



Jordan University of Science and Technology
Faculty of Applied Medical Sciences
Department of Rehabilitation Sciences
 First Semester 2013-2014, Course Syllabus

Course Information	
Course Title	Physical Therapy in Orthopedics
Course Number	PT 341
Instructor	Saddam Kanaan, PT, PhD
Teaching Assistants	Sakher Obaidat, PT; Terez Kabboushi, PT
Office Location	
Office Phone	NA
Office Hours	
E-mail	sfkanaan@just.edu.jo
Class Time	
Class Room	
Course Credit	3 credit hours (2 theory (2 contact hours per week): 1 practical (2 contact hours per week))
Course Description	
<p>This course builds on previous knowledge of anatomy, pathology, physiology, biomechanics, kinesiology, musculoskeletal assessment, diseases of muscle and bone, and therapeutic exercises. Basic assessment methods of musculoskeletal assessment of peripheral joints and spine will be introduced in this course and will be related to clinical situations. Physical therapy treatment and rehabilitation of peripheral joints and spine will be taught to prepare students for clinical situations. This course will be taught by lectures, active learning, case studies and lab demonstrations.</p>	

Text Books	
Title	<ol style="list-style-type: none"> 1. Orthopedic Physical Assessment 2. Maitland's Peripheral Manipulation 3. Maitland's Vertebral Manipulation 4. Orthopaedic Examination Evaluation and Intervention
Author(s)	<ol style="list-style-type: none"> 1. David Magee 2. Elly Hengveld and Kevin Banks 3. Maitland et al 4. Mark Dutton
Year	<ol style="list-style-type: none"> 1. 2004 2. 2005 3. 2005 4. 2004
Edition	<ol style="list-style-type: none"> 1. Fifth edition 2. Fourth edition

- | | |
|--|--------------------|
| | 3. Seventh edition |
| | 4. Second edition |

Course Objectives

Global Objectives: At the successful completion of this course the student is expected to :

1. define terminology related to peripheral joints and spine.
2. evaluate peripheral joints and spine function.
3. perform subjective examination pertaining to peripheral joints and spine.
4. perform systematic objective examination of the peripheral joints and spine.
5. evaluate patients with musculoskeletal disorders and provide diagnosis.
6. prescribe appropriate treatment plan.
7. use of manual therapy skills in the assessment and treatment of musculoskeletal disorders.
8. prescribe exercise therapy and utilize variety of therapeutic exercises for musculoskeletal management.

Specific Objectives: At the end of this course the student should be able to:

1. conduct appropriate subjective examination for musculoskeletal condition.
2. analyzing information collected in subjective and objective examination.
3. apply basic differential diagnosis skills.
4. use of clinical reasoning in evaluation and treatment planning.
5. explain basics of Maitland's manual therapy.
6. utilize mobilization and manipulation skills in the assessment and treatment.
7. understand precautions and contraindications of using mobilization and other manual therapy skills.
8. conduct systematic evaluation of ankle, foot, knee, hip, shoulder, elbow, wrist and hands, and temporomandibular joint.
9. interpreting the results of PT assessment of ankle, foot, knee, hip, shoulder, elbow, wrist and hands.
10. incorporating manual therapy and therapeutic exercise for treatment of peripheral joints disorders.
11. utilizing appropriate manual therapy and therapeutic exercise based on assessment and evaluation of the peripheral joints.
12. explain the biomechanics of the lumbar, cervical, and thoracic spine.
13. integrate biomechanical concept of the spine to clinical syndromes.
14. relate intervertebral disc pathologies to clinical situations.
15. discuss terminology related to neurodynamics.
16. conduct upper and lower limb neurodynamic tests
17. use of slump tests variations in the assessment and treatment.
18. prescribe relevant neurodynamic technique for clinical situations.
19. conduct systematic evaluation of lumbar spine, thoracic spine, cervical spine, and sacroiliac joint.
20. interpreting the results of PT assessment of lumbar spine, thoracic spine, cervical spine, and sacroiliac joint
21. incorporating manual therapy and therapeutic exercise for treatment of peripheral joints disorders.
22. incorporating manual therapy and therapeutic exercise for spine disorders.
23. utilizing appropriate manual therapy and therapeutic exercise based on assessment and evaluation of the spine.
24. utilize different types of exercise including resistive, aerobic, isotonic, isometrics, isokinetic, and passive exercise for peripheral joints and spine.
25. explain the osteokinematics and pathologies of the temporomandibular joint
26. perform assessment and treatment of the temporomandibular joints.

