COURSE OUTLINE

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTA 107</td>
<td>Therapeutic Measurement</td>
<td>2</td>
</tr>
</tbody>
</table>

Hours: lecture/Lab/Other 1/2/0

Pre-requisite PTA 101, PTA 112, BIO 104 LEC & LAB with a grade of C+ or higher completed within the past 5 years

Co-requisite

PTA 105

Implementation

Summer

Catalog description:

Laboratory practice of measurement skills for joint range of motion (ROM), muscle length, and muscle strength. Includes volumetric, circumferential and postural assessments; manual muscle tests; and range of motion measurements using a goniometer. Competencies evaluated throughout the course.

Required texts/other materials:


Recommended Texts:


ISBN: 978-0-9777006-7-7

Revision date: Summer 2016

Course coordinator: Holly Kaiser, 609-570-3478, Kaiserh@mccc.edu

Information resources:

This course makes use of the required texts for the course and in addition, uses a laboratory manual created by the instructor.

Course Competencies/Goals:

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

MCCC Course Outline; Approved by the Curriculum Committee 12/6/07
1. Observe the available range of motion in a specified joint of a classmate and verbally report whether or not the motion looks like it is within normal limits, functional limits or is limited and then objectively measure the motion with a goniometer and document the range of motion.

2. Observe the size of a peripheral extremity and compare it with the opposite extremity and assess whether or not there is a size differential in girth and length and then objectively measure the area to determine whether or not there is a difference.

3. Manually assess the strength of a peripheral muscle group against gravity and in gravity eliminated positions to determine how much muscle strength is present in the prime movers for that muscle group and whether or not the test position needs to be changed.

Course-specific General Education Knowledge Goals and Core Skills.

**General Education Knowledge Goals**

- **Goal 1. Communication.** Students will communicate effectively in both speech and writing.
- **Goal 2. Mathematics.** Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems.

**MCCC Core Skills**

- **Goal A. Written and Oral Communication in English.** Students will communicate effectively in speech and writing, and demonstrate proficiency in reading.
- **Goal B. Critical Thinking and Problem-solving.** Students will use critical thinking and problem solving skills in analyzing information.
- **Goal D. 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.
- **Goal F. Collaboration and Cooperation.** Students will develop the interpersonal skills required for effective performance in group situations.

Units of study in detail:

<table>
<thead>
<tr>
<th>Units of study</th>
<th>Goals:</th>
<th>Learning Objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 1</td>
<td>1, A, B, D, F</td>
<td>C14, P5, P6, A1, A2, A3, A4</td>
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<tr>
<td>Unit 2</td>
<td>1, 2, A, B, D, F</td>
<td>C4, C14, C16, C17, P3, P4, P6, P9, A1, A2, A3, A4</td>
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<tr>
<td>Unit 3</td>
<td>1, 2, A, B, D, F</td>
<td>C2, C4, C5, C7, C8, C14, C15, A1, A2, A3, A4</td>
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<tr>
<td>Unit 4</td>
<td>1, 2, A, B, D, F</td>
<td>C2, C4, C5, C7, C8, C9, C14, A1, A2, A3, A4</td>
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<td>Unit 5</td>
<td>1, 2, A, B, D, F</td>
<td>C1, C2, C3, C5, C6, C8, C9, C10, C11, C12, C13, C14, P1, P2, P6, P7, P8, P9, A1, A2, A3, A4</td>
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<tr>
<td>Unit 6</td>
<td>1, 2, A, B, D, F</td>
<td>C1, C2, C3, C5, C6, C8, C9, C10, C11, C12, C13, C14, P1, P2, P6, P7, P8, P9, A1, A2, A3, A4</td>
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<tr>
<td>Unit 7</td>
<td>1, 2, A, B, D, F</td>
<td>C1, C2, C3, C5, C6, C8, C9, C10, C11, C12, C13, C14, P1, P2, P6, P7, P8, P9, A1, A2, A3, A4</td>
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*Learning Objectives have been identified in each of the following domains of learning:*
The student will be able to…

**Cognitive/Knowledge**
The student/learner will be able to successfully:
1. identify synergistic muscle groups that initiate and continue motion for the peripheral joints
2. differentiate between gravity assisted, gravity resisted and gravity eliminated testing positions for MMT
3. identify muscles that will try to substitute for weak muscles to maintain or perform a specified motion
4. differentiate between the advantages & disadvantages of various measurement techniques for strength, ROM and extremity size or volume
5. identify the components of measurements that need to be documented in a patient chart
6. recognize normal and abnormal joint movement, as well as commonly accepted “normal” values
7. describe the difference between active ROM, passive ROM, and active assisted ROM
8. describe the normal end feel during joint ROM for a specific joint
9. differentiate between the various muscle grades using “5/5” terminology
10. identify which anatomical plane each motion of the peripheral joints occur within
11. identify alignment of the fulcrum, stationary arm and moving arm of a goniometer using bony landmarks for all motions of the peripheral joints
12. identify proper stabilization, clinician hand placement, and patient instruction for all motions of the peripheral joints
13. identify recommended (standard) patient positions for all motions of the peripheral joints for both goniometry and manual muscle testing
14. recognize and define medical terminology
15. differentiate between the uses for different sizes of goniometers
16. describe the purpose of a volumetric assessment for edema
17. contrast and compare a tape measure with a volumeter for edema assessment

**Psychomotor**
The student/learner will be able to successfully:
1. perform manual muscle tests for all grades for the prime movers
2. perform goniometric measurement of joint range of motion for all peripheral joints
3. perform a volumetric measurement for the hand and foot/ankle
4. perform circumferential measurements for an upper extremity
5. perform a postural assessment for a seated and standing patient
6. document objective measurements in the patient chart
7. recognize normal and abnormal muscle length
8. demonstrate MMT utilizing the principles of mechanical advantage
9. demonstrate documentation of measurements taken with a goniometer, a tape measure and a volumeter

**Affective**
The student/learner will be able to successfully:
1. Display communication styles utilized in the clinical setting
2. Demonstrate a commitment to learning by attending class consistently and showing up on time
3. Demonstrate a commitment to learning by preparing for each class
4. Demonstrate responsibility and professionalism by completing assignments in a timely manner

**Evaluation of student learning**

<table>
<thead>
<tr>
<th>Grading</th>
<th>% of grade</th>
<th>Activity</th>
<th>Number within course</th>
</tr>
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<tbody>
<tr>
<td>Credit Hours</td>
<td>Assessment Type</td>
<td>Weight</td>
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<tr>
<td>--------------</td>
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<tr>
<td>45</td>
<td>Written Exams</td>
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<tr>
<td>15</td>
<td>Quizzes**</td>
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<tr>
<td>NA</td>
<td>Article Reviews</td>
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<tr>
<td>NA</td>
<td>Papers</td>
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<tr>
<td>NA</td>
<td>Presentation(s)</td>
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<tr>
<td>5</td>
<td>Generic Abilities Assessment</td>
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<tr>
<td>25</td>
<td>Practical Exam</td>
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<tr>
<td>10</td>
<td>Competency Tests**</td>
<td>4</td>
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**Academic Integrity Statement:** There is a zero tolerance policy for plagiarism. Any work that violates the MCCC Academic Integrity policy will receive a grade of “0” and the learner will be reported to the College’s Academic Integrity Committee consistent with College policies. See [http://mlink.mccc.edu/omb/OMB210.pdf](http://mlink.mccc.edu/omb/OMB210.pdf)