

## PHYS 2320 Introductory Mechanics (CRN 14184)

Term: Fall 2024  
Lecture: M W 3:00 – 4:20 PM  
Location: Physical Science 208

Prerequisites: MATH 1411. It may be taken concurrently.

Instructor: Ramon Ravelo  
E-mail: [rravelo@utep.edu](mailto:rravelo@utep.edu)  
Office hours: M W 1:00-2:00 PM or by appointment.

### TEACHING ASSISTANTS AND WORKSHOPS (SEMINARS)

Teaching Assistant: Alondra Sanchez  
E-mail: [aasanchez25@miners.utep.edu](mailto:aasanchez25@miners.utep.edu)  
WORKSHOP: PHYS 2320 013 **CRN 14275** M 9:30 – 10:20 AM; PSCI 314

Teaching Assistant: KC Bimal  
E-mail: [bkc@miners.utep.edu](mailto:bkc@miners.utep.edu)  
WORKSHOP: PHYS 2320 014 **CRN 14276** T 3:30 – 4:20 PM; PSCI 314  
WORKSHOP: PHYS 2320 020 **CRN 14280** R 2:30 – 3:20 PM; PSCI 314  
WORKSHOP: PHYS 2320 022 **CRN 14285** F 1:30 – 2:20 PM; PSCI 314

Teaching Assistant: TBA  
WORKSHOP: PHYS 2320 016 **CRN 14278** W 9:30 – 10:20 AM; PCSI 314

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### TUTORING SERVICES:

On line tutoring will be available from the Miner Learning Center (MLC). Gabriel Dillow ([gqdillow@miners.utep.edu](mailto:gqdillow@miners.utep.edu)) will be the SI/PASS leader for the course. To learn more about the services MLC will provide this semester please visit <https://www.utep.edu/mlc>

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### Objectives:

This course will offer an introduction to theoretical concepts in classical mechanics. You will learn dynamics of particles and rigid bodies using vectors, conservation of energy and momentum, and kinetic theory. These concepts are foundational in the physical sciences and many branches of engineering and chances are you will continue to apply these concepts in the rest of your college and professional career.

### Text: Physics for Scientists & Engineers: A Strategic Approach 5th Edition by Randall Knight

The class will largely follow the textbook and most homework problems will come from the problems at the end of the chapters. It can be bought bundled with Mastering Physics. More on Mastering below

**Grading Policy:**

Midterm exams: 40% (2 exams)

Homework Assignments: 20%

Quizzes: 15%

Final Exam (comprehensive): 25%

**Homework: All Homework assignments will be posted and graded using Pearson's Mastering Physics Service.** Access codes to the site need to be purchased, and it can be bundled with the e-text version of the textbook. Go to: <https://mlm.pearson.com/enrollment/ravelo38680> whether you have already bought an access code, or buy it online. You will need the following course ID to signed into our course:

Course ID: ravelo38680

Purchase options:

Mastering with eText- students have two access length options:

- Multi-term: \$149.99 direct from Pearson ;
- 18 week: \$84.99 direct from Pearson

**WORKSHOPS (SEMINARS):**

The TAs will discuss and explain problems very similar to those in the homework as well as some from the homework. Quizzes will be given based on the homework and class examples. See above under Teaching Assistants for times and CRN numbers. Please note that location and times might be updated in the future as the schedule is finalized.

**Final Exam:**

The final will be comprehensive and is scheduled for **Monday Dec 9, 1:00-3:45 PM** Physical Science 208

**COVID-19 Statement:**

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. 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 with your professors.

The Center 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. For more information about the current rates, testing, and vaccinations, please visit [epstrong.org](http://epstrong.org)

**Disability Statement:**

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](mailto:cass@utep.edu), or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at [www.sa.utep.edu/cass](http://www.sa.utep.edu/cass).

**Military Statement:** Students being called for military duties need to contact the instructor as soon as possible.

**Scholastic Integrity:** Any student who commits an act of academic dishonesty is subject to discipline. Proven violations of the detailed regulations, as printed in the Handbook of Operating Procedures, and available on the homepage of the Dean of Students at [www.utep.edu/dos](http://www.utep.edu/dos), may result in sanctions ranging from disciplinary probation, to a failing grade on the work in question, to a failing grade in the course, to suspension or dismissal, among others.

**Course Schedule:**

Week	Content		Observations
Aug 26– 30	Ch 1	Concepts of Motion	
Sep 2 – 6	Ch 2	Kinematics in one-dimension	<b>Sep 2: Labor Day</b> University Closed
Sep 9 – 13	Ch 3	Vectors and Coordinate Systems	<b>Sep 11: Census day</b>
Sep 16 – 20	Ch 4: § 1-4	Kinematics in two-dimensions	
Sep 23 – 27		<b>Midterm I, Wed Sep 25</b>	
Sep 30 – Oct 4	Ch 5	Force and Motion	
Oct 7 – 11	Ch 6	Dynamics: Motion in one-dimension	
Oct 14 – 18	Ch 7	Friction, Newton’s Third Law	
Oct 21 – 25	Ch 8	Motion in a Plane	
Oct 28 – Nov 1		<b>Midterm II, Mon Oct 28</b>	<b>Nov 1: Course drop deadline</b> No automatic “W” after this day
Nov 4 – 8	Ch 9	Work and Kinetic Energy	
Nov 11 – 15	Ch 9	Dissipated Forces, Power	
Nov 18 – 22	Ch 10	Potential Energy	
Nov 25 – 29	Ch 10	Energy Conservation, Non-Conservative Forces	<b>Nov 28-29 Thanksgiving holidays</b>
Dec 2 – Dec 6	Ch 11	Impulse and Momentum	<b>Dec 5: Last day of classes</b> <b>Dec 6: dead day</b>
Dec 9 – 13		<b>FINAL EXAM (Comprehensive)</b> <b>Mon Dec 9, 1:00 - 3:45 PM</b>	<b>Final Exams</b>