Assessment Policy

Assessment Type	Expected Due Date	Weight
First Exam		2%
Midterm Practical		15%
Second Exam		20%
Lap Weekly Evaluation		5%
Practical Check off		5%
Final Practical (cumulative)		13%
Final Exam (cumulative)	To be announced by the registrar office	27%

**Course Schedule
Lectures**

Week #	Date	Lecture
1		Syllabus and course expectation
		PT assessment and planning 1
2		PT assessment and planning 2
		Ankle and foot 1
3		Ankle and foot 2
		Knee 1
4		Knee 2
		Hip 1
5		Hip 2
		Exam review
6		First exam
		Wrist and hand
7		Elbow
		Shoulder
8		Shoulder
		Spine biomechanics
9		Lumbar spine disorders
		Disc disorders
10		Lumbar spine assessment
		Exam review
11		Second exam
		Lumbar spine treatment
12		Sacroiliac joint
		Thoracic spine
13		Thoracic spine
		Cervical spine
14		Cervical Spine
		Spinal stabilization
15		Temporomandibular joint
		Exam review
17		Final Exam

**Labs
Section 1:**

Week #	Date	Lab
1		No labs
2		Clearing of Cervical and lumbar spine, shoulder, elbow, wrist, sacroiliac joint, hip, knee, and ankle.
3		Ankle and foot: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active range of motion, muscle length tests, and special tests.
4		Knee: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active range of motion, muscle length tests, and special tests.
5		Hip: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active range of motion, muscle length tests, and special tests.
6		Midterm mock practical
7		Wrist and elbow: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active range of motion, muscle length tests, and special tests.
8		Shoulder 1: Including observation, functional assessment, assessment of active range of motion and passive and active range of motion, and muscle length tests.
9		Midterm Practical
10		Shoulder 2: Shoulder joint mobilization and special tests
11		Case studies
12		Lumbar Spine: Including observation, functional assessment, passive physiological motion, passive accessory motion, special tests.
13		Sacroiliac joint: Lumbar Spine: Including observation, functional assessment, passive physiological motion, passive accessory motion, special tests.
14		Thoracic and Cervical Spine: Lumbar Spine: Including observation, functional assessment, passive physiological motion, passive accessory motion, special tests.
15		Final Practical

**Labs
Section 2:
Section 4:**

Week #	Date	Lab
1		No labs
2		UQ and LQ clearing: Clearing of Cervical and lumbar spine, shoulder, elbow, wrist, sacroiliac joint, hip, knee, and ankle.
3		Ankle and foot: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active range of motion, muscle length tests, and special tests.
4		Knee: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active range of motion, muscle length tests, and special tests.
5		Hip: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active range of motion, muscle length tests, and special tests.
6		Midterm mock practical
7		Wrist and elbow: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active

		range of motion, muscle length tests, and special tests.
8		Midterm Practical
9		Shoulder 1: Including observation, functional assessment, assessment of active range of motion and passive and active range of motion, and muscle length tests.
10		Shoulder 2: Shoulder joint mobilization and special tests
11		Case studies
12		Lumbar Spine: Including observation, functional assessment, passive physiological motion, passive accessory motion, special tests.
13		Sacroiliac joint: Lumbar Spine: Including observation, functional assessment, passive physiological motion, passive accessory motion, special tests.
14		Thoracic and Cervical Spine: Lumbar Spine: Including observation, functional assessment, passive physiological motion, passive accessory motion, special tests.
15		Final Practical

