



**MERCER**  
COUNTY COMMUNITY COLLEGE

# COURSE OUTLINE

Course Number	Course Title	Credits
PTA 222	Clinical Orthopedics	4
Hours: Lecture/Lab/Other	Co- or Pre-requisite	Implementation Semester & Year
3/3/0	Pre = PTA 105 Co = PTA 107	Fall 2023

**Catalog description:**

A study of orthopedic conditions and their underlying pathology. Emphasis on physical therapy interventions in the rehabilitation of specified conditions. Topics include, special tests, stretching, strengthening, joint mobilization, massage, exercise parameters and progression. Students develop skills through practice with each other using clinical scenarios to promote clinical decision making.

**General Education Category:**  
Not GenEd

**Course coordinator:** ([Rachel Cordasco](mailto:CordascR@mccc.edu), 609-570-3385, [CordascR@mccc.edu](mailto:CordascR@mccc.edu))

**Required texts & Other materials:**

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Req: Dutton M, (2012) Orthopaedics for the Physical Therapist Assistant, Jones & Bartlett, ISBN# 978-0-7637-9755-3

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Recommended:

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Cook C, Hegedus E, (2013) Orthopedic Physical Examination Tests, 2<sup>nd</sup> edition. Pearson. ISBN# 978-0-13-254478-8

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Shankman G, (2004), Fundamental Orthopedic Management for the Physical Therapist Assistant, 2<sup>nd</sup> ed., Mosby. ISBN# 978-0-323-02002-2

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Jarmey, C, Sharkey, S (2016) The Concise Book of Muscles, 3<sup>rd</sup> ed., North Atlantic Books ISBN# 978-1623-170-202

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Kisner Therapeutic Exercise 7<sup>th</sup> ed FA Davis 2018 978-0-8036-5850-0

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Konin (2016) Special Tests for Orthopedic Examination, 4<sup>th</sup> edition. Slack

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**Course Student Learning Outcomes (SLO):**

Following the successful completion of this course with a grade of C+ or higher, the learner will be able to:

1. Recognize that there is a relationship between impairments, functional limitations, patient goals and the therapeutic interventions chosen to address them.
2. Provide appropriate therapeutic interventions for a given clinical scenario, including possible progressions and taking into account precautions and contraindications.

3. Demonstrate therapeutic interventions including clear instructions, verbal cues and tactile cues that results in proper performance of the exercise or intervention.
4. Demonstrate continued development of professional behaviors in the classroom.
5. Integrate knowledge and clinical skills to develop effective manual skills for orthopedic conditions for the purpose of screening, assessing patient progress or assisting the PT in the determination of whether or not further testing is required for the peripheral joints and/or spine.
6. Demonstrate the ability to access professional literature for continued development of knowledge and skills in the management of orthopedic conditions

### **Course-specific Institutional Learning Goals (ILG):**

**Institutional Learning Goal 1. Written and Oral Communication in English.** Students will communicate effectively in both speech and writing.

**Institutional Learning Goal 3. Science.** Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.

**Institutional Learning Goal 9. Ethical Reasoning and Action.** Students will understand ethical frameworks, issues, and situations.

**Institutional Learning Goal 10. Information Literacy:** Students will recognize when information is needed and have the knowledge and skills to locate, evaluate, and effectively use information for college level work.

**Institutional Learning Goal 11. Critical Thinking:** Students will use critical thinking skills understand, analyze, or apply information or solve problems.

### **Program Learning Outcomes for Physical Therapist Assistant Program (PLO)**

## **Cognitive/Knowledge**

The learner will be able to successfully:

1. Describe normal and abnormal responses to orthopedic assessment screening tests for peripheral joints and/or cervical and lumbar spine
2. State the findings from orthopedic assessment screening tests for peripheral joints
3. State the findings from orthopedic assessment screening tests for the cervical and lumbar spine
4. Identify and describe orthopedic assessment screening tests for the peripheral joints and cervical and lumbar spine
5. Describe the concepts behind various soft tissue techniques including: muscle releases, Passive Range of Motion (PROM), joint distraction, open and closed packed joint positions, and muscle stretching techniques.
6. Define therapeutic exercise
7. Identify common substitution and compensation patterns seen during various therapeutic interventions
8. Identify the components of treatment interventions that need to be documented in a patient chart
9. Identify factors related to exercise safety
10. Describe the current disablement model
11. Recognize and define medical and descriptive terminology
12. Identify proper patient care sequence
13. Describe the process for managing patient/client care as per the Guide to PT Practice<sup>x</sup>
14. Recall indications, contraindications and precautions for range of motion exercises, stretching, strengthening, joint mobilization and aerobic exercise
15. Describe the sequence of events that occur during an episode of care that lead up to a PT delegating tasks to ta PTA<sup>x</sup>

