

King Saud University
College of Applied Medical Sciences
Rehabilitation Sciences Department
Physical Therapy
RHS 341 Therapeutic exercises (Kinesiology)

Faculty: Faris Alodaibi PT, PhD (Office 2081, e-mail: falodaibi@ksu.edu.sa)

Credit Hours: 2 (Theory) + 1 (Practical)

Class Sessions: **Theory:** Wednesday, 10:00am to 12:00pm
Practical: Thursday, 12:00pm to 2:00pm

Course Description: This course will begin with the concepts of kinematics and kinetics, muscle structure and function, and joint structure and function. Joints of the upper and lower extremities and the spine will be studied in details including osteology, arthrology and muscle and joint interactions. For each joint osteokinematics and arthrokinematics will be discussed including the clinical applications of these concepts.

Pre-requisites:

Course Objectives: Upon completion of this course, student participants are expected to:

- Understand the concept of kinematics (osteokinematics and arthrokinematics) and kinetics
- Be familiar with skeletal muscle structure, muscle contraction mechanism, factors influencing muscle excursion and muscle force generation.
- Recognize structures that constitute synovial joints and the function of each structure.
- Be familiar with the structure of the Joints of the upper and lower extremities and the spine.
- Understand osteokinematics and arthrokinematics of the Joints of the upper and lower extremities and the spine.
- Be familiar with surface anatomy of the body's joints.
- Be able to palpate anatomical landmarks and soft tissues of each joint.

Course Materials:

1) Presentations' slides/Handouts/References – distributed in class and or through electronic formats

2) Required Textbook:

Kinesiology of the Musculoskeletal System: Foundations for Rehabilitation, 2nd edition,
ISBN-10: 0323039898

3) Strongly Recommended Textbook:

Trail Guide to the body. 4th edition, ISBN-10: 0982663404

Grading:

Grading will be based on attendance, two written examinations and two practical examinations occurring throughout the term, and completion of a project. In determining the final course grade, these items will be weighted as follows:

- Attendance and participation: 10%
- Midterm practical exam: 10%
- Midterm written exam: 20%

- Final practical exam: 15%
- Final written exam: 30%
- Assignments: 15%

In order to pass this class, students must demonstrate a minimum competency level by achieving: 60% or greater.

Final Grades will be determined based on a representative curve

The course grade will be assigned based on the following criteria:

A+	100 – 95 %
A	<95 – 90 %
B+	<90 – 85 %
B	<85 – 80 %
C+	<80 – 75 %
C	<75 – 70 %
D+	<70 – 65 %
D	<65 – 60 %
<60% → Fail	

Performance Expectations

To successfully complete the course, all students are expected to:

1. Complete reading assignments in advance of class sessions as assigned
2. Participate in class discussions by posing pertinent questions and volunteering information to demonstrate levels of comprehension of foregoing assignments and prior knowledge
3. Actively participate in all course assignments including outside of class assignments

Days to keep in mind:

Last day to add classes

Last day to withdraw from classes

Holidays

Course Outline:**Tentative Course Schedule**

Week	Subject	Comments
1	Introduction	
2	Kinematics and Kinetics	Chapter 1
3	Joint structure and function	Chapter 2
4	Muscle structure and function	Chapter 3
5	Hip Joint	Chapter 12
6	Knee Joint	Chapter 13
7	Ankle and Foot	Chapter 14
8	1 st midterm exam	
9	Cervical Spine	Chapter 10
10	Lumbar Spine and SI Joint	Chapter 10
11	Shoulder Complex	Chapter 5
12	Elbow and Forearm	Chapter 6
13	Wrist Joint	Chapter 7
14	Hand	Chapter 8
15	Review	
16	Final Exam	