

**THE UNIVERSITY OF TEXAS AT EL PASO
COLLEGE OF SCIENCE
DEPARTMENT OF PHYSICS**

Course #:	PHYS 2320 CRN 15196
Course Title:	Introductory Mechanics
Credit Hrs:	3.0
Term:	Fall 2023
Course Meetings & Location:	TR 12:00 – 13:20 pm, PSCI 208
Prerequisite Courses:	-
Instructor:	Dr. Chunqiang Li
Office Location:	PSCI 221E
Contact Info:	Phone #: (915) 747-7537
	E-mail: cli@utep.edu
	Fax #: (915) 747-5447
Office Hours:	Tuesday 11:00 am– 12:00 pm or by appointment
Final Exam Date	Tuesday, December 12 th 2023, 1:00 - 3:45 pm
Textbook(s), Materials:	<p>Physics for Scientists and Engineers, by Randall D. Knight, 5th Ed., Pearson. Chapters 1-12.</p> <p>Please try to complete the daily reading before lecture. Lectures will be more effective and you will be ready to ask questions on topics that may have not been clear from the reading.</p> <p>You can purchase a hardcopy or electronic textbook. Fourth edition of the book is fine. Homeworks will be assigned on Pearson online.</p>
Course Objectives (Learning Outcomes):	This semester you will be learning about mechanics. A simple way to think about EVERYTHING you will learn in this course is that you will learn about 1) motion (velocity and acceleration), 2) force, 3) work, kinetic energy, potential energy, and 4) impulse and momentum.
Grading Policy:	60% Final Exam: cumulative with emphasis on most recent 20% Midterm Exam: one exam during the semester 20% Homework 10% Quiz (during the workshop)

Tentative Topics

1. Fundamental topics of motion: velocity, speed, acceleration
2. Kinematics in one dimension: solving mathematical problems of motion in one dimension.
3. Basics of vectors and coordinates
4. Kinematics in two dimensions with vectors
5. Force and motion: their relation, Newton's first and second laws
6. Dynamics in one dimension: force-and-motion problems
7. Newton's third law: how objects interact
8. Dynamics in two dimensions
9. Work and kinetic energy: how energy is transferred and transformed
10. Potential energy: energy conservation and transformation
11. Impulse and momentum
12. Rotation of a rigid body
13. Gravity: the classical theory

<p>Course Activities/Assignments:</p>	<p>Home work Supplementary reading, answering questions, and solving problems will be assigned in advance in the lecture. Also, our textbooks come with problems at the end. Homework should be completed every Friday.</p> <p>It is essential that students become well versed in problem solving methods, which means developing the writing skills to set up a problem, including diagrams and mathematical manipulation to achieve the final answer. A numerical score will be assigned for each homework set based on graded and counted problems.</p> <p>Feel free to form study groups with your classmates and seek help from any lecture instructor during his or her office hours as you attempt to solve the problems. Make sure that you understand the solutions and write them up yourself. There is a strong correlation between homework scores and exam scores!</p> <p>Exams Exams will consist of problems very similar to the worked example problems in the text and the assigned homework problems. Exams will be strictly closed-book. You should bring with you a pocket calculator to work out the answers to numerical problems: make sure the battery is charged!</p> <p>No cell phones allowed in the exams!</p> <p>Full credit on exams will be awarded for complete solutions including drawing a figure and deriving necessary relations if appropriate, and for numerically accurate answers with units. Partial credit may be given for correct derivations if the answer is numerically incorrect due to arithmetic errors. No credit will be given for relations written down at random or for numerical answers that are not supported by a reasonably complete derivation.</p> <p>The best way to prepare for the exams is to study the example problems and work out the assigned homework problems regularly. You should work as many additional problems from the text as you can: this is the best way to ensure your understanding of the material.</p>
<p>Make-up Policy:</p>	<p>An extension of the due date for the homework as well as the make-up of missing exams will be granted only in extraordinary circumstances.</p>
<p>Attendance Policy:</p>	<p>No credit will be granted for just attending the class.</p>
<p>Academic Integrity Policy:</p>	<p>Please see: http://academics.utep.edu/Default.aspx?tabid=23785</p>
<p>Civility Statement:</p>	<ul style="list-style-type: none"> • Cell phones and pagers should be turned off during class time. • When absences occur, it is your responsibility to obtain handouts and notes from your peers. When possible you will complete the activities you have missed. • Academic integrity is to be practiced at all times.

Disability Statement:	<p>If you have a disability and need classroom accommodations, please contact the Center for Accommodations and Support Services (CASS) at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East Building, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass.</p> <p>The student is responsible for presenting to the instructor any accommodation letters and instructions.</p>
Military Statement:	<p>If you are a military student with the potential of being called to military service and/or training during the course of the semester, you are encouraged to contact the instructor at the beginning of the semester.</p>