

EXS322 Kinesiology (3 credit hours) Syllabus

Course Description

The scientific study of human movement has been defined as Kinesiology, also known as Human kinetics. This course will examine the relationship of the anatomical, physiological, and mechanical principles of human motion.

Course Learning Outcomes (CLOs)

By the end of this course, the student will be able to do the following:

1. To identify the anatomical and physiological fundamentals of human motion.
 2. To identify and analyze the musculoskeletal system and the neuromuscular basis of human motion.
 3. To apply principles of biomechanics on human motion as well as on center of gravity and stability.
 4. To analyze human locomotion in different environments.
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Course Topics

Introduction to kinesiology
Anatomical reference and directional terminology
Planes of motion and axes of rotation
Osteology and bone types
Wolff's Law
Joint classifications, mobility and stability
Movement terminology
Skeletal muscle function and structure
Skeletal muscle properties
Muscle contractions
Muscle terminology
Muscle agonists and antagonists
Spinal nerves and voluntary control of movement
Proprioception
Muscle tension development
Length-tension and force velocity relationships
Stretch-shortening cycle
Introduction to biomechanics

Bones, joints, and movements of the hand and wrist

Hand and wrist muscles:

- Origin
- Insertion
- Innervation
- Prime moving action

Bones, joints, and movements of the hip joint and pelvic girdle

Hip joint and pelvic girdle:

- Origin
- Insertion
- Innervation
- Prime moving action

Bones, joints, and movements of the knee joint

Knee joint muscles:

- Origin
- Insertion
- Innervation
- Prime moving action

Levers of the body
Law of reaction
Balance, equilibrium, and stability
Bones, joints, and movements of the shoulder girdle
Shoulder girdle muscles:

- Origin
- Insertion
- Innervation
- Prime moving action

Bones, joints, and movements, and paired movements of the glenohumeral joint

Glenohumeral joint muscles:

- Origin
- Insertion
- Innervation
- Prime moving action

Bones, joints, and movements of the elbow and radioulnar joints

Elbow and radioulnar joint muscles:

- Origin
- Insertion
- Innervation
- Prime moving action

Bones, joints, and movements of the ankle and foot joints

Ankle and foot joint muscles:

- Origin
- Insertion
- Innervation
- Prime moving action

Bones, joints, and movements of the trunk and spinal column

Trunk and spinal column muscles:

- Origin
- Insertion
- Innervation
- Prime moving action

Concepts for muscular analysis

Phases of movement

The kinetic chain:

- Open kinetic chain exercises
- Closed kinetic chain exercises

Principles of Conditioning:

- Progressive overload
- SAID principle
- Specificity

Course Prerequisites/Corequisites

None

Required Textbook(s) and Resources

A digital copy of your textbook is included with your DragonACCESS fees for this course. Use the DragonACCESS tool in Moodle to view your book.

Floyd, R.T. (2021). *Manual of structural kinesiology* (21st ed.). New York, NY:McGraw-Hill Education.

Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements. Where applicable, Tiffin University has obtained permission to use copyrighted material.

Visit the Tiffin University library to locate resources and writing tips. A link is also provided in the Course Home area.

- Link (website): [Tiffin University Library](#)

Register for a library webinar on library research, source evaluation, copyright, and other topics. (Note: If you register but cannot attend the live session, a recording of the session will be sent to you via email after the event.)

- Link (website): [Library Events - Upcoming Events](#)

Contact the librarian for assistance:

- Link (email): library@tiffin.edu

Minimum Student Technology Requirements

In order to have a quality learning experience in your online courses, the University requires that your primary computer (the computer used to access course materials and on which you will be required to install course-specific software) meets or exceeds certain specifications. Click on the following link to view the specifications:

- Link (website): [PC Recommendations](#)

Time Management

Time management is an important part of academic success. Please refer to the approximate (average) times noted below for readings and assignments to help plan your time accordingly.

Course Content

Please refer to individual activities for assessment guidelines.

WEEK 1			
Course Topics	Introduction to kinesiology Anatomical reference and directional terminology Planes of motion and axes of rotation Osteology and bone types Wolff's Law Joint classifications, mobility and stability Movement terminology		
Read/Review			Approx. Time
Textbook, Lectures, and Other Resources	Textbook: Chapter 1		1.00 hrs.
	Lecture Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements.		1.00 hrs.
Activity Type	Course Learning Outcomes	Due	Approx. Time
Introductory Discussion: Initial Post	CLO(s): n/a	Monday	0.50 hrs.
Discussion: Initial Post	CLO(s): 1, 3, 5	Wednesday	1.00 hrs.
All Discussions: Secondary Posts	CLO(s): as noted		4.00 hrs.
Assignment: Application	CLO(s): 1, 2, 3, 4	Saturday	4.50 hrs.
Quiz	CLO(s): 1, 2, 3, 4	Sunday	3.00 hrs.
Final Project Review	CLO(s): 1, 2, 3, 4, 5	Sunday n/a	0.50 hrs.
Approximate Weekly Time on Task (includes resources and activities)			15.50 hrs.

