STANDARD COURSE OUTLINE
PHTA 2114 Basic Physical Therapy Tests and Measures
PHTA 2112 Basic Physical Therapy Tests and Measures Lab

PREREQUISITE

MATH	1204	College Algebra **OR**
MATH	1003	Math for AAS
BIOL	2214	Anatomy & Physiology I
BIOL	2224	Anatomy & Physiology II
PSYC	2003	General Psychology
ENGL	1013	English Composition I
ENGL	1023	English Composition II **OR**
ENGL	2013	Technical Writing
AHSC	1001	Medical Terminology
CISQ	1103	Introduction To Computer Information
PHTA	2105	Clinical Kinesiology

Admission into the Physical Therapist Assistant Program

COURSE DESCRIPTION
PHTA 2112 & PHTA 2114 provides training in ROM measurement techniques, which include observational and goniometric, manual muscle test procedures; the development of manual palpation skills of bone and soft tissue structure, and postural assessment. In addition, PHTA 2114 expands on basic information obtained in PHTA 2105 Clinical Kinesiology in PT including the relationship between structure and movement function of the human body, basic joint structure, muscle anatomy and function (origin, insertion, action and innervation), types of muscle contraction, and the application of biomechanical and kinesiological principles to analyze common motor tasks.

CREDIT HOURS:
PHTA 2114: 4 credit hours / non-transferable/ 4 contact hours and 4 load hours
PHTA 2112: 2 credit hours/ non-transferable/ 6 contact hours and 6 load hours

TARGET AUDIENCE Students admitted to the PTA Program

INSTRUCTIONAL MATERIALS: See Instructor for Details

LEARNING OUTCOMES
PHTA 2114 Basic PT Tests and Measures Lecture
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
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
    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 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.

LEARNING OUTCOMES PHTA 2112 Basic PT Tests and Measures Lab:
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. Use a goniometer to assess range of motion and muscle length at each major joint.
9. Visually assess functional range of motion without the use of a goniometer.
10. Palpate and verbally identify superficial muscles, tendons, ligaments, and various other landmarks needed to accurately assess posture, strength, and range of motion.
11. Recognize indications, precautions, and contraindications for manual muscle test and range of motion assessments.
12. Assess the strength of every major muscle group, using the standard manual muscle test and scoring.
13. Develop a patient chart for a classmate, which will include height, weight, vital signs, muscle length, ROM, and strength for all major muscle groups.
14. 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.
15. Demonstrate critical thinking skills to safely modify ROM and MMT positions, without compromising the validity of the test.
16. Assess Q-angle, and leg length.

TOPICS

Medical Terminology, Draping Skills, Body Mechanics, joint movement, ROM assessment/contraindications/precautions/ Palpation of bony landmarks, and End Feels. Reading a Goniometer, MMT& ROM of Pelvis, Hip, knee, ankle, foot, shoulder girdle, shoulder, elbow, wrist, & hand. Posture assessment, Cervical and trunk ROM and MMT. Muscle(s) location, action, origin, insertion, nerve innervations, analyzing body movements regarding muscles working, type contraction

FORMS OF ASSESSMENT:

Written Exams
Quizzes
Lab Practical Examinations
Assignments
*All Lab Practical examinations will include Professionalism, Ethical Behavior, Safety, and both written and verbal communication.