

**Northwest Arkansas Community College  
Health Professions Division:  
Physical Therapy Program Course Outline**

**Course Number and Title**

PHTA 2114 & 2112 Basic PT Tests and Measures Lecture and Lab

**Catalog Description**

**PHTA 2114**

This course provides contraindications and precautions for goniometric measurement and functional manual muscle test procedures, the location of commonly used bony landmarks and soft tissue structures, and normal and abnormal postural alignment assessment.

**PHTA 2112**

This laboratory course provides skills for position, safety, palpation, and accurate assessment during goniometric measurement, functional manual muscle test procedures, and postural assessments to accompany PHTA 2114.

**Prerequisites**

Admission into the Physical Therapist Assistant Program

**Credit Hours/Contact Hours/Load Hours**

4/52.5/4

2/75/6

**Target Audience**

Students admitted to the PTA Program

**Student Learning Outcomes**

**LECTURE COURSE OBJECTIVES**

Upon successful completion of this course the student should be able to:

1. Describe, list, and/or identify the required patient positions for the completion of goniometric measurement and manual muscle testing.

2. Describe, list, and/or identify the bony landmarks utilized for goniometric measurement for the axis, stationary arm and moveable arm.
3. Given a patient scenario assess the manual muscle grade and/or correct patient position for the manual muscle test, and the muscle(s) assessed.
4. Use medical terminology to describe resting posture in any position.
5. Given a picture or diagram assess normal and abnormal spinal posture.
6. List and/or identify the normal range of motion and end feel for major joints.
7. Given a diagram or picture visually assess functional range of motion without the use of a goniometer.
8. Given a written description identify and differentiate between normal and abnormal joint movements.
9. Identify the normal end feel of each major joint, and explain the probable cause for any alterations.
10. Recognize muscle atrophy and hypertrophy.
11. List and/or identify indications, precautions, and contraindications for manual muscle test and range of motion assessments.
12. List the description and corresponding name of each MMT grade from 0 – 5.
13. Given a scenario, assess the strength of major muscle groups, using the standard manual muscle test and scoring.
14. Relate musculoskeletal abnormalities to the abnormal posture that accompany them.
15. Apply basic biomechanical principles to movement and to anatomical structures
16. Identify basic joint characteristics.
17. Given a bone or diagram identify and name bones and bony landmarks of the UE's, LE's, TMJ and spine.
18. Given a muscle name identify the muscle: origins and insertions, and muscle action.

19. Given a written description of a functional activity or limb movement, assess the following:

- a. muscle(s) working
- b. type muscle contraction (eccentric, concentric, isotonic, isometric etc.)
- c. agonist and antagonist muscles
- d. influence of gravity (against gravity, gravity assisted, gravity eliminated)
- e. differentiate between open and closed chain activities

20. Differentiate between the cervical, thoracic, and lumbar spine for function of vertebral curves, movement available.

21. Given a written description differentiate between quiet inspiration, deep inspiration, forced inspiration, forced expiration and identify and/or list the muscles working.

22. Demonstrate basic understanding of the TMJ joint to include: muscles, muscle actions, joint type, and function.

23. Identify loose-packed and closed-packed position for selected joints

24. Recognize definitions for various end feels.

25. Identify &/or describe a variety of common joint deformities

26. Identify and provide the correct terminology for a variety for positions.

Supine, Prone, Quadruped, Half sitting, Long sitting, Tall kneeling, Half kneeling.

#### LAB COURSE OBJECTIVES:

Upon successful completion of this course, the student should be able to:

1. Communicate verbally and nonverbally the required positions and patient responsibilities for the completion of goniometric measurement and manual muscle testing.

2. Communicate verbally and through written documentation the outcome of manual muscle tests and goniometric measurements, including any deviations from the standard procedure.

3. Use medical terminology to describe resting posture in any position.
4. Use medical terminology to describe the alignment of the trunk and extremities at rest and during activities.
5. Utilize safe body mechanics while handling patients, for the purpose of positioning and assessing range of motion, muscle length, and muscle strength.
6. Utilize appropriate handling techniques while assessing active/passive range of motion and muscle length/strength.
7. Assess normal and abnormal spinal posture, using a plumb line.
8. Verbalize the visual assessment of the range of motion and muscle length at each major joint.
9. Use a goniometer to assess range of motion and muscle length at each major joint.
10. Visually assess functional range of motion without the use of a goniometer.
11. Palpate and verbally identify superficial muscles, tendons, ligaments, and various other landmarks needed to accurately assess posture, strength, and range of motion.
12. Recognize indications, precautions, and contraindications for manual muscle test and range of motion assessments.
13. Assess the strength of every major muscle group, using the standard manual muscle test and scoring.
14. Develop a patient chart for a classmate, which will include height, weight, vital signs, muscle length, ROM, and strength for all major muscle groups.
15. Perform a comprehensive assessment of muscle length, strength, and joint range of motion on a mock patient, with minimal positional changes and within a reasonable time frame to reduce the risk of patient fatigue.
16. Demonstrate critical thinking skills to safely modify ROM and MMT positions, without compromising the validity of the test.
17. Assess Q-angle, and leg length.

## **Forms of Assessment**

- Lab Practical examinations
- Written Examinations
- Homework
- Participation
- Lab Activities
- Case Based Problem Solving Activities