WEEK 2

Course Topics	Skeletal muscle function and structure Skeletal muscle properties Muscle contractions Muscle terminology Muscle agonists and antagonists Spinal nerves and voluntary control of movement Proprioception Muscle tension development Length-tension and force velocity relationships Stretch-shortening cycle Introduction to biomechanics Levers of the body Law of reaction Balance, equilibrium, and stability		
Read/Review			Approx. Time
Textbook, Lectures, and Other Resources	Textbook: Chapter 2, 3 Lecture 1, 2 Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements.		2.00 hrs. 2.00 hrs.
Activity Type	Course Learning Outcomes	Due	Approx. Time
Discussion: Initial Post	CLO(s): 1, 2, 3, 4	Wednesday	1.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted		3.50 hrs.
Assignment: Application	CLO(s): 1, 2, 3, 4,	Saturday	4.50 hrs.
Quiz	CLO(s): 1, 2, 3, 4	Sunday Sunday	3.00 hrs.
Approximate Weekly Time on Task (includes resources and activities)			16.00 hrs.

WEEK 3			
Course Topics	Bones, joints, and movements of the shoulder girdle Shoulder girdle muscles: <ul style="list-style-type: none"> • Origin • Insertion • Innervation • Prime moving action Bones, joints, and movements, and paired movements of the glenohumeral joint Glenohumeral joint muscles: <ul style="list-style-type: none"> • Origin • Insertion • Innervation • Prime moving action 		
Read/Review			Approx. Time
Textbook, Lectures, and Other Resources	Textbook: Chapter 4, 5 (review Chapters 1-3) Lecture 1, 2 Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements.		2.25 hrs. 2.00 hrs.
Activity Type	Course Learning Outcomes	Due	Approx. Time
Discussion 1: Initial Post	CLO(s): 1, 2, 3	Wednesday	1.00 hrs.
Discussion 2: Initial Post	CLO(s): 1, 2, 3, 4, 5,		1.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted	Wednesday	5.00 hrs.
Assignment: Application	CLO(s): 1, 2, 3, 4		4.50 hrs.
Quiz	CLO(s): 1, 2, 3, 4	Saturday	3.00 hrs.
Final Project: Phase I	CLO(s): 1,2, 3, 4, 5	Sunday Sunday Sunday	4.00 hrs.

Approximate Weekly Time on Task (includes resources and activities)	22.75 hrs.
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WEEK 4			
Course Topics	Bones, joints, and movements of the elbow and radioulnar joints Elbow and radioulnar joint muscles: <ul style="list-style-type: none"> • Origin • Insertion • Innervation • Prime moving action Bones, joints, and movements of the hand and wrist Hand and wrist muscles: <ul style="list-style-type: none"> • Origin • Insertion • Innervation • Prime moving action 		
Read/Review			Approx. Time
Textbook, Lectures, and Other Resources	Textbook: Chapter 6, 7		2.00 hrs.
	Lecture 1, 2 Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements.		2.00 hrs.
Activity Type	Course Learning Outcomes	Due	Approx. Time
Discussion: Initial Post	CLO(s): 1, 2, 3	Wednesday	1.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted		2.00 hrs.
Assignment: Application	CLO(s): 1, 2, 3, 4	Saturday	4.50 hrs.
Quiz	CLO(s): 1, 2, 3, 4	Sunday	3.00 hrs.
Approximate Weekly Time on Task (includes resources and activities)			14.50 hrs.

WEEK 5			
Course Topics	Bones, joints, and movements of the hip joint and pelvic girdle Hip joint and pelvic girdle: <ul style="list-style-type: none"> • Origin • Insertion • Innervation • Prime moving action Bones, joints, and movements of the knee joint Knee joint muscles: <ul style="list-style-type: none"> • Origin • Insertion • Innervation • Prime moving action 		
Read/Review			Approx. Time
Textbook, Lectures, and Other Resources	Textbook: Chapter 8, 9 (review Chapters 1-7)		2.25 hrs.
	Lecture 1, 2 Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements.		2.00 hrs.
Activity Type	Course Learning Outcomes	Due	Approx. Time
Discussion 1: Initial Post	CLO(s): 1, 2, 3, 4	Wednesday	1.00 hrs.
Discussion 2: Initial Post	CLO(s): 1, 2, 3, 4, 5		1.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted	Wednesday	8.00 hrs.
Assignment: Application	CLO(s): 1, 2, 3, 4		4.50 hrs.
Quiz	CLO(s): 1, 2, 3, 4	Saturday	3.00 hrs.
Final Project: Phases II	CLO(s): 1, 2, 3, 4, 5	Sunday	4.00 hrs.

