

COURSE SYLLABUS

LAST REVIEW	Spring 2021
COURSE TITLE	Pathophysiology for Rehabilitation
COURSE NUMBER	PHTR 0250
DIVISION	Musculoskeletal: Upper Extremity
DEPARTMENT	Physical Therapist Assistant
CIP CODE	51.0806
CREDIT HOURS	5
CONTACT HOURS/WEEK	Class: 2.5 Lab: 5
PREREQUISITES	None
COURSE PLACEMENT	This course is part of a selective admission program. Students must be admitted to the Physical Therapist Assistant program to enroll in this course.

COURSE DESCRIPTION

This course provides a link between the principles of biomechanics, musculoskeletal and neuromuscular anatomy/physiology and their application to movement analysis for the upper extremity. This course also covers the role of the physical therapist assistant in the management of common musculoskeletal disorders of the upper extremity, including the theoretical foundation for assessments and intervention strategies. Students will also learn the pathophysiology of and therapeutic interventions for various types of arthritis as well as pharmacology related to the musculoskeletal system.

PROGRAM ALIGNMENT

This course is part of a program aligned through the Kansas Board of Regents and Technical Education Authority. For more information, please visit:

https://kansasregents.org/workforce_development/program-alignment

PROGRAM LEARNING OUTCOMES

1. Demonstrate competence in safely administering all tests and measures and interventions as outlined in the plan of care established by the physical therapist.
2. Communicate appropriately, both verbally and non-verbally, with patient/clients, families, physical therapy personnel and other healthcare team members.
3. Adhere to the legal, ethical and professional behavior guidelines established by the American Physical Therapist Association (APTA), the state licensure committee, and the facility of employment.
4. Utilize data collection, problem solving and critical thinking skills to identify the appropriateness of requested interventions.

5. Provide education to the patient/client, family members, physical therapy personnel, other healthcare team members and the community.
6. Identify cultural differences and their impact on the provision of physical therapy services.
7. Be involved in activities that promote life-long learning.
8. Participate in activities that promote the practice of physical therapy and the role of the physical therapist assistant (PTA).
9. Assist facility administration with outcome measurements, material management, reimbursement issues and other administrative roles deemed appropriate for the PTA.

TEXTBOOKS

<http://kckccbookstore.com/>

METHODS OF INSTRUCTION

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, panels, conferencing, performances, and learning experiences outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE

- I. Tests and Measures of the Upper Extremity
 - A. Manual Muscle Testing
 - B. Goniometric Measurements
 - C. Sensory Testing
 - D. Motor Testing
- II. Shoulder Complex
 - A. Anatomy
 - B. Pathology
 - C. Orthopedic tests
 - D. Physical therapy tests and measures
 - E. Physical therapy interventions
- III. Elbow
 - A. Anatomy
 - B. Pathology
 - C. Orthopedic tests
 - D. Physical therapy tests and measures
 - E. Physical therapy interventions

IV. Wrist and Hand

- A. Anatomy
- B. Pathology
- C. Orthopedic tests
- D. Physical therapy tests and measures
- E. Physical therapy interventions

V. Arthritis

- A. Pathology
- B. Appropriate tests and measures
- C. Physical therapy interventions

VI. Pharmacological interventions for musculoskeletal disorders

COURSE LEARNING OUTCOMES AND COMPETENCIES

Upon successful completion of this course, the student will:

- A. Describe the anatomy of the upper extremity.
 - 1. Identify bony landmarks in the upper extremity.
 - 2. Describe the structure of all of the joints in the upper extremity.
 - 3. Locate the attachment sites for all of the muscles in the upper extremity.
 - 4. List the actions of all of the muscles in the upper extremity.
 - 5. Identify the innervations of all of the muscles in the upper extremity.
- B. Discuss the effects of injury on the upper extremity.
 - 6. List common mechanisms of injury for various upper extremity musculoskeletal disorders.
 - 7. Identify the specific tissues involved for various upper extremity musculoskeletal disorders.
 - 8. Relate various upper extremity musculoskeletal disorders to expected signs, symptoms and functional deficits.
- C. Perform various tests and measures for the upper extremity.
 - 9. Perform sensory testing of the upper extremity.
 - 10. Perform range of motion testing for joints throughout the upper extremity.
 - 11. Perform manual muscle testing for muscles throughout the upper extremity.
 - 12. Adapt testing procedures in response to substitution patterns.
 - 13. Accurately document the results of various tests and measures for the upper extremity.
 - 14. Demonstrate understanding of the common special tests used in the evaluation of upper extremity musculoskeletal disorders.
 - 15. Demonstrate clear verbal communication when interacting with patients.

