

The University of Texas at El Paso  
Department of Kinesiology  
KIN 4313 – Biomechanics  
CRN: 16112  
Spring 2023

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### General Information

Instructor:	Heather Vanderhoof, M.S.
Office:	Larry K. Durham 102C
Email:	hvanderhoof@miners.utep.edu
Office Hours:	By appointment only
Course Textbook:	No text required
Class Time:	Mondays & Wednesdays 9:00-10:20am
Classroom:	Memorial Gym Room 118
Teaching Assistants:	TBD

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### Course Description

A mechanical analysis of the internal and external forces 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 in 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 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. Understand and apply Newton's Laws of Motion 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

Exams	20% (each)
Laboratory Grade	15%
Attendance	10%
Journal Entries	10%
Quizzes	5%

***Due to the weights of the categories above, you cannot simply compute your grade by the number of points you have received. For your actual grade, refer to the 'Weighted Total' column in the Full Grade Center on Blackboard.***

**Exams:** There will be two mid-semester exams and one final exam for this course. Each exam will be worth 100 points each. The Final Exam will be cumulative; material from the entire semester can be on it. Exams will be administered via Blackboard with **Respondus LockDown Browser** and **will be available for 24 hours on the specified dates (below). Students will have 1 attempt and will have the normal class duration (1 hour and 20 minutes) to complete the exam;** please plan accordingly. Once students begin an exam, they must finish it.

## Exam Schedule

Exam I	Wednesday, March 8 <sup>th</sup>
Exam II	Wednesday, April 12 <sup>th</sup>
Final Exam	Monday, May 8 <sup>th</sup>

Attendance Policy: Attendance will be taken within the first 5 minutes of every class. Students will scan a QR code that will prompt a short survey where they will enter their first and last names and their 800 number. There are 260 attendance points possible (10 points per class).

Journal Entries will be completed on Blackboard and are meant to serve as a platform to share questions or interests regarding the topics covered. There will be four journals due during the semester on the broad topics of Basic Biomechanics (Intro to biomechanics), Linear & Angular Kinematics, Linear Kinetics, and Angular Kinetics. In journal entries, students will be required to include the following three things (at minimum) in their post: 1) something they thought was interesting; 2) something they thought was confusing; and 3) how the information can be applied to real-life scenarios. While not required, students are encouraged to comment on others' posts or answer any questions posed by a peer.

Quizzes: There are four quizzes that are designed to determine if students are fully understanding course material. Each quiz will follow the sections of material: Introductory Material, Linear & Angular Kinematics, Linear Kinetics, and Angular Kinetics. Since quizzes only account for 5% of students' overall grade, quizzes should be viewed as another opportunity to determine competence and proficiency. Quiz content will range from verbal understanding (short answer questions) to mathematical computations (computational proficiency) of the covered material. Quizzes will be administered via **Blackboard Respondus LockDown Browser**; they will open Wednesdays after class and are due by 11:59pm on the following dates:

- Quiz 1 – Saturday, February 4<sup>th</sup>
- Quiz 2 – Saturday, March 4<sup>th</sup>
- Quiz 3 – Saturday, April 1<sup>st</sup>
- Quiz 4 – Saturday, April 29<sup>th</sup>

Extra Credit: Students can earn 5 points of extra credit by participating in a research study during the semester. Students will only receive credit for participating in one study. To earn extra credit, students must write a short paragraph detailing what they were asked to do in the study (i.e. VO<sub>2</sub>max test, glucose test, hypoxia, etc.), why they were asked to perform any tasks, what the purpose of the study was (students need to ask the research personnel they are working with for this), and how the information from the study could be used. As an alternative to participating in a research study, students may choose a research paper from the 'Literature' file in the Extra Credit link on Blackboard and write a 1-page summary of their selected paper. In their summary, students need to include information such as the paper's purpose, how the paper addresses a gap in the current literature, research procedures (how did the authors collect/obtain data), the statistical outcomes of the paper, and finally how the information is useful to the broader population. Extra credit submissions need to be uploaded to Blackboard by **May 6<sup>th</sup> @ 11:59pm**. Extra credit points will be added to students' lowest mid-term exam grade 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. For instance, if you have earned a 78.6%, you will earn a C; your percentage will not be rounded to a B.**

The last day to **drop this course is March 30<sup>th</sup>, 2023** without receiving a ‘W’ or failing grade.

### **The ‘Life Happens Clause’**

The Life Happens Clause is referring to the fact that life happens to each of us throughout the course of a semester and you may not be able to take a quiz or exam on time. Specifically, you can invoke this clause **once** during the semester by simply emailing me within one day of any quiz or exam and state that you would like to invoke the clause. If you do this, you will receive a 2-day extension on any quiz or exam with no questions asked (i.e. you do not have to tell me why, just state you would like to invoke the clause). You will still need to schedule a make-up date/time with me for the missed activity.

### **Course Content**

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

### **COVID-19 Precaution Statement**

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to [covidaction@utep.edu](mailto:covidaction@utep.edu), so that the Dean of Students Office can provide you with support and help with communication to your professors. The Student Health Center is equipped to provide COVID-19 testing.

The Centers for Disease Control and Prevention recommends that people in areas of substantial or high COVID-19 transmission wear face masks when indoors in groups of people. The best way that Miners can take care of Miners is to get vaccinated. If you still need the vaccine, it is widely available in El Paso and will be available at no charge on campus during the first week of classes. For more information about the current rates, testing, and vaccinations, please visit [epstrong.org](http://epstrong.org).

### **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.

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. All Quizzes and Exams must be taken and submitted **individually**.

**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.