

**SOUTHEAST COMMUNITY COLLEGE
HEALTH SCIENCES DIVISION
PHYSICAL THERAPIST ASSISTANT
Revision Date: 12/2025**

I. CATALOG DESCRIPTION

Course Number: PTAS 1110
Course Title: Musculoskeletal Conditions and Rehabilitation
Prerequisite(s): Admission to the Physical Therapist Assistant Program

Catalog Description: This course includes instruction in the theory and clinical application of pathophysiology and therapeutic exercise interventions (range of motion, stretching, resistance and aerobic exercise) for common orthopedic impairments of the spine and upper and lower extremities, gait training strategies and basic skills of orthotic and supportive devices, adaptive and assistive equipment.

Credit Hours: 4
Class Hours: 45
Lab Hours: 45
Total Contact Hours: 90

II. COURSE OBJECTIVES: *Course will:*

1. Summarize pathogenesis, prognosis and therapeutic management of musculoskeletal conditions commonly encountered in physical therapy.
2. Summarize the clinical application of therapeutic interventions and data collections for health conditions of the cardiopulmonary, blood, immune, endocrine, gastrointestinal, urinary, and hepatic systems.
3. Summarize abnormalities of structure and function of the musculoskeletal system.
4. Summarize methods of management for rehabilitation of musculoskeletal health conditions.
5. Explore various data collection techniques for a given pathology including special tests, goniometry, joint end feel, and manual muscle testing.
6. Explain the role of the physical therapist assistant in the execution of a plan of care for individuals with musculoskeletal conditions.
7. Describe physical therapy interventions in the context of common musculoskeletal diagnoses and conditions.

Note: Unit objectives are located in the learning management system within each unit of study.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

A. STUDENT LEARNING OUTCOMES: *The student will be able to:*

1. Demonstrate professional behavior.
2. Choose appropriate interventions using exercise principles to progress or modify a simulated treatment (with a musculoskeletal health condition), within a physical therapist plan of care.
3. Recognize when a therapeutic intervention for a simulated patient with a musculoskeletal condition are beyond the scope of practice for a physical therapist assistant.
4. Instruct a simulated patient on safe therapeutic exercise intervention.
5. Demonstrate and provide instruction in appropriate exercise techniques for various diagnoses.
6. Understand guidelines for progression of exercise based on patient response and stage of healing.

7. Distinguish the of resistive exercise including: manual resistance, isotonic, isometric, isokinetic, and open and closed chain.
8. Differentiate the various modes of range of motion exercise including: active, active assistive, and passive.
9. Define and discuss the principles of aerobic exercise and conditioning.
10. Create a safe and effective therapeutic exercise plan based on a given orthopedic diagnosis and within a physical therapist plan of care.
11. Demonstrate safe and accurate data collection in the treatment of a patient with a musculoskeletal condition.
12. Understand the effects of load on healing and non-healing tissues within the human body including Overload Principle, SAID Principal, and Reversibility Principle.
13. Display behaviors consistent with the expected norms for a physical therapist assistant.
14. Use safe, legal and ethical performance of physical therapy interventions as applied to musculoskeletal diagnoses.
15. List and define the goals, indications, contraindications, and various techniques of therapeutic exercise, including both general and specific exercise regimes relative to the treatment of soft tissue, bony, and post-surgical problems.
16. Choose the appropriate equipment in the treatment of a patient with a neuromuscular health condition.
17. Relate the results of standardized tests and measures utilized for patients with musculoskeletal health conditions.
18. Identify and demonstrate the safe and proper use of equipment commonly found in a physical therapy setting.

B. GENERAL EDUCATION LEARNING OUTCOMES

1. GELO 3: Critical Thinking and Problem Solving

Outcome: Synthesize information to arrive at reasoned solutions to problems.

IV. CONTENT/TOPICAL OUTLINE (*course outline may provide more detailed information*)

A. UNITS

1. Range of motion
2. Flexibility
3. Strength
4. Endurance
5. Inflammation and Tissue Healing
6. Musculoskeletal Diseases
7. Surgical Procedures
8. Imaging in Musculoskeletal Diseases
9. Management of Tissue Inquiries
10. Shoulder
11. Elbow
12. Wrist and Hand
13. Spine
14. Pelvic
15. Hip
16. Knee
17. Ankle, Foot, and Toes

V. INSTRUCTIONAL MATERIALS REQUIRED

A. Required Text(s):

Bryan, E., *The Comprehensive Manual of Therapeutic Exercises* (current edition)
 Kisner & Kolby, *Therapeutic Exercise Foundations and Techniques* (current edition)

Manske, R., *Fundamental Orthopedic Management for the Physical Therapist Assistant*, (current edition)

B. Other Materials:

PhysioU App

VI. METHODS OF PRESENTATION/INSTRUCTION

A. Methods of presentation typically include a combination of the following:

1. Lecture
2. Demonstration
3. Handout Materials
4. Class Participation/Presentations
5. Case Studies and Group Work
6. Guest Presenters
7. Websites
8. Power Point slides and videos
9. Laboratory

VII. METHODS OF EVALUATION

A. Methods of evaluation typically include a combination of assignments, quizzes, exam, projects, skill checkoffs, etc. For grading expectations, please see the course information document.

SCC STANDARD GRADING SCALE POLICY:

A+	95-100	C+	75-79
A	90-94	C	70-74
B+	85-89	D+	65-69
B	80-84	D	60-64
		F	Below 60

VIII. SPECIFIC COURSE REQUIREMENTS

A. ATTENDANCE

Attendance is crucial to the success of this course. Any class missed could mean valuable missed information, which is difficult to obtain. Please notify the instructor of any pending absences or if you will be late. Absences in excess of four hours may result in failing the course.

B. Must pass all program courses with a C+ to progress to the next term. Courses with a classroom and lab portion must have a C+ or better in both.

Please see course information document for course policies related to grading, expectations, assignments, assessments, and participation.