

University of Texas at El Paso
Department of Kinesiology
KIN 4313 – Biomechanics (CRN: 12690)
Fall 2018

General Information

Instructor: Jeff Eggleston, Ph.D.
Office: HSSN 450
Email: jdeggleston@utep.edu
Office Hours: by appointment only
Course Textbook: Biomechanical Basis of Human Movement, 4th Edition
J. Hamill, K.M. Knutzen, & T.R. Derrick; Lippincott, Williams & Williams
Class time: Mondays & Wednesdays, 9:00 – 9:50am
Classroom: Memorial Gym 118

Prerequisites KIN 1303, KIN 3331, MATH 1320 (or equivalent) and departmental approval

Course Description

A mechanical analysis of the internal and external force acting on the human body and the effects of these forces. Emphasis will be placed on the development of skills to analyze movement both qualitatively and quantitatively.

Laboratory

Labs begin the first week of class and will meet in the teaching laboratory (Memorial Gym 126). You will likely need supplies such as paper, pencil, scientific calculator, etc. for all laboratory activities. If any additional supplies are needed, your lab instructor will notify you in advance.

Additional Resources

Throughout the semester, additional assignments, readings, and information will be posted on Blackboard.

Learning Objectives

By the end of this course students should be able to:

1. Describe human motion using appropriate, well-defined terminology;
2. Apply Newton's Laws to identify causes of human motion;
3. Demonstrate a conceptual and computational proficiency with the above objectives;
4. Demonstrate an understanding of the real-world applications of the course materials.

Course Evaluation

Final Exam	25%
Exams I & II	20% (each)
Laboratory Grade	15%
Quizzes	10%
Journals	10%

Exams: There will be two mid-semester exams and one final exam for this course. The final will be comprehensive and will take place in accordance with the University Schedule. Each exam will be 150 points each. The Final Exam will be cumulative, material from the entire semester can be on it.

Journal Entries will be completed on Blackboard and are meant to serve as a platform to share interesting biomechanics-related topics of your choice. Specific posting instructions will vary for each journal and will be listed on Blackboard.

A total of 5 Quizzes will be given unannounced during the semester and are designed to determine if you are competently understanding course material.

Extra Credit: You can earn extra credit two ways, worth 5 points each, in this course: 1) participating in a research study within our department. You will only receive credit once for participating. To earn extra credit, you must take a picture of yourself participating in the study and submit it to Blackboard; and 2) completing the course evaluation near the end of the semester. You must take a screen shot of the confirmation that your evaluation has been submitted and upload it to Blackboard. Extra credit points will be added to your lowest exam score and will be manually entered at the end of the semester.

Grading Policy

A	≥ 90.0%
B	80.0%-89.9%
C	70.0%-79.9%
D	60.0%-69.9%
F	<59.9%

Grades will not be rounded

Attendance Policy

For lecture, attendance will not be taken. However, students who attend class regularly tend to perform much better.

Students are responsible for obtaining information given during class for missed lectures. The instructor is available to clarify missed material via email or during an in-face meeting.

No phones will be allowed as calculators, and calculators must not have any additional capabilities. All exams and quizzes will be written as such and will only require basic algebraic and trigonometric functions.

Behavior in class is expected to be conducive to creating a collaborative learning environment. Students may be asked to leave class if they disrupt others' learning environment.

Course Content

See the class schedule for approximate dates for each covered topic.

Exam Schedule

Exam I	Monday, October 8 th
Exam II	Wednesday, November 7 th
Final Exam	<u>Wednesday, December 12th, 10:00am-12:45pm</u>

University Policies and Resources

Changes to this syllabus – The course schedule may be altered by the instructor, with sufficient notice being provided to students.

Cheating, Plagiarism, Scholastic Dishonesty, and Student Discipline: Cheating is obtaining a reward for ability by dishonest means. It is unethical and not acceptable. Plagiarism occurs whenever a student quotes, paraphrases or summarizes another person's work without providing correct citation. Plagiarism occurs whether the work quoted is a book, article, website, reader's guide like Cliffs Notes or SparkNotes, another student's paper, or any other source. An entire essay is fraudulent even if only a single sentence is plagiarized. *Do not submit work under your name that you did not do yourself, ever.* You may not submit work for this class that

you did for another class. If you cheated or plagiarized, you will be subject to disciplinary action as stated in the UTEP undergraduate catalog policy.

