

Lecture: MWF 12:15 p.m. – 2:40 p.m., OWS 168

Instructor: Dr. Paul Ohmann
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Office Hours: T Th 3:00 – 4:30 pm, and by appointment. Don't be shy about setting up a time to meet; I'm pretty flexible.

Text: University Physics (11th Edition), Young & Freedman

Tests: There will be 6 tests during the semester, usually covering two or three chapters. The final exam is a unit test and is worth the same as the others. Tests *must* be taken at the scheduled time. Missed tests can only be made-up at my discretion.

Labs: There will be several in-class labs where some aspect of the classroom material is demonstrated. These will typically be done in groups, though write-ups should be submitted individually. Labs are due at the end of the class period, unless stated otherwise. **There are no make-up labs;** think of the points you earn on your labs as a reward for coming to class. The lab grade will be equal to one test.

Homework: Homework will not be graded directly, but it is crucial to learning the material. You are encouraged to ask many questions about it – both to me and to your classmates. Working in groups is also encouraged. Solutions will be posted on the departmental web site (see <http://www.stthomas.edu/physics>). As an added incentive, one of the test problems usually bears a very close resemblance to a homework problem or in-class exercise.

Attendance: Attending class is strongly encouraged. If you miss class, you should get the class notes and assignments from another class member; but in any event, you will have missed my wonderful and thought-provoking lecture! In case of emergencies or other special circumstances that necessitate missing an extended period of time, please let me know as soon as possible.

Philosophy: Most people think Physics is difficult. It often is. But what makes Physics 111-112 difficult is not so much the material per se; rather, it's a combination of two factors. First, the whole goal of Physics is to be able to describe phenomena in a quantitatively meaningful way. In Physics 111-112 we learn how to do this by working through specific problems. The goal then is to generalize our problem-solving skills so that we can attack problems that we haven't seen before – and this is an inherently difficult thing to do. Moreover, the quick pace that we have in this class sometimes makes the concepts hard to absorb. The reason that we need to go through the material so quickly in Introductory Physics is that Physics is such a broad area, with diverse applications and a student body who needs to learn different aspects within Physics as a prerequisite for future courses in varied fields. Covering such a broad swath of material necessitates this fast pace. Consequently, the single most important factor in success with this course is to *keep up with the material*. We typically cover a chapter every two or three days – this may not sound like much, but it really is quite intense. **Plan on studying 3 hours** for each class session we have. And don't get discouraged – it may sometimes seem overwhelming, but you'll gain a lot of confidence in overcoming these hurdles, which will help you in the future.

Honor Code: We have an Honor Code in the Physics Department. This means that we trust you. You are free to leave the room during tests, for example, even without asking me first. We take this very seriously – and so a breach of this trust has very severe consequences. Cheating – in any form – will be dealