



MERCER
COUNTY COMMUNITY COLLEGE

COURSE OUTLINE

Course Number	Course Title	Credits
PTA 107	Therapeutic Measurement	2
Hours: Lecture/Lab/Other	Co- or Pre-requisite	Implementation Semester & Year
1/2/0	<div style="border: 1px solid black; padding: 5px;"> Pre-requisite = PTA 105, BIO 104 LEC & LAB with a grade of C+ or higher completed within the past 5 years Co-requisite = PTA 222 (clinical orthopedics) </div>	Fall 2023

Catalog description:

Addresses bony landmarks, muscle length, measurement of joint range of motion and muscle strength. Medical documentation is introduced. Students develop their skills through practice with each other. Competencies evaluated throughout the course.

General Education Category:
Not GenEd

Course coordinator: ([Holly Kaiser, 570-3478, KaiserH@mccc.edu](mailto:Holly.Kaiser@mccc.edu))

Required texts & Other materials:

These are recommended, not required:

Biel A, *Trail Guide to the Body 3rd ed.*, Books of Discovery Publishers, Boulder CO, 2005. ISBN 0-9658534-5-4

Santé Learning Systems, & Books of Discovery. *Trail Guide to the Body DVD*. Books of Discovery, Boulder, CO, 2008.

ISBN: 978-0-9777006-7-7

GONI RehabLearning App from the App Store

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 PTA 107 (PLO)

Cognitive/Knowledge

The learner will be able to successfully:

C1. Knows specific facts (Remember)

- C1.1 Identify prime movers for each motion within the body
- C1.2 Identify common substitution and compensation patterns seen during goniometry and manual muscle testing
- C1.3 Identify the components of measurements that need to be documented in a patient chart
- C1.4 Recall commonly accepted “normal” values
- C1.5 Describe the normal end feel during passive range of motion for each joint
- C1.6 Identify which anatomical plane each motion of the body occurs in, while in anatomic position and testing positions
- C1.7 Identify alignment of the fulcrum, stationary arm and moving arm of a goniometer using bony landmarks for all motions of the body
- C1.8 Identify proper stabilization, clinician hand placement, and patient instruction for all motions for goniometry and manual muscle testing
- C1.9 Identify recommended (standard) patient positions for all motions for both goniometry and manual muscle testing
- C1.10 Recognize and define medical and descriptive terminology
- C1.11 Select the most appropriate goniometer size for each joint
- C1.12 Describe the components and proper use of various measurement tools
- C1.13 Recognize bony landmarks used during goniometry and describe how to identify and palpate them
- C1.14 Identify proper patient care sequence

C2. Comprehends basic concepts and principles (Understand)

- C2.1 Describe how the role of the PTA differs from that of the PT in relation to gathering objective data
- C2.2 Describe types of muscle contractions (isometric, concentric, eccentric) responsible for joint movements
- C2.3 Contrast and compare various measurement tools
- C2.4 Describe the difference between active, passive, and active assisted range of motion
- C2.5 Differentiate between the advantages & disadvantages of various measurement techniques for goniometry
- C2.6 Differentiate between gravity assisted, against gravity and gravity eliminated testing positions for manual muscle testing

C3. Applies basic concepts and principles to new situations (Apply)

- C3.1 In small and large group discussions, apply the principles of goniometry to the joints of the hand
- C3.2 Apply basic principles of stretching and strengthening to muscles throughout the body
- C3.3 Distinguish between positions that measure muscle length and those which measure joint range of motion
- C3.4 Apply the principles of manual muscle testing to determine muscle grades using both numerical and quantitative scores
- C3.5 During classroom activities, apply the principles of manual muscle testing to determine appropriate placement for resistance for various muscles

C4. Demonstrates the ability to analyze procedures to determine if organizational principles are being followed (Analyze)

