Instructor: Vinod Kumarappan  
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e-mail: vinod@phys.ksu.edu  
Office hours: Monday 10:30-11:30 a.m., Thursday 3:30-4:30 p.m., or by appointment.

Course Sections: You must register for all four PHYS 113 sections: LEC, QZ, REC, and LAB. If you are missing any of these, get on the wait list immediately!

Textbook and Other Required Materials:

- **Textbook:** *Physics: Principles with Applications* by Douglas C. Giancoli (7th ed.) The textbook is available in many different forms (hardcover, paperback, looseleaf, e-text, in volumes I and II, etc.). You may get whichever form you prefer.

- **Modified Mastering Physics** ([http://www.masteringphysics.com](http://www.masteringphysics.com)): This is a web-based tutoring and homework assignment system. You must purchase an access code for Modified Mastering Physics. It can be purchased separately or bundled with the textbook. Registration instructions have been posted on K-State Online in an Announcement and in a file named “Student_Getting_Started_Handout_MyLabMastering_Canvas.pdf”. Note that mastering Physics links on Canvas will not work if your browser blocks pop-ups. Enable pop-ups from Canvas.

- **i>clicker:** i>clicker is a student response system that is used in many classes at K-State. If you already have one, you can use it. If not, you can buy one online or from the bookstore. You must register your i>clicker on Canvas. Instructions are posted in an Announcement on Canvas. i>clickers will be used in the lectures, but not in any other part of the course. You may use the original i>Clicker, i>clicker+ or i>clicker2. **Bring your i>clicker to every lecture!**

- **K-State Online** ([https://k-state.instructure.com](https://k-state.instructure.com)) : K-State Online (KSOL) by Canvas will be used to post announcements, exam keys and grades, and most other material that needs to be made available to you. The Discussions feature has been enabled so that you can get help from your classmates. Please be aware that the policy on unauthorized help remains applicable to what you write on the message board.

Course Components:

- **Lecture:** The basic principles of mechanics, fluids, oscillations and waves, and heat will be introduced in the lectures and illustrated with demonstrations. Some example problems will also be solved in the lectures. To get the most out of the lectures, you should come prepared by reading the textbook in advance. Reading assignment will be posted on Canvas.

  i>clickers will be used in the lectures to obtain and provide instant feedback and encourage discussions in class. You will get time to discuss the question with other students before providing an answer. Credit will be given for participation and for correct answers. To earn the participation point, you must answer at least 50% of the questions asked in the lecture. You will also get 0.5 points for every correct answer, subject to a maximum of one point per lecture. Clicker responses during the first two weeks of class will not be graded. i>clicker grade will be rescaled to 5% of the total grade for the course.

  i>clickers will also be used at the beginning of lecture for a quiz. You be asked a few questions to test whether you have read the material assigned. The quizzes will be graded from the third week, so the first graded quiz will be on 02/02/2016. The lowest six scores (out of 26) will be dropped. The pre-lecture quiz grade is distinct from the feedback/discussion grades discussed above. Pre-lecture quiz scores will be rescaled to 5% of the total grade for the course.
• **Online homework:** Home work will be assigned on Mastering Physics every week. **The assignments will be due at 11 p.m. on Sundays.** No Mastering Physics assignment is due the first week of class; the first due date is 01/31/2016. No credit will be given for late submissions. At the top of each assignment, there is a link to the grading policy. Read the grading policy to understand how Mastering Physics will assign points. Mastering Physics scores will be rescaled to 20% of the total grade for the course.

A standardized practice home work (Introduction to Mastering Physics) is available (including grades that have no penalties for wrong answers) so that you can learn how the system works—you should complete this assignment before attempting any others. This assignment is in addition to the 14 weekly assignments on Mastering Physics, and will count as extra credit.

• **Recitation:** The recitation section will be used to reinforce concepts introduced in the lectures, for problem solving, and to address your difficulties. To get the most out of the recitations, you should attempt to do the online homework assignment before the class. The instructor will assign a home work problem that you need to work out on paper. You must write a detailed solution to the assigned problem, similar in style to the solved problems in the textbook. This includes a discussion of your approach, a figure whenever appropriate, algebraic equations that you’ll use, consistent use of units and significant figures. Remember, you will have to write out the solutions to the problems in the exams, so these assignments are also good practice. Written assignment scores will be rescaled to 10% of the total grade for the course.

The **written assignment will be due by 4:00 p.m. on Fridays. You must drop your solution in the box in front of CW220.**

You are allowed, even encouraged, to work with others (that means discussing concepts, ideas for solving the problem, etc.—not copying), but you **must** write the solution by yourself. The use of solution manuals, solution websites etc. is not allowed and will be in violation of the honor code.

• **Laboratory:** The Lab section is an essential and required part of this course. Your Lab grade counts for 20% of the course. You must get a passing grade in the Lab section to pass this course—if you score less than 108 points (before rescaling in this section, you will get an F regardless of your scores in the rest of the course).

There is no lab in the first week of the semester, or during “dead” week. You will get detailed instructions during the first lab.

You will get only an hour and fifty minutes to complete the lab each week. This includes doing the experiments, answering questions and finishing your writeup. Therefore, it is important that you go prepared to the lab. The lab manuals will be posted on Canvas in Files. Read the instructions ahead of the class each week. There will a total of 13 Labs. The lowest score will be dropped. Each lab will be graded out of 15 points, for a total of 180 possible points. Lab scores will be rescaled to 20% of the total grade for the course.