**Labs
Section 3:**

Week #	Date	Lab
1		No labs
2		UQ and LQ clearing: Clearing of Cervical and lumbar spine, shoulder, elbow, wrist, sacroiliac joint, hip, knee, and ankle.
3		Ankle and foot: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active range of motion, muscle length tests, and special tests.
4		Knee: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active range of motion, muscle length tests, and special tests.
5		Hip: Including observation, functional assessment, joint mobilization, assessment of active range of motion and passive and active range of motion, muscle length tests, and special tests.
6		Midterm mock practical
7		Wrist and elbow
8		Midterm practical
9		Shoulder 1: Including observation, functional assessment, assessment of active range of motion and passive and active range of motion, and muscle length tests.
10		Shoulder 2: Shoulder joint mobilization and special tests
11		Case studies
12		Lumbar Spine: Including observation, functional assessment, passive physiological motion, passive accessory motion, special tests.
13		Sacroiliac joint: Lumbar Spine: Including observation, functional assessment, passive physiological motion, passive accessory motion, special tests.
14		Thoracic and Cervical Spine: Lumbar Spine: Including observation, functional assessment, passive physiological motion, passive accessory motion, special tests.
15		Final Practical

Theoretical Exams

The exams may include any type of questions; multiple choice, true or false or essay questions. Exam materials will be decided upon handouts, notes, reading assignments, lab materials and discussion through course. Exams will be

designed to assess the foundation knowledge, critical thinking, and problem solving.

Practical Exams

The students will be presented with clinical case and asked to perform subjective and objective examination related to the case. The students will be asked to design treatment plan and demonstrate selected treatments. Also, the students will be asked to demonstrate selected assessment techniques and tests, and demonstrate some treatment techniques.

Practical Check-offs

Each week students will be asked to demonstrate skills, techniques or tests that was taught in the previous labs. Each week, students will be randomly selected for the check-offs. Each student, will have two check-offs: before and after the midterm practical. The check offs will be **cumulative** and students may be asked to perform skills or techniques was taught anytime during the semester.

Participation

Students will be assessed according to their active participation in the lecture, practical demonstration, group assignments, and other activities. The participation will be evaluated by course instructor and teaching assistants.

Statement on Professionalism

Professional behavior is expected of students at all times. Attitude and professional behavior are a minimum criterion for passing this class. Repeated lack of professional behavior will result in failure of the course. Examples of unprofessional behavior include but are not limited to: missing classes, tardiness, lack of attention for a speaker, leaving a lecture prior to its completion without prior authorization of the instructor, working on other class material during class, and sleeping during class. Using social network (e.g. facebook, twitter, messenger etc.) during the classes and labs is considered unprofessional behavior. Group discussions are highly recommended however it's crucial for each student to submit individual assignment, unless I indicate otherwise.

Cheating and plagiarism will not be tolerated and will be leading to consequences determined by university regulations.

Attendance

Attendance will not count for points in this class, however attending the lectures and labs will greatly enhance your grade. The student is responsible for any information discussed in lecture and lab sessions. It is **imperative** to attend all classes! Make-up (including assignments) work will be granted for excused absences only.

Communication with instructor

Electronic-mail is preferred. Students can use the above listed office hours.

Cell phone

Please do not use cell phones or pagers in class. If you are depended upon for anticipated emergencies please put cell phones on vibration and answer the phone outside the classroom. **CELL PHONES MUST BE TURNED OFF DURING THE EXAMS.**

Student Responsibility

It is the responsibility of each individual student enrolled in this course to monitor grades and progress. The student has one week from the time any test, assignment, or lab summary is returned to the class to appeal the grade.

Statement on Disability

Any student in this course who needs an accommodation because of a disability in order to complete the course requirements should contact the instructor.

Religious Observance

If any examination, except the final examination, conflicts with a personal religious holiday, please privately identify yourself to the instructor to schedule a make-up examination that is mutually acceptable.

Statement of Acceptance of Syllabus

Any student who does not understand or accept the contents and terms of this syllabus must notify the instructor in writing within one week of receiving the syllabus. The syllabus is subject to change based on needs assessment at any time.

End of Syllabus