- C4.1 During instructor-led lab discussions, question standard manual muscle testing procedures to determine if they follow the principles and rules of manual muscle testing
- C5. Applies thinking skills when judging data and performance (Evaluate)
- C5.1 Judge the adequacy with which changes in standard positions have been supported by data
 - C5.2 Interpret a research article related to goniometry or manual muscle testing and its impact on the testing procedure or interpretation of the testing procedure
 - C5.3 Assess and rate the performance of a classmate in a mock practical examination and compare observations with classmates and instructor
- C6. Uses knowledge to create new methods necessary to gather data (Create)
- C6.1 Arrange a testing sequence for goniometry and manual muscle testing to minimize positional changes for the subject
 - C6.2 In small groups during class, generate possible solutions for patients who are unable to assume a standard testing position
 - C6.3 Generate a new procedure for MMT utilizing the principles of MMT in a lab session

Psychomotor

The learner will be able to successfully:

- P1. Observe course skills performed by the instructor (Observe)
- P1.1 Observe the instructor demonstrate goniometry and manual muscle testing for all joint motions during lab activities
 - P1.2 Observe and review examples of proper documentation examples
- P2. Copy data collection skills during lab activities, with feedback provided by the course instructor (Imitate)
- P2.1 Perform hand hygiene skills including hand sanitizing rub and hand wash during lab
 - P2.2 Perform goniometric measurement of joint range of motion for all joints during lab, as outlined by the skill demonstration list and critical safety indicators
 - P2.3 Perform manual muscle tests for all grades for each joint motion correctly during lab, as outlined by the skill demonstration list and critical safety indicators
 - P2.4 Communicate effectively and professionally with subjects during labs, case scenarios, competency tests and practical examinations
- P3. Perform skills repeatedly to make the movements more automatic and smooth (Practice)
- P3.1 Repeat correct hand hygiene techniques with enough frequency to demonstrate competence during competency testing and practical examinations
 - P3.2 Repeat correct goniometry and manual muscle testing sequences (as outlined by the skill demonstration list and critical safety indicators) with enough frequency to demonstrate competence during competency testing and practical examinations
 - P3.3 Document the subjective and objective portions of a SOAP note
 - P3.4 Demonstrate use of precision of medical language on written quizzes and during supervised lab sessions
 - P3.5 Repeat the program approved introduction until it is smooth and automatic
 - P3.6 Ask subjective questions that are pertinent to the situation, while avoiding leading questions
- P4. Make adjustments in the performance of goniometry and manual muscle testing in order to perfect these skills (Adapt)
- P4.1 Maintain a safe and competent hand wash process when other clinicians are sharing the same resources
 - P4.2 Properly locate and palpate random bony landmarks used in goniometry during competency testing
 - P4.3 Use a goniometer to measure random active joint range of motion of a classmate or instructor during competency testing, as outlined by the skill demonstration list and critical safety indicators

- P4.4 Perform random manual muscle tests to measure a classmate or instructor's actual muscle strength during competency testing, as outlined by the skill demonstration list and critical safety indicators
- P4.5 Prepare and maintain safe and effective treatment areas
- P4.6 Perform selected data collection techniques as directed by the supervising physical therapist during a practical examination, as outlined by the skill demonstration list and critical safety indicators
- P4.7 During lab activities and competency tests, identify which CPT Code(s) you would bill for and the rationale for choosing the code(s)
- P4.8 During lab scenarios, competency tests and practical examinations, practice within the scope of practice of a PTA in New Jersey
- P4.9 Respond effectively to subject and/or environmental emergencies that occur in the lab during instruction, practice and testing

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

Evaluation of student learning:

Grading

Learning Domain	Assessment	% of course grade
Cognitive	Exam #1	40
	Exam #2	
	Exam #3	
	11 Quizzes	8
	Article Review	4

Psychomotor	4 SOAP notes	8
	4 Competency Tests	10
	1 Practical Examination	25
Affective	Generic Abilities Assessment	5
	Total	100