• **Mid-term and final exams:** Mid-term and final exams will consisted of multiple-choice questions and problems requiring numerical solutions. The mid-terms exam will be split into modules for each chapter; the exam for each module will be 25 minutes long and worth 25 points. Some exams dates will cover two and others three modules. Mid-term exam scores will be rescaled to 30% of the total grade for the course.

Schedule for exams:

- Mid-term Exam 1: Chapters 1, 2, and 3, 5:30 p.m.–6:45 pm on 02/11/2016.
- Mid-term Exam 2: Chapters 4 and 5, 5:30–6:20 p.m. on 02/25/2016.
- Mid-term Exam 3: Chapters 6, 7 and 8, 5:30–6:45 p.m. on 03/24/2016.
- Mid-term Exam 4: Chapters 9 and 10, 5:30–6:20 p.m. on 04/07/2016.
- Mid-term Exam 5: Chapters 11, 12 and 13, 5:30–6:45 p.m. on 04/28/2016.
- Final Exam: Chapters 14 and 15, and Comprehensive Exam, 6:20–8:10 p.m. on 05/10/2016.

Please note that the final exam slot (05/10/2016, 6:20–8:10 p.m.), the first 50 minutes will be used for the last two modules (chapters 14 and 15), and the remaining 60 minutes for a comprehensive exam. **The comprehensive exam is mandatory and will consist of multiple choice questions only.**

The lowest two module scores will be dropped. Module scores will be rescaled to 30% of the total grade for the course. The final exam is 10% of the total grade for the course.

All exams will take place in CW101, CW102, and CW103. Room assignment will be emailed to you before each exam.
Grade assessment:

<table>
<thead>
<tr>
<th>Task</th>
<th>Points</th>
<th>Percentage of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm exams (best 12 of 15 modules)</td>
<td>$12 \times 25 = 300$</td>
<td>30</td>
</tr>
<tr>
<td>Online homework (best 12 out of 14)</td>
<td>$12 \times 20 = 240$</td>
<td>20</td>
</tr>
<tr>
<td>Lab write-ups (best 12 of 13)</td>
<td>$12 \times 15 = 180$</td>
<td>20</td>
</tr>
<tr>
<td>Written Homework (best 12 out of 14)</td>
<td>$12 \times 10 = 120$</td>
<td>10</td>
</tr>
<tr>
<td>i&gt;Clicker (best 20 out of 26)</td>
<td>$20 \times 2 = 40$</td>
<td>5</td>
</tr>
<tr>
<td>Pre-lecture quiz using i&gt;clickers (best 20 of 26)</td>
<td>$20 \times 5 = 100$</td>
<td>5</td>
</tr>
<tr>
<td>Comprehensive Final Exam</td>
<td>100</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>1000</td>
<td>100</td>
</tr>
</tbody>
</table>

Raw points from the Points column will be rescaled so that they match the Percentage column.

A passing grade (108 points or more before rescaling) in the LAB section is required to pass the course.

- **Make-up policy:** Since the lowest one or more scores in all graded categories will be dropped, no make up will be possible except under exceptional (and documented) conditions. Labs, homework assignments and clicker responses cannot be made up. If you have a good reason for a makeup exam (conflict with an authorized university event, for instance) you must inform me at least one week ahead of the day of the exam. If you have a medical emergency, please inform me as soon as possible.

**University Policies etc.:**

- **Statement Regarding Academic Honesty:** Kansas State University has an Honor System based on personal integrity, which is presumed to be sufficient assurance that, in academic matters, one’s work is performed honestly and without unauthorized assistance. Undergraduate and graduate students, by registration, acknowledge the jurisdiction of the Honor System. The policies and procedures of the Honor System apply to all full and part-time students enrolled in undergraduate and graduate courses on-campus, off-campus, and via distance learning. The honor system website can be reached via the following URL: www.k-state.edu/honor. A component vital to the Honor System is the inclusion of the Honor Pledge which applies to all assignments, examinations, or other course work undertaken by students. The Honor Pledge is implied, whether or not it is stated: “On my honor, as a student, I have neither given nor received unauthorized aid on this academic work.” A grade of XF can result from a breach of academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation.

- **Statement Regarding Students with Disabilities:** Students with disabilities who need classroom accommodations, access to technology, or information about emergency building/campus evacuation processes should contact the Student Access Center and/or their instructor. Services are available to students with a wide range of disabilities including, but not limited to, physical disabilities, medical conditions, learning disabilities, attention deficit disorder, depression, and anxiety. If you are a student enrolled in campus/online courses through the Manhattan or Olathe campuses, contact the Student Access Center at accesscenter@k-state.edu, 785-532-6441; for Salina campus, contact the Academic and Career Advising Center at acac@k-state.edu, 785-826-2649.

- **Statement Defining Expectations for Classroom Conduct:** All student activities in the University, including this course, are governed by the Student Judicial Conduct Code as outlined in the Student Governing Association By Laws, Article V, Section 3, number 2. Students who engage in behavior that disrupts the learning environment may be asked to leave the class.

- **Campus Safety Statement:** Kansas State University is committed to providing a safe teaching and learning environment for student and faculty members. In order to enhance your safety in the unlikely case of a campus emergency make sure that you know where and how to quickly exit your classroom and how to follow any emergency directives. To view additional campus emergency information go to the University’s main page, www.k-state.edu, and click on the Emergency button at the bottom.
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