



COURSE OUTLINE

Course Number
PTA 216

Course Title
Orthopedics in PTA

Credits
2

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

Pre-requisite
PTA 107 Therapeutic Measurement
PTA 112 Pathology

Implementation
sem/year

Catalog description:

A study of orthopedic conditions and their underlying pathology. Emphasis on physical therapy interventions utilized in the rehabilitation of specified conditions. Required course for all PTA majors.

Required texts/other materials:

| | | | | | |
|---------------|--|-----|--------------------|------|-------------------|
| Dutton | Orthopadics for PTAs | 1st | Jones & Bartlett | 2012 | 978-0-7637-9755-3 |
| Cook, Hegedus | Orthopaedic Physical Examination Tests | 2nd | | 2013 | 978-0-1325478-8 |
| Jarmey | <i>The Concise Book of Muscles</i> | 1st | No. Atlantic Books | 2008 | 978-1-55643-719-9 |

Revision date: Spring 2016

Course coordinator: Barbara J. Behrens, behrensb@mccc.edu

Information resources: Primal Pictures Interactive Functional Anatomy Software

www.primalpictures.com ISBN 1-90247089-3

www.anatomy.tv

Trail Guide to the Body DVD, Books of Discovery ISBN 978-0-9777006-7-7

A goniometer is required and additional handouts are provided by the instructor.

Other learning resources: Primal Pictures software is available for use on laptops in the PTA program lab at no charge to learners enrolled in the course during open lab hours which are posted on a schedule outside of the lab.

Course Competencies/Goals:

The student/learner will be able to:

1. Demonstrate professional behaviors in the classroom.
2. 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.
3. Demonstrate the ability to access professional literature for continued development of knowledge and skills in the management of orthopedic conditions.

Course Objectives:

Cognitive/Knowledge:

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.

Psychomotor:

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 or performing 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.

Affective:

1. Recognize when assessment results need to be verified, consulting with the physical therapist and current literature if appropriate
2. Accept responsibility for assessment skills and seek assistance from the physical therapist and guidance for continuing education courses for further development of these skills
3. Recognizes the importance of clinical affiliations where orthopedic assessment skills can be practiced and refined and seeks clinicals and employment for that purpose

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 3. Science. Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.

Goal 9. Ethical Reasoning and Action. Students will understand ethical issues and situations.

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 C. Ethical Decision-Making. Students will recognize, analyze and assess ethical issues and situations.

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.

Goal G. Intra-Cultural and Inter-Cultural Responsibility. Students will demonstrate an awareness of the responsibilities of intelligent citizenship in a diverse and pluralistic society, and will demonstrate cultural, global, and environmental awareness.

Units of study in detail.

Each unit centers on a topic that supports the Course Goals

| | | Goals: | Learning Objectives |
|----------------------|---|-------------------|--|
| <u>Unit 1</u> | Professional Behaviors | 1, A, G | C4, P1, P2, P3, P4, A1, A2, A3 |
| <u>Unit 2</u> | The Cervical and Lumbar Spine | 3, B, D, F | C4, P1, P2, P3, P4, A1, A2, A3 |
| <u>Unit 3</u> | The Lower Extremity | 3, B, D, F | C1, C2, C3, P1, P2, P3, P4, A1, A2, A3 |
| <u>Unit 4</u> | The Upper Extremity | 3, B, D, F | C1, C2, C3, P1, P2, P3, P4, A1, A2, A3 |
| <u>Unit 5</u> | Management of Patients with Orthopedic Disorders | 3, B, D, F | C1, C2, C3, P1, P2, P3, P4, A1, A2, A3 |
| <u>Unit 6</u> | Professional Literature and Orthopedic Conditions | 1,3,9,A,B,C,D,F,G | C1, C2, C3, C4, P1, P2, P3, P4, A1, A2, A3 |

Units of study in detail.

1. **Unit 1** Professional Behaviors

The student/learner will be able to...

Demonstrate continued development of professional behaviors in the classroom.

- 1.1 *Be responsible for having demonstrated professional behavior patterns which include, but are not limited to, adhering to designated times for each educational experience, following a dress code, being adequately prepared, participating in class discussions, following laboratory and safety rules and displaying appropriate interpersonal dynamics, and communication skills including an oral presentation.*
(Gen Ed Goals: 1, Core Skill Goals A,&G)

2. **Unit II** The Cervical and Lumbar Spine

The student/learner will be able to...

