

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

Course #:	PHYS 5321 CRN 11180
Course Title:	Mechanics
Credit Hrs:	3.0
Term:	Fall 2018
Course Meetings & Location:	Tue Thu 3:00 – 4:20 PM, Classroom Building, C203
Instructor:	Dr. José Leo Bañuelos
Office Location:	PSCI 215C
Contact Info:	Phone # : (915) 747-7535
E-mail address:	jlbanuelos@utep.edu
Fax #:	(915) 747-5447
Emergency Contact:	(915) 747 5715
Office Hrs:	Wed 9:00 am – 11:00 am and by appointment
Textbook(s), Materials:	Main textbook: <i>Classical Mechanics</i> by <i>Goldstein, Poole, and Safko</i> (Third Edition).

Course Objectives (Learning Outcomes):

The course will cover chapters 1-8. Topics to be covered are: Mechanics of a single particle and a system of particles, Variational principles, Lagrange's equations, Two-body central force problem, Kinematics of rigid body motion, Small oscillations, Hamilton's equations of motion.

Grading Policy:

Grades in this course will be based on your scores on two midterm exams, a final exam (comprehensive; but with emphasis on the last part of the course), laboratory, homework assignments, and in-class participation.

Midterm exams:	50% (25% each)
Final exam:	25%
Homework/Quizzes:	20%
Attendance	5%

Course Activities/Assignments:

1. Homework

The problem solving methods you develop in this course are critical for success in future courses. A numerical score will be assigned for each homework set. **Please do not fall behind because future material generally depends on previous material. Seek help immediately.** Please form study groups with your classmates and seek help as you attempt to solve problems. Make sure that you understand the solutions and write them up yourself!

2. Exams

You should bring with you a calculator to work out the answers to numerical problems: **make sure the battery is charged.** Cell phone use is NOT ALLOWED during the exams!

Dates of the midterm exams are listed in the course schedule at the end of the syllabus. The final exam is scheduled to take place Thursday 12/13/2018 from 4:00 pm – 6:45 pm according to the UTEP Fall 2018 Final Examination Schedule: <https://www.utep.edu/student-affairs/registrar/Scheduling/Final%20Exams%20Schedule/ExamScheduleFall2018.pdf> (Visit link for other information regarding UTEP's final exam policy.)

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.

Make-up Policy:

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. Late homework will be penalized at a rate of 8% of the maximum score for each day it is late.

Attendance Policy: You are expected to arrive to class on time and sign in at every lecture.

Academic Integrity Policy:

A fundamental principle for any educational institution, academic integrity is highly valued and seriously regarded at The University of Texas at El Paso. More specifically, students are expected to maintain absolute integrity and a high standard of individual honor in scholastic work undertaken at the University.

Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.

Please see: <https://www.utep.edu/student-affairs/osccr/student-conduct/academic-integrity.html> for more information and the UTEP Handbook of Operating Procedures: <https://www.utep.edu/vpba/hoop/>

Civility Statement:

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:

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 <https://www.utep.edu/student-affairs/cass/>. The student is responsible for presenting to the instructor any accommodation letters and instructions.

Military Statement:

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.

Tentative course schedule and homework due dates

	Date	Topic	Problems Due
Week1	28-Aug	math review	
	30-Aug	1.1	
Week2	4-Sep	1.2-1.3	
	6-Sep	1.3-1.4	
Week3	11-Sep	(read 1.5) 1.6	
	13-Sep	2.1-2.3	
Week4	18-Sep	Prob 1.19 revisited	CH1: 1,2,4,8-10,12,14,19,21,22,24a-b
	20-Sep	Prob 1.22 revisited, 2.4	
Week5	25-Sep	2.6,2.7,3.1	
	27-Sep	3.2-3.4 (read 3.5)	CH2: 11,12,14,17-20,22-24
Week6	2-Oct	3.6,3.7	
	4-Oct	Exam (1.1-2.7)	
Week7	9-Oct	3.8-3.10	
	11-Oct	3.10,4.1,4.2	
Week8	16-Oct	4.3,4.4,4.6	CH3: 11,14,20,21,23,31,33
	18-Oct	4.7,4.8	
Week9	23-Oct	4.9,4.10,5.1	
	25-Oct	5.2-5.4	
Week10	30-Oct	5.5-5.6	CH4: 1-4,7,15,20,22,23
	1-Nov	5.6-5.7	
Week11	6-Nov	6.1-6.3	CH5: 5,9,10,16,19-21,23
	8-Nov	6.4,7.1,7.2	
Week12	13-Nov	Exam (3.1-5.7)	
	15-Nov	7.3-7.5	CH6: 1,6a,12,16
Week13	20-Nov	7.6,7.9	
	22-Nov	Thanksgiving, No School	
Week14	27-Nov	7.9,8.1	CH7: 6,8,24,25
	29-Nov	8.1,8.2	
Week15	4-Dec	8.2,8.3,8.5	
	6-Dec	8.5,8.6	
	13-Dec	Final, 4:00pm - 6:45pm	CH8: 1,12,14,23,29