		Sunday Sunday	
Approximate Weekly Time on Task (includes resources and activities)			25.75 hrs.

WEEK 6			
Course Topics	Bones, joints, and movements of the ankle and foot joints Ankle and foot joint muscles: <ul style="list-style-type: none"> • Origin • Insertion • Innervation • Prime moving action Bones, joints, and movements of the trunk and spinal column Trunk and spinal column muscles: <ul style="list-style-type: none"> • Origin • Insertion • Innervation • Prime moving action 		
Read/Review			Approx. Time
Textbook, Lectures, and Other Resources	Textbook: Chapter 10, 11, 12 Lecture 1, 2, 3 Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements.		3.00 hrs. 3.00 hrs.
Activity Type	Course Learning Outcomes	Due	Approx. Time
Discussion: Initial Post	CLO(s): 1, 2	Wednesday	1.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted		3.50 hrs.
Assignment 1: Application	CLO(s): 1, 2, 3, 4	Saturday	4.50 hrs.
Quiz	CLO(s): 1, 2, 3, 4	Sunday	3.00 hrs.
Assignment 2: Presentation	CLO(s): 1, 2, 3, 4	Sunday	9.50 hrs.
Approximate Weekly Time on Task (includes resources and activities)			27.50 hrs.

WEEK 7			
Course Topics	Concepts for muscular analysis Phases of movement The kinetic chain: <ul style="list-style-type: none"> • Open kinetic chain exercises • Closed kinetic chain exercises Principles of Conditioning: <ul style="list-style-type: none"> • Progressive overload • SAID principle • Specificity 		
Read/Review			Approx. Time
Textbook, Lectures, and Other Resources	Some lectures/activities may contain additional resources. See individual lectures/activities for those requirements.		
Activity Type	Course Learning Outcomes	Due	Approx. Time
Discussion: Initial Post	CLO(s): 1, 2, 3, 4, 5	Wednesday	1.00 hrs.
Assignment: Application	CLO(s): 1, 2, 3, 4		4.50 hrs.
Assignment 2: Final Project: Phase III	CLO(s): 1, 2, 3, 4, 5	Thursday	4.00 hrs.
Discussion: Secondary Posts	CLO(s): as noted	Thursday	0.50 hrs.
Quiz	CLO(s): 1, 2, 3, 4	Saturday	3.00 hrs.
		Sunday	

Approximate Weekly Time on Task (includes resources and activities)	13.00 hrs.
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Approximate Time on Task for Entire Course	135.00 hrs.
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Grading Structure

Activity	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Total
Introductory Discussion	n/a							0
Discussion 1	20	20	20	20	20	20	20	140
Discussion 2			20		20			40
Application	30	30	30	30	30	30	30	210
Quiz	50	50	50	50	50	50	50	350
Presentation						50		50
Final Project			50		50		110	210
Total								1000

Activity Categories	Percentage of Total Points
Discussions	18%
Application Assignments	21%
Quizzes	35%
Presentation	5%
Final Project	21%
Total	100%

Grading Scale	
Grade	Percentage
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	<60%

Please see the Academic Bulletin for grade appeal information.

FERPA

The Family Educational Rights and Privacy Act (FERPA) protects student information. Other than directory information, such as name, address, phone number, etc., students must give consent for individuals to gain access to a student's educational record, including grades, transcripts, and behavior reports (unless the student is under the age of 18). Students also have the right to review their educational records. For a more detailed explanation, please see the Student Handbook.

Office for Student Accessibility Services

Please refer to your Moodle Home page for Office for Student Accessibility Services contact information to coordinate reasonable accommodations for students with documented disabilities.

Veterans

Please refer to your Moodle Home page for services for veterans, service members, and their families.

Moodle and Non-Moodle Technical Support

Blackboard Student Services will provide 24x7 Moodle helpdesk support for all Tiffin University students and faculty. Locate contact information for Blackboard Student Services (Moodle-related issues) and for Tiffin University ITS helpdesk (non-Moodle related issues) on your Moodle Home page.

This syllabus is subject to change at the discretion of the University.