Integrate knowledge and clinical skills to develop effective physical therapy interventions for the cervical and lumbar spine **(Gen Ed Goals: 3, Core Skill Goals B, D & F)**

- 2.1 Compare/contrast normal movement patterns of cervical and lumbar spine.
- 2.2 Define scoliosis as either functional or non-functional.
- 2.3 Identify primary and secondary curves.
- 2.4 Compare and contrast kyphosis vs. lordosis as a pathological entity.
- 2.5 Deduce from a patient problem, likely structural abnormalities associated with scoliosis.
- 2.6 Discuss acute or chronic mechanical sprains and strains of the low back in terms of signs and symptoms.
- 2.7 Diagram anatomy of the intervertebral disk, changes with age and pathology at the disk level.
- 2.8 Differentiate between herniation and bulge.
- 2.9 Define spondylolisthesis as either stable or unstable and define a treatment approach for each.
- 2.10 Define and discuss various exercise approaches appropriate for spinal conditions in the cervical and lumbar spines including but not limited to: degenerative disc disease, degenerative joint disease, fusions, sprains & strains, thoracic outlet syndrome, flexion versus extension, laminectomies, stenosis, surgical and non-surgical fractures, microdiscectomies, piroformis syndrome, and sacroiliac dysfunction.
- 2.11 Demonstrate the ability to correctly instruct an individual in exercise treatment for conditions of the spine within the plan of care established by the PT.

3. **Unit III** The Lower Extremity

The student/learner will be able to...

Integrate knowledge and clinical skills to develop effective physical therapy interventions for the lower extremity. **(Gen Ed Goals: 3, Core Skill Goals B, D & F)**

- 3.1 Define the etiology, pathology, clinical picture, and treatment of the following lower extremity conditions of the hip
- 3.2 Define the etiology, pathology, clinical picture and treatment of the following lower extremity conditions of the knee including but not limited to surgical versus non-surgical options, standardized protocols for operative procedures
- 3.3 Describe the etiology, pathology, clinical picture and treatment of the following lower extremity conditions including but not limited to surgical versus non-surgical options, standardized protocols for operative procedures involving ligamentous and other injuries of the foot and ankle **(Gen Ed Goals: 3, Core Skill Goals B, D & F)**
- 3.4 Demonstrate the ability to correctly instruct an individual in an exercise program for conditions of the lower extremity within the plan of care established by the PT.

4. **Unit IV** The Upper Extremity

The student/learner will be able to...

Integrate knowledge and clinical skills to develop effective physical therapy interventions for upper extremity conditions. **(Gen Ed Goals: 3, Core Skill Goals B, D & F)**

- 4.1 Describe shoulder pathology, etiology, clinical picture, and treatment of the following upper extremity conditions which may be surgical or non-surgical and involve specific protocols
- 4.2 Describe the etiology, pathology, clinical picture and treatment of the following upper extremity conditions which may be surgical or non-surgical and involve specific protocols
- 4.3 Demonstrate the ability to correctly instruct an individual in an exercise program for conditions of the upper extremity within the plan of care established by the PT.

5. **Unit V** Management of Patients with Orthopedic Disorders

The student will be able to...

Demonstrate ability to identify and perform effective interventions in the management of patients with orthopedic disorders. **(Gen Ed Goals: 3, Core Skill Goals B, C, D & F)**

- 5.1 Demonstrate the ability to integrate previous classroom and laboratory knowledge and skills (including but not limited to therapeutic exercise, data collection, transfers, gait training and documentation) to obtain proposed goals for patients with orthopedic disorders.
- 5.2 Demonstrate ability to assess patient's response to treatment and identify appropriate treatment modifications within the plan of care.
- 5.3 Describe how the PTA assists the PT with discharge planning.

6. **Unit VI** Professional Literature and Orthopedic Conditions

The student will be able to...

Demonstrate the ability to access professional literature for continued development of knowledge and skills in the management of orthopedic conditions. **(Gen Ed Goals: 1, 3 & 9 Core Skill Goals A, B, C, D, F&G)**

Evaluation of student learning

| % of grade | Activity | # per semester |
|-------------------|-------------------------|-----------------------|
| 50 | Exams | 3 |
| 10 | Presentations | 1 |
| 5 | Class/lab participation | Continuous |
| 15 | Competency Tests | 3 |
| 20 | Practical Exam | 1 |

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>