16. Determine appropriate questions to gather subjective information from the patient
17. Indicate an understanding of appropriate warm up and cool down periods
18. Identify which factors would indicate that the intensity of therapeutic exercise needs to be adjusted
19. Recognize factors that impact spinal stability
20. Recall precautions and contraindications for all interventions reviewed
21. Describe methods of maximizing exercise safety
22. Identify exercise parameters
23. 1.18 Identify appropriate methods of performing the following interventions: PROM, stretching, strengthening, PNF, joint mobilization, soft tissue mobilization, aerobic exercise, massage, balance, spinal interventions (disk, kinesthetic training, posture, stabilization, body mechanics)
24. Determine the documentation responsibilities that differ between PTs and PTAs
25. Identify the portions of a SOAP note and the type of information that would go in each section
26. Identify the various types of medical documentation notes completed in physical therapy
27. Describe how the role of the PTA differs from that of the PT in relation to determining treatment interventions<sup>x</sup>
28. Define and differentiate between a medical diagnosis, physical therapy diagnosis, impairments and functional limitations
29. Distinguish between all components of an initial physical therapy evaluation
30. Identify planes of movement, type of muscle contraction, prime movers and the effects of gravity for various therapeutic exercises
31. Differentiate between the scope of practice of a PT versus a PTA<sup>x</sup>
32. Indicate how to adjust (increase or decrease) the intensity of stretching and strengthening by changing factors including duration, force, resistance, position, etc.
33. Differentiate between interventions that maintain joint range of motion from those that increase joint range of motion
34. Describe how to adjust exercise parameters to meet the needs of the patient
35. Provided with a muscle or muscle group, identify isometric, eccentric and concentric strengthening exercises
36. Apply basic principles of stretching and strengthening to muscles throughout the body
37. Identify appropriate therapeutic interventions to address a variety of impairments
38. Integrate knowledge from kinesiology into the new material in this PTA 222 course during lab scenarios, classroom case studies, quizzes and written exams
39. During instructor-led lab discussions, observe an intervention and determine its intention, which principles are being followed, and what might need to be changed
40. Interpret an initial physical therapy evaluation and understand the clinical relevance of data found within it
41. Assess and rate the performance of a classmate in a mock practical examination and compare observations with classmates and instructor
42. In small groups during class, generate possible interventions for patients who have balance deficits
43. Generate a physical therapy intervention plan based on goals outlined in an initial physical therapy evaluation<sup>x</sup>

## **Psychomotor**

The learner will be able to successfully:

1. Demonstrate competence in the performance of documenting patient results as reported by the evaluating PT from selected orthopedic assessment screening tests for peripheral joints
2. Demonstrate competence in the performance of documenting patient results as reported by the evaluating PT from selected orthopedic assessment screening tests for the cervical and lumbar spine
3. Distinguish between normal and abnormal patient responses when observing orthopedic assessment screening tests for peripheral joints and/or the cervical and lumbar spine
4. Recognize when orthopedic assessment screening tests for peripheral joints and/or cervical and lumbar spine should not be performed due to contraindications or a change in the patient's status
5. Demonstrate competence in the performance of various soft tissue techniques including: muscle releases, Passive Range of Motion (PROM), joint distraction, open and closed packed positions and muscle stretching techniques for selected muscles.
6. During lab scenarios, competency tests and practical examinations, perform selected data collection and treatment intervention techniques as directed by the supervising physical therapist, within the scope of practice of a PTA in New Jersey
7. Observe the instructor demonstrate treatment interventions during lab activities
8. Observe and review examples of proper documentation examples
9. Perform hand hygiene skills including hand sanitizing rub and hand wash during lab
10. Perform passive range of motion for all joints correctly during lab, as outlined by the skill demonstration list and critical safety indicators
11. Perform therapeutic interventions to increase joint range of motion (joint mobilization, muscle stretching, soft tissue mobilization) correctly during lab, as outlined by the skill demonstration list and critical safety indicators
12. Perform strengthening interventions correctly during lab, as outlined by the skill demonstration list and critical safety indicators
13. Perform therapeutic interventions for the spine (including kinesthetic training, postural awareness, stabilization and body mechanics) correctly during lab, as outlined by the skill demonstration list and critical safety indicators
14. Perform massage for relaxation correctly during lab
15. Perform therapeutic interventions designed to reduce pain originating from intervertebral disks
16. Perform therapeutic interventions designed to improve balance
17. Repeat correct hand hygiene techniques with enough frequency to demonstrate competence during competency testing and practical examinations
18. Repeat correct therapeutic interventions from P2 (as outlined by the skill demonstration list and critical safety indicators) with enough frequency to demonstrate competence during competency testing and practical examinations
19. Document a SOAP note
20. Demonstrate use of precision of medical language during supervised lab sessions
21. Repeat the program approved introduction until it is smooth and automatic
22. Ask subjective questions that are pertinent to the situation, while avoiding leading questions
  
