

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

Course #: PHYS 3352; CRN: 23188
Course Title: Analytical Mechanics II
Credit Hrs: 3
Term: Spring 2016
Course Meetings & Location: TR 10:30-11:50 am; PSCI 222A
Prerequisite Courses: PHYS 3351
Instructor: Huiyan Yang
Office Location: PSCI 215B
Contact Info: Phone # 915-747-7510
E-mail address: hyang4@utep.edu
Fax # 915-747-5447
Emergency Contact: 915-747-5536

Office Hrs: TR 1:30-2:30 pm
Textbook(s), Materials: Required: Classical Dynamics of Particles and Systems, by Thornton and Marion, 5th edition
Suggested: Mechanics: Symon

Course Objectives (Learning Outcomes): Students learn about Lagrangian and Hamiltonian dynamics and their application, analyze classical dynamics of particles, central force motion, systems of particles, rigid bodies, coupled oscillations, and waves. The students will solve textbook problems.

Course Activities/Assignments: The course will cover chapters from 7 to 13. The topics to be discussed are Lagrangian and Hamiltonian dynamics, central force motion, dynamics of a system of particles, non-inertial reference frame, dynamics of rigid bodies, coupled oscillations, and waves. The objective is that students can apply the methods and analyze the behavior of dynamical systems.

Assessment of Course Objectives: The students will be required to solve text book problems using the techniques they learn during the course. The assessment will be made based on regular quizzes, homework, and tests.

Grading Policy: The grades will be determined from three tests including the final (60%), quizzes (20%), and homework (20%). Quizzes will be based on class work and home-works.

Make-up Policy: No makeup tests or quizzes. If you are going to miss a class/quiz, inform a week before.

Attendance Policy: None

Academic Integrity Policy: See <http://academics.utep.edu/Default.aspx?tabid=23785>

Civility Statement: No cell phones.

Disability Statement: If a student has or suspects he/she has a disability and needs an accommodation, he/she should contact the Disabled Student Services Office (DSSO) at 747-5148 or at <dss@utep.edu> or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any DSS 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, please contact me within the first two weeks of class to arrange in advance for makeup exams, etc.

Course Schedule: Tentative timeline. May change with class activities.

Chap. 7: 2 weeks

Chap. 8: 2 weeks

Chap. 9: 3 weeks

Chap. 10: 1 weeks

Chap. 11: 3 weeks

Chap. 12: 3 weeks

Chap. 13: 1 weeks

Midterm I: Feb. 16

Midterm II: Mar. 24

Midterm III: Apr. 28

Final : May 12, Thursday at 10:00-12:45 pm.