“Scholastic dishonesty (which includes the attempt of any student to present the work of another as his or her own, or any work which s(he) has not honestly performed, or attempting to pass any examination by improper means) is a serious offense and will subject the student to disciplinary action. The aiding and abetting of a student in any dishonesty is held to be an equally serious offense. All alleged acts of scholastic dishonesty should be reported to the Dean of Students for disposition. It is the Dean of Students’ responsibility to investigate each allegation, dismiss the allegation, or proceed with disciplinary action in a manner which provides the accused student his or her rights of due process.” Refer to <http://www.utep.edu/dos/acadintg.htm> for further information.

UTEP has a site license for **Turnitin.com**, a plagiarism detection site that you can also use to check your own work for this or other classes to prevent getting in trouble. If you want to test your understanding of plagiarism, take the self-assessment at <http://education.indiana.edu/~frick/plagiarism> or visit <http://www.turnitin.com>

When an assignment specifies that you must perform a task individually, asking for your classmates’ help is **collusion** and thus scholastic dishonesty. Any instances of scholastic dishonesty will be reported to the Dean of Students Office.

Deadline Policy and Late Assignments: It is essential that you regularly visit the class Blackboard website prepared to work. Once a deadline has passed, you can no longer turn in your work for credit. Plan carefully to ensure you meet the deadlines. If you wait until the last minute, things that can go wrong often do. Start early so you have time to deal with problems and are still able turn in your assignments on time. Do not procrastinate!

Missed Tests: All assignments will strictly follow UTEP’s attendance policy. Any missed assignment that does not meet the requirements of an excused absence will be counted as a 0. If you are going to / or miss an assignment and you believe the absence is excusable, you must contact the Professor within 24 hours of the assignments due date. Emailing later in the semester about missing grades, even if the absence was excused, will not be accepted. It is the student’s responsibility to keep track of when assignments are due and also communicating to the Professor when absences happen.

Students in Need of Assistance: UTEP seeks to provide reasonable accommodations for all qualified individuals who need accommodations or support for their learning. This university adheres to all applicable federal, state, and local laws, regulations and guidelines with respect to providing reasonable accommodations as required, affording equal educational opportunity. It is the *student's responsibility* to register with the **Center for Accommodations and**

Support Services <http://sa.utep.edu/cass/> in the UTEP Union Bldg. East Wing, Room 106 *within the first two weeks of classes*, and inform the faculty member to arrange for appropriate accommodations or support.

The CASS Office can also be reached in the following ways: Web: <http://cass.utep.edu/>; Phone: (915) 747-5148 voice or TTY; Fax: (915) 747-8712; E-Mail: cass@utep.edu

Campus Safety and Emergencies Notifications: Information Technology at UTEP provides emergency notification via your mobile phone. Visit <http://www.utep.edu/it> for more information and registration. Check the UTEP website for health-related information and updates.

Course Schedule

Week	Date	Topic Covered	Online Assignment Due
1	August 27	Syllabus & Intro to Biomechanics	
	August 29	Basic Terminology	Journal 1*
2	September 3	Labor Day – NO CLASS	
	September 5	Skeletal Considerations for Movement	
3	September 10	Muscular Considerations for Movement	
	September 12	Neural Considerations for Movement	

4	September 17	Linear Kinematics I	
	September 19	Linear Kinematics II	
5	September 24	Linear Kinematics III	
	September 26	PVA	
6	October 1	Projectile Motion	
	October 3	Review	Journal 2*
7	October 8	Exam I	
	October 10	Angular Kinematics I	
8	October 15	Angular Kinematics II	
	October 17	Linear Kinetics	
9	October 22	Linear Kinetics II and Friction	
	October 24	Collisions/Impacts and Linear Kinetics III	
10	October 29	Work, Energy Power	
	October 31	Work, Energy Power	Journal 3*
11	November 5	Review	
	November 7	Exam II	
12	November 12	Angular Kinetics	
	November 14	Angular Kinetics II	
13	November 19	NO CLASS – Thanksgiving Holiday	
	November 21	NO CLASS – Thanksgiving Holiday	
14	November 26	Angular Kinetics III	
	November 28	Angular Kinetics IV	Journal 4*
15	December 3	Guest Presentation	
	December 5	Final Exam Review	
16	December 12	Final Exam 10:00am-12:45pm	