23. Maintain a safe and competent hand wash process when other clinicians are sharing the same resources
24. Perform therapeutic interventions (P2) correctly and safely during psychomotor testing, as outlined by the skill demonstration list and critical safety indicators
25. Perform therapeutic interventions only in the absence of precautions and contraindications
26. Demonstrate proper and safe set up, use, and adjustment of exercise equipment (i.e. Cybex) in the fitness center
27. Prepare and maintain safe and effective treatment areas during lab activities, competency tests, and practical examinations
28. Perform selected therapeutic intervention techniques as directed by the supervising physical therapist during a practical examination, as outlined by the skill demonstration list and critical safety indicators

# Affective

The learner will be able to successfully:

## A1. Receive Phenomenon

- A1.1 Listen to others with respect
- A1.2 Receive feedback professionally
- A1.3 Attend class consistently
- A1.4 Arrive to all classes and clinicals prior to the start time

## A2. Respond to Phenomenon

- A2.1 Participate in class
- A2.2 Know the safety rules and practice them
- A2.3 Respond to feedback in a professional manner
- A2.4 Prepare for lectures, labs and clinicals ahead of time

## A3. Value

- A3.1 Demonstrate sensitivity to individual and cultural differences
- A3.2 Show an ability to solve problems
- A3.3 Inform PTAP faculty of matters one feels strongly about

## A4. Organize

- A4.1 Recognize the need for balance between educational and personal priorities
- A4.2 Accept professional ethical standards, as evidenced by following them
- A4.3 Prioritize times effectively to meet educational and personal needs
- A4.4 Complete and submit all assignments, assessments, and required documents on time

## A5. Internalize

- A5.1 Show self-reliance when working independently
- A5.2 Cooperate in group activities
- A5.3 Revise judgments and changes behavior in light of new evidence and feedback
- A5.4 Value people for who they are, not how they look
- A5.5 Identify sources of stress and implement effective coping behaviors
- A5.6 Demonstrate a commitment to the physical therapy profession

## **Units of study in detail – Unit Student Learning Outcomes:**

<b>Unit</b>	<b>Description</b>	<b>MCCC Core Skills</b>	<b>Learning Objectives</b>
Unit 1	Introduction to Orthopedics and Exercise	1,3,9,10,11	C6, C7, C8, C9, C10, C12, C16, C17
Unit 2	The Cervical Spine, Special Tests and Exercise	1,3,9,10,11	C1, C3,C4, C11, C13, C14, C15, C18, C19, C20, C21, P3, P4, P5, P7, P8, P9, P10, P11
Unit 3	The Lumbar Spine, Special Tests and Exercise	1,3,9,10,11	C1, C3,C4, C11, C13, C14, C15, C18, C19, C20, C21, P3, P4, P5, P7, P8, , P9, P10, P11
Unit 4	The Hip, Special Tests and Exercise	1,3,9,10,11	C1, C3,C4, C11, C13, C14, C15, C18, C19, C20, C21, P5, P7, P8, P9, P10, P11
Unit 5	The Knee, Special Tests and Exercise	1,3,9,10,11	C1, C3,C4, C11, C13, C14, C15, C18, C19, C20, C21, P5, P7, P8, P9, P10, P11

Unit 6	The Ankle and Foot, Special Tests and Exercise	1,3,9,10,11	C1, C3,C4, C11, C13, C14, C15, C18, C19, C20, C21,P5, P7, P8, P9, P10, P11
Unit 7	The Shoulder, Special Tests and Exercise	1,3,9,10,11	C1, C3,C4, C11, C13, C14, C15, C18, C19, C20, C21, P5, P7, P8, P9, P10, P11
Unit 8	The Elbow, Special Tests and Exercise	1,3,9,10,11	C1, C3,C4, C11, C13, C14, C15, C18, C19, C20, C21, P5, P7, P8, P9, P10, P11
Unit 9	The Wrist and Hand, Special Tests and Exercise	1,3,9,10,11	C1, C3,C4, C11, C13, C14, C15, C18, C19, C20, C21, P5, P7, P8, P9, P10, P11
Unit 10	Therapeutic Massage	1,3,9,10,11	C5, C23, C24, C25, C26, P5, P12, P13
Unit 11	Gym Equipment Use (on location)	1,3,9,10,11	P6, P7

**Evaluation of student learning:**

<b>Assessment</b>	<b>Percentage of grade</b>
5 Written Exams	45%
1 Literature Review	5%
4 Soap Note Writing Assignments	10%
4 Competency Tests	10%
1 Practical Examination	25%
1 Generic Abilities (ongoing assessment)	5%