

UNIVERSITY OF TEXAS AT EL PASO
PHYSICS DEPARTMENT

Spring 2018	PHYS 2210 VIBRATIONS AND WAVES CRN 23066
Class Day and Hour	T: 1:30 – 2:50 pm PSCI, Room: 218
Instructor	Dr. Huiyan Yang Physical Science Building, Room: 215B Phone: (915)747-7510, E-mail: hyang4@utep.edu
Office Hours	MW: 10:00 – 11:00 am or by appointments
Prerequisite Courses	PHYS 2420 or Cal I
Textbook	<i>Required:</i> Physics for Scientists and Engineers: A Strategic Approach, 4 th Edition, by Randall D. Knight. Online study tool: MasteringPhysics (MPYANG49576) (Homework is assigned and graded in MasteringPhysics. All students are required to have access of MasteringPhysics.) <i>Recommended:</i> Fundamentals of Acoustics, Lawrence E. Kinsler, Austin R. Frey, Alan B. Coppins, James V. Sanders, 4 th Edition Vibrations and Waves, A. P. French, CBS Publishers & Distributors
Course Objectives (Learning Outcomes)	This course will be devoted to the study of vibrations and waves and its applications in different fields of physics. The principal objective is to develop an understanding of basic wave concepts and of their relations with one another. Study of topics such as free and forced oscillations, superposition principle, traveling and standing waves, wave packets, bandwidth and polarization, will serve to reach the proposed goal. Applications to different physical systems will be illustrated through interesting examples.
Course Activities/Assignments	Course activities include reading assignment, lectures, homework, quizzes, three midterm exams, and a final exam. Lectures will include discussions of problems, as well as presentations of the conceptual materials. Students will be expected to have read the textbook chapter at least once before it is lectured on and once after.
Attendance Policy	Attendance in class is the responsibility of the students. If class is missed, you are responsible for obtaining the notes from another student or from the instructor.
Evaluations Policy Homework Policy	Homework 30%; Quizzes 30%; Final Exam 40% Homework is assigned and graded in MasteringPhysics. Homework credit is reduced by 10% per day after the due day and a hard copy must be turned in. 30% credit will be granted when a turned-in homework is overdue more than a week. No homework will be accepted after the final exam.
Quiz Policy	Classroom quiz is given by using iClicker Cloud. There is no make-up for missed quiz.
Exam Make-up Policy	Make up exams are given only on extraordinary cases of severe illnesses or emergencies. They can be arranged at the discretion of the instructor. In all cases a written excuse and official documents will be required and investigated.

Attendance Policy	Attendance is not required but recommended. When it is necessary to miss class, it is the student's responsibility to check with classmates or the instructor to determine what content was covered and what assignments were made.
Academic Integrity Policy	Acts of academic dishonesty will not be tolerated in this class. Lapses in academic integrity will be referred to the Dean of Students, as required at http://academics.utep.edu/Default.aspx?tabid=23785 .
Civility Statement	This course requires positive behaviors: Be on time and be focused on your work. Please do not distract yourself or others with telephones or music.
Disability Statement	If a student has or suspects he/she has a disability and needs an accommodation, he/she should contact the Center for Accommodations and Support Services (747-5148 or cass@utep.edu). or go to Room 106 Union East Building. The student is responsible for presenting to the instructor any CASS 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 me as soon as it appears that your service will interfere with this course. The instructor will work with you to ensure that your service will not adversely affect your academic progress.

Course Schedule Tentative List of Topics and Timeline: may change with class activity

Week	Date	Topic	Activity	Homework
1	Jan 16	CH 15 Oscillations		HW 1 assigned
2	Jan 23	CH 15 Oscillations	Review HW 1	
3	Jan 30	CH 15 Oscillations		HW 1 due, HW 2 assigned
4	Feb 6	CH 16 Traveling Waves		
5	Feb 13	CH 16 Traveling Waves	Review HW 2	
6	Feb 20	CH 16 Traveling Waves		HW 2 due
7	Feb 27	CH 17 Superposition		HW 3 assigned
8	Mar 6	CH 17 Superposition		
9	Mar 13	Spring Break		
10	Mar 20	CH 17 Superposition	Review HW 3	HW 3 due
11	Mar 27	CH 31 Electromagnetic Waves		HW 4 assigned
12	Apr 3	CH 31 Electromagnetic Waves		
13	Apr 10	CH 31 Electromagnetic Waves	Review HW 4	HW 4 due
14	Apr 17	CH 33 Wave Optics		HW 5 assigned
15	Apr 24	CH 33 Wave Optics	Review HW 5	
16	May 1	CH 33 Wave Optics		HW 5 due
17	May 8	Final		