

COURSE SYLLABUS

LAST REVIEW	Spring 2021
COURSE TITLE	Fundamental Treatment Procedures
COURSE NUMBER	PHTR 0170
DIVISION	Health Professions
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 will provide students an overview of the healing process and the physiology and use of physical agents, including thermal agents, ultrasound and electrical stimulation. In addition, exercise physiology and basic therapeutic exercises will be taught.

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. Anatomy and Physiology Review
 - A. Basic anatomy terminology
 - B. Cardiovascular
 - C. Pulmonary
 - D. Integumentary
 - E. Musculoskeletal
 - F. Neurology

- II. Healing Process
 - A. Introduction to the healing process
 - B. Edema
 - C. Pain

- III. Physical Agents
 - A. Physical laws and principles
 - B. Treatment utilizing physical agents
 - C. Other physical agents: ultraviolet, laser and diathermy

- IV. Basic Treatment Considerations
 - A. Anthropometric measurements
 - B. General sensory testing
 - C. Discharge planning

- V. Ultrasound
 - A. Physical laws and principles
 - B. Physiological effects

C. Basic application

VI. Electrotherapeutic modalities

- A. Physical laws and principles
- B. Physiological effects
- C. Basic application

VII. Exercise

- A. Overview of exercise
- B. Exercise physiology
- C. Types of exercise and their use
- D. Aerobic and anaerobic exercise
- E. Exercise and the older population

VIII. Professional Behavior

- A. Hygiene
- B. Dress code
- C. Body language
- D. Communication
- E. Cultural diversity
- F. Ethics

COURSE LEARNING OUTCOMES AND COMPETENCIES

Upon successful completion of this course, the student will:

- A. Discuss basic anatomy and physiology of the cardiovascular, pulmonary, integumentary, muscular, skeletal and neurologic systems.
 - 1. Discuss the components of and types of muscles in the human body.
 - 2. Locate various muscles and bones of the axial and appendicular skeleton.
 - 3. Identify the function of various muscles.
 - 4. Name the components of various joints of the human body.
 - 5. Discuss basic anatomy of the neurologic system.
- B. Discuss the principles of the healing process and edema formation.
 - 6. Outline what occurs during each phase of the healing process.
 - 7. Discuss the role of the PTA during each phase of the healing process.
 - 8. Describe common isolation and sterile techniques a PTA may encounter during patient care.

9. Identify the pathophysiology of edema and lymphedema.
 10. Compare and contrast the complications that arise as a result of acute and chronic edema.
 11. Discuss the physiology of pain and its effect on the patient.
- C. Discuss basic data collection techniques completed by the PTA prior to beginning a treatment.
12. Complete the appropriate sensory and/or circulatory assessments prior to application of a therapeutic modality.
 13. Complete anthropometric measurements.
 14. Administer a standardized questionnaire or visual analog scale to document a patient's pain level.
- D. Demonstrate a general understanding of the concepts and application of a variety of therapeutic modalities, including ultrasound and electrical stimulation.
15. Discuss the categories of physical agents.
 16. Explain the effects of physical agent use during each phase of the healing process.
 17. Discuss which modalities are appropriate during each phase of the healing process.
 18. Justify the use or nonuse of a specific physical agent by demonstrating knowledge of indications, contraindications and precautions.
 19. Demonstrate the proper application technique for various types of cryotherapy.
 20. Outline the potential uses of hydrotherapy.
 21. Demonstrate the proper application technique for various types of superficial and deep thermal agents.
 22. Discuss the physical principles of ultrasound, including thermal and non-thermal effects.
 23. Compare and contrast the clinical uses of ultrasound for thermal and non-thermal application.
 24. Discuss characteristics of the different types of electrical current.
 25. Analyze the clinical use of selected types of electrical stimulation.
 26. Apply the principles of ultrasound and electrical stimulation to implement a treatment plan given a simulated clinical situation.
 27. Internalize the importance of safety with use of electrotherapeutic agents by describing routine preventative maintenance and safe operation of equipment.
- E. Explain exercise physiology and utilize this knowledge to develop a basic exercise program.
28. Discuss the effects of exercise on a variety of tissues and body systems.
 29. Apply the principles of muscle flexibility in stretching exercises.

30. Apply appropriate strengthening and/or stretching exercises in situations of muscle imbalance.
31. Discuss rationale and progression of passive, active assistive, active and resistive exercise.
32. Compare and contrast the principles of isotonic, isometric and isokinetic exercise.
33. Follow a basic treatment plan based on the appropriate principles, techniques, indications and contraindications of the various types of exercise.
34. Discuss the impact of aerobic principles in endurance training.

- F. Internalize the importance of professionalism in practice by demonstrating appropriate behavior during lecture and lab sessions.
 - 35. Internalize the importance of professional appearance by demonstrating acceptable grooming and personal hygiene.
 - 36. Present a professional demeanor in all interactions.
 - 37. Respect cultural and personal difference of others by working with a variety of lab partners.
 - 38. Internalize the importance of safe, ethical and legal practice as a physical therapist assistant.
 - 39. Demonstrate the ability to adjust interventions within the plan of care created by the PT in response to the patient's clinical indications.
 - 40. Demonstrate the ability to report any changes in the patient's status to the supervising physical therapist.
 - 41. Recognize when the direction to perform an intervention is beyond that which is appropriate for the PTA to do.
 - 42. 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.
 - 43. Demonstrate appropriate documentation skills that meet the requirements established by the profession, payers, and legal systems.
 - 44. Discuss the importance of reading healthcare literature.
 - 45. Discuss the requirement for interacting with other members of the health care team in patient-care and non-patient care activities.

- G. Understand the pathology and management of osteoporosis.
 - 46. Identify the risk factors for the development of osteoporosis.
 - 47. Identify typical medical diagnosis and management of osteoporosis.
 - 48. Propose modifications to physical therapy assessments and interventions for patients with osteoporosis.

- H. Demonstrate an understanding of pathologies and treatment applications specific to the practice of physical therapy with geriatric patients.
 - 49. Analyze normal age-related physiological changes as they relate to various theories of aging.
 - 50. Outline the benefits of physical activity for the elderly population.
 - 51. Summarize the typical clinical presentation of various geriatric diagnoses.

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>.