

University of Texas at El Paso  
Department of Kinesiology  
KIN 4313 – Biomechanics  
Spring 2019

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**General Information**

Instructor: Jeff Eggleston, Ph.D.  
Office: HSSN 450  
Email: jdeggleston@utep.edu  
Office Phone: 915-747-7208  
Office Hours: Tuesday and Thursday 9:00 – 11:00am  
Course Textbook: Biomechanical Basis of Human Movement, 4<sup>th</sup> 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

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**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 **second 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	25%
Quizzes	5%
Journals	5%

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 100 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 unannounced quizzes will be given 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 mid-term exam score and will be manually entered at the end of the semester. **Extra credit attempts must be submitted before the last day of the semester (May 10) by 11:59pm.**

### **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. For instance, if you have earned a 78.6%, you will earn a C; your percentage will not be rounded to a B.

### **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.

The last day to **drop this course is April 5<sup>th</sup>, 2019** without receiving a 'W' or failing grade.

**No phones will be allowed as calculators on exams or quizzes**, 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	Wednesday, March 6 <sup>th</sup>
Exam II	Wednesday, April 17 <sup>th</sup>
Final Exam	<b><u>Wednesday, May 15<sup>th</sup>, 10:00am-12:45pm</u></b>

### **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](mailto: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

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Week	Date	Topic Covered	Online Assignment Due
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1	January 21	No Class – MLK Day	
	January 23	Syllabus & Intro to Biomechanics	
2	January 28	Basic Terminology	
	January 30	Skeletal Considerations for Movement I	Journal 1*
3	February 4	Skeletal Considerations for Movement II Neural Considerations for Movement I	
	February 6	Neural Considerations for Movement II	
4	February 11	Linear Kinematics I	
	February 13	Linear Kinematics II	
5	February 18	Linear Kinematics III	
	February 20	Linear Kinematics IV	
6	February 25	PVA	
	February 27	Projectile Motion	Journal 2*
7	March 4	Review	
	March 6	<b>Exam I</b>	
8	March 11	Angular Kinematics I	
	March 13	Angular Kinematics II	
9	March 18	<b>Spring Break</b>	
	March 20	<b>Spring Break</b>	
10	March 25	Angular Kinematics III	
	March 27	Linear Kinetics	Journal 3*
11	April 1	Linear Kinetics II and Friction	
	April 3	Collisions/Impacts and Linear Kinetics III	
12	April 8	Work, Energy Power	
	April 10	Work, Energy Power	
13	April 15	Review	
	April 17	<b>Exam II</b>	
14	April 22	Angular Kinetics	
	April 24	Angular Kinetics II	Journal 4*
15	April 29	Angular Kinetics III	
	May 1	Angular Kinetics IV	
16	May 6	Angular Kinetics V	
	May 8	Final Exam Review	
	May 15	<b>Final Exam 10:00a-12:45pm</b>	

\* All online assignments are due by 11:59pm the Saturday of the assigned week. For instance, Journal 2 is due by February 2<sup>nd</sup> at 11:59pm.