appropriate action when a seizure occurs.

Project Based Learning Experience

48. Create a culminating product related to prevention, rehabilitation, and/or management of an individual to include oral and written communication.