

**Instructor:**     Dr. Gary Pennington  
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Office Hours: Mon. 5:30-6:30 pm, Wed. 5:30-6:30 pm, Thurs. 12:30-1:30 pm, or by appointment

**Schedule :**

Lectures :	Mon. and Weds. 4:00 – 5:15 pm	Room 1410	PHY
Recitations:	Sect. 0101 Tu. 11:00 –11:50 am	Room 1104	EGR
	Sect. 0102 W. 10:00 –10:50 am	Room 1219	PHY
	Sect. 0103 W. 8:00 – 8:50 am	Room 1219	PHY
	Sect. 0104 W. 9:00 – 9:50 am	Room 0405	PHY
	Sect. 0105 W. 10:00 –10:50 am	Room 0405	PHY

**Official Course Description:** PHYS260 General Physics: Vibration, Waves, Heat, Electricity and Magnetism; (3 credits) Grade Method: REG/P-F/AUD. USP Distributive Studies Area B: Natural Sciences and Mathematics Course. Prerequisite: MATH141. Pre- or corequisite: PHYS261. Credit will be granted for only one of the following: PHYS142; PHYS260 and PHYS 261 (Formerly: PHYS262) or PHYS272. Formerly PHYS 262. Second semester of a three-semester calculus-based general physics course. Vibrations, waves, fluids; heat, kinetic theory, and thermodynamics; electrostatics, circuits, and magnetism. PHYS260 and PHYS261 must be taken in the same semester and the grade for the courses will be combined into a single grade for both. To pass, students must complete passing work in both PHYS260 and PHYS261. CORE Physical Science Lab (PL) course only when taken concurrently with PHYS 261. If purchasing used books additional software may be required.

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

The required textbook for the course is: Physics for Scientists and Engineers, A Strategic Approach, with Mastering Physics, Volumes 1, 2, 3 and 4, second edition, by Randall D. Knight (Addison Wesley). Note that we will be using material in four different volumes! You will also need a Mastering Physics access code so you can do the on-line homework. If you took 161 in the last year then you are all set - your Mastering Physics access code from 161 is good for two years. However, if you are a transfer student or for some other reason never got an access code, then you will need to get one. See me if you don't already have an access code from when you took Physics 161. See me if you would like a list of addition references for the course material.

**Exams:** There will be four exams during the semester, three of which occur during a regular lecture class and a cumulative final exam. The preliminary schedule (subject to change) is as follows:

Monday, October 3rd at 4 pm  
Wednesday, November 2nd at 4 pm  
Wednesday, December 7nd at 4 pm  
Friday, December 16th at 6:30 – 8:30 pm (Final)

There will be a review session the week before each exam with the schedule TBA. Makeup exams will only be given for those with a valid documented excuse. If you know ahead of time that you will miss an exam you must notify me before the exam. If you miss an exam due to an emergency let me know as soon as you can, by any means possible.

**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.** Details on the academic honesty policy can be found at [www.testudo.umd.edu/soc/dishonesty.html](http://www.testudo.umd.edu/soc/dishonesty.html).

We will be using *Mastering Physics* to **assign and grade** the homework problems on the web. In order to do well on the exams and quizzes, solutions to the homework problems should also be written out. You should be able to explain each step of your solution in English using logic and reasoning. The online homework *may* also be supplemented with one or two hand written problems to be turned in during the lecture. This will be announced in the lecture and on the elms website. The following tentative homework guidelines will apply.

Approximately 10-15 problems will be posted at the website each Friday and will be due the following Friday. 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 multiple attempts. All homework problems should be hand written out for your records. Late homework will not be accepted.

**Electronic homework submission:** To turn in your homework, you need to go to:

**<http://www.masteringphysics.com/>**

The site is best accessed with a current version of Windows Explorer. If you run into problems check the system requirements. If you have not used Mastering Physics before then you should log on to the site and try the practice homework set before attempting any of the real homework sets.

