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
Required:
Physics for Scientists and Engineers: A Strategic Approach, 4th 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.)
Recommended:
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 30%; Quizzes 30%; Final Exam 40%
Homework Policy
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

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