- D. Utilize various physical therapy interventions for the treatment of upper extremity musculoskeletal disorders.
 - 16. Implement exercise programs that follow the plan of care for various upper extremity musculoskeletal disorders.
 - 17. Assess the appropriateness of treatment interventions based on the type of musculoskeletal disorder and the stage of healing.
 - 18. Discuss common medical and physical therapy interventions for various upper extremity musculoskeletal disorders.
 - 19. Demonstrate the use of therapeutic modalities for the treatment of upper extremity musculoskeletal disorders.
 - 20. Discuss the use of joint mobilization, myofascial release, and trigger point release for treating upper extremity musculoskeletal disorders.
 - 21. Accurately document physical therapy interventions.
 - 22. Demonstrate concern for patient comfort by using proper positioning and handling techniques during laboratory practicals.
 - 23. Demonstrate understanding of arthokinematics and osteokinematics of the upper extremity.
 - 24. Accurately perform joint mobility of the upper extremity to increase ROM.

- E. Understand various forms of arthritis and the role of the PTA in disease management.
 - 25. Discuss the types of arthritis affecting the musculoskeletal system.
 - 26. Discuss the medical management of various forms of arthritis.
 - 27. Associate medications with their action and most appropriate use in patients with arthritis.
 - 28. Discuss the role of physical therapy in the management of arthritis conditions.

- F. Express familiarity with common pharmacological agents used in the treatment of patients with musculoskeletal disorders.
 - 29. Recognize common pharmacological agents used in the treatment of patients with musculoskeletal disorders.
 - 30. List the desired effects of these medications.
 - 31. Recognize possible unwanted side effects of these medications.

- G. Demonstrate clinical problem-solving skills.
 - 32. Assess the need to modify an intervention based on the patient's response.
 - 33. Modify a therapeutic exercise program based on the needs of the patient.
 - 34. Recognize signs and symptoms of complications during the recovery for various upper extremity musculoskeletal disorders.
 - 35. Incorporate the use of evidence to make clinical decisions for a case study.
 - 36. Communicate with others in an effective, appropriate, and capable manner.
 - 37. Discuss conduct that reflects a commitment to meet the expectations of members of society receiving health care services.

38. Discuss conduct that reflects a commitment to meet the expectations of members of the profession of physical therapy.
39. Discuss conduct that reflects practice standards that are legal, ethical and safe.
40. The student will demonstrate the ability to adjust interventions within the plan of care created by the PT in response to the patient's clinical indications and report this to the supervising PT.
41. Justify when interventions should not be provided due to changes in the patient's status and report this to the supervising PT.
42. Demonstrate the ability to report any changes in the patient's status to the supervising physical therapist.
43. Recognize when the direction to perform an intervention is beyond that which is appropriate for the PTA to do and initiates clarification with the PT.
44. Demonstrate the ability to provide appropriate patient education based on the plan of care.
45. Demonstrate the ability to provide patient-related instruction to patients, family members and caregivers to achieve outcomes based on the plan of care established by the PT.
46. Demonstrate appropriate documentation skills that meet the requirements established by the profession, payers, and legal systems.
47. Internalize the importance of reading healthcare literature.
48. Internalize the importance of interacting with other members of the health care team in patient-care and non-patient care activities.

ASSESSMENT OF COURSE LEARNING OUTCOMES AND COMPETENCIES

Student progress is evaluated through both formative and summative assessment methods. Specific details may be found in the instructor's course information document.

COLLEGE POLICIES AND PROCEDURES

Student Handbook

<https://www.kckcc.edu/files/docs/student-resources/student-handbook-and-code-of-conduct.pdf>

College Catalog

<https://www.kckcc.edu/academics/catalog/index.html>

College Policies and Statements

<https://www.kckcc.edu/about/policies-statements/index.html>

Accessibility and Accommodations

<https://www.kckcc.edu/academics/resources/student-accessibility-support-services/index.html>.