In order to turn in your homework, you will need to register at the Mastering Physics website <http://www.masteringphysics.com/>. To register, you need two things - an access number and the class ID **MPPENNINGTON19348**. The access number will be packaged with new copies of the Knight textbook. If you want to buy a used book, make sure you purchase an access code at the Mastering Physics website.

**Laboratories:** See the lab manual for P261 describing the 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 quizzes. Typically there will be a quiz based on the homework turned in that week. The quiz will emphasize hand written solutions and explanations of physical concepts.

**Clicker In-Class Questions:** You are required to obtain and register an electronic clicker and bring it to each lecture class including review sessions. I will post instructions for the clicker usage on Elms.

**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, take advantage of all the available resources. These include:

1. Discussions with me before or after class, or in my office
2. Your recitation section, which is designed for just this activity
3. The Slawsky Clinic.

**Bulletin Board and Email:** Please check Blackboard every class day, to log in go to **[www.elms.umd.edu](http://www.elms.umd.edu)**. I will communicate important information there or post solutions. I will also use email extensively. When sending an email please begin subject line with "PHYS260:"

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

Three Midterm Exams (9% each)	27%
Final Exam	20%
Homework	18%
Quizzes	5%
Clicker Questions	5%
Laboratories (from P261)	25% (if all labs completed, F otherwise)

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. You must complete P261 to get credit for P260.

**Preliminary schedule for Physics 260  
(as of August 27, 2011)**

<b>Lecture</b>	<b>Dates</b>	<b>Main Topics</b>	<b>Chapter in Knight</b>
1	Wed. Aug. 31	Introduction, Oscillatory Motion	14
2	Mon. Sept. 5	No Class (Labor Day)	
3	Wed. Sept. 7	Oscillatory Motion	14
4	Mon. Sept. 12	Fluids	15
5	Wed. Sept. 14	Fluids	15
6	Mon. Sept. 19	Wave Motion	20
7	Wed. Sept. 21	Wave Motion, Sound, Superposition and Standing Waves	20,21
8	Mon. Sept. 26	Sound, Superposition and Standing Waves	21
9	Wed. Sept. 28	Review for Exam I	14,15,20,21
10	<b>Mon. Oct. 3</b>	<b>Exam I</b>	<b>14,15,20,21</b>
11	Wed. Oct. 5	States of Matter, Temperature, Ideal Gasses, and Work	16,17
12	Mon. Oct. 10	Work, Heat & First Law of Thermodynamics	17
13	Wed. Oct. 12	Work, Heat & First Law of Thermodynamics	17
14	Mon. Oct. 17	Kinetic theory of Ideal Gases	18
15	Wed. Oct. 19	Kinetic theory of Ideal Gases	18
16	Mon. Oct. 24	Heat Engines and 2nd Law (select topics)	19
17	Wed. Oct. 26	Electric Charges and Forces	26
18	Mon. Oct. 31	Review for Exam II	16-19
19	<b>Wed. Nov. 2</b>	<b>Exam II</b>	<b>16-19</b>
20	Mon. Nov. 7	Charge, Electric Forces, and Electric Fields	26,27
21	Wed. Nov. 9	Electric Forces, and Electric Fields	27
22	Mon. Nov. 14	Gauss's Law	28
23	Wed. Nov. 16	Gauss's Law	28
24	Mon. Nov. 21	Electric Potential	29
25	Wed. Nov. 23	Electric Potential	29,30
26	Mon. Nov. 28	Electric Potential, Capacitance	30
27	Wed. Nov. 30	Current I, Voltage V, and Resistance R (select topics)	31-32
28	Mon. Dec. 5	Review Exam III	26-30
29	<b>Wed. Dec. 7</b>	<b>Exam III</b>	<b>26-30</b>
30	Mon. Dec. 12 1410 4:00 pm	Review Session for Final	14-21, 26-32
	<b>Fri. Dec 16, 6:30 pm-8:30 pm</b>	<b>Final Exam (room number to be announced)</b>	<b>14-21, 26-32</b>