

**Instructor:** R.F. Ellis  
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Email : rfellis@umd.edu  
Office Hours: Monday 4:30-6, Wednesday 5-6 or by appointment

**TAS :** Richard Triplett, [rtriplett@umd.edu](mailto:rtriplett@umd.edu), Office Hours TBA  
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**Schedule :** Lectures : Mon. 7:00 – 8:50 pm, Wed 7:00 – 7:50 pm Room 1410  
Recitations : Sect. 0401 Wed. 8:00 – 8:50 pm Room 4208  
Sect. 0402 Wed. 6:00 – 6:50 pm Room 4208  
Sect. 0403 Mon. 6:00 – 6:50 pm Room 4208  
Sect. 0404 Mon. 6:00 – 6:50 pm Room 1219

**Text:** *Physics for Scientists and Engineers, 2nd Edition, by R.D. Knight*

**Course Description:** The second semester of a three semester sequence in introductory physics. The subjects covered consist of oscillations (chap 14), fluids, heat, and thermodynamics (chaps 15-19), waves (chaps 20-21), and electricity thru resistor circuits (chap 26-32). Note all chapters will not be covered in depth. Laboratory experiments related to the material will be conducted each week. This is a calculus based sequence and makes extensive use of MATH 140 and 141. We will also use some of the math from MATH 241. The course will stress a quantitative understanding of physical phenomena and problem solving as well as a clear qualitative understanding. It is not possible to cover all the course material in lecture and students are responsible for the sections assigned in the text. Lectures will concentrate on covering the major points and providing insight into the material. To get the most out of lecture it is imperative that students read the text before class.

**Exams:** There will be three exams during the semester and a **cumulative** final exam. The schedule is as follows:

Monday, October 5 at 7 pm  
Monday, November 16 at 7 pm  
Wednesday, December 9 at 7 pm (Makeup Exam)

**Note the final exam will take place during the final exam period and will be a common exam for all sections of PHYS 260. It will be a cumulative exam for the entire semester.** There will be a review session the week before each exam with the schedule TBA.

**A makeup exam will be given on December 9** for anyone who wants to take it. This will be the **only makeup exam**. It will be cumulative and I will count your two best exams toward the grade. If you know that you will miss an exam you must notify me before the exam so we can plan. If you miss an exam due to an emergency let me know as soon as you can by email.

**Homework:** Regular homework is assigned to try to insure that you are keeping up with the course material and to act as a measure of your understanding of the material. If you are having difficulty with the homework this is a sure sign that you should seek some assistance. Students are encouraged to work together on homework but each person must submit their own homework and numeric answers will in general not be the same for each student. We will be using *Mastering Physics* to assign and grade the homework problems on the web. The following guidelines will apply.

Approximately 8 problems will be posted at the website each Monday. Work those problems to completion and submit the answers on the web. You will be informed immediately if your answer is correct or incorrect and will be allowed 4 retrys (a total of 5 attempts). Late homework will not be accepted. The grades on these problems will **not be included in your final grade** but the quizzes will be based on the *Mastering Physics* problems. I will check to see if students are doing the homework and failing to do so will hurt your grade if it is a “close call”.

**Laboratories:** See lab manual for P261 describing laboratory schedule and grading.

**Recitations:** Recitations meet once a week for the purpose of discussing homework problems, reviewing important concepts from the lectures, and administering the quizzes. **Attendance will be taken and there will be a quiz each week based on one of the homework problems.** No makeups for quizzes will be given but I will drop your lowest quiz score. You cannot get a good grade in this course without doing well on the quizzes.

**Help:** Help in understanding the concepts and solving problems can be obtained in a variety of ways. If you have a question or any difficulty, try to take advantage of all the available resources. These include:

1. discussions with me before or after class or in my office - please do not be shy about seeing me;
2. your recitation section, which is designed for just this activity;
3. The Slawsky Clinic.

**Bulletin Board:** Please check every class day. I will communicate important information there or post solutions. I will also use email extensively.

**Grade:** Your grade will be based on the following components:

Two In Class Exams(equally weighted)	35%
Final Exam	25%
Quizzes	15%
Laboratories(from P261)	25%

All grades are subject to "curving" and there is no set correspondence between numbers and letters. **In general, a letter grade is only associated with the final course grade**, but I can provide you an estimate of how I think you are doing, if requested. **Active class participation** will improve your chances of obtaining the best letter grade given your aggregate numerical total. You must complete P261 to get credit for P260.

### Topics and Chapters

<u>Subject</u>	<u>Chapter</u>
Oscillations	14
Fluids	15
Macroscopic Description of Matter	16
Work,Heat, and the First Law of Thermo.	17
Kinetic Theory, the Second Law of Thermo.	18
Heat Engines and Refrigerators	19
EXAM 1	
Traveling Waves	20
Superposition and Standing Waves	21
Electric Charges and Forces	26
Electric Fields	27
Gauss's Law	28
EXAM 2	
Electric Potential	29
Potential and Field, Capacitors	30
Current and Resistance	31
Circuit Fundamentals	32
MAKEUP EXAM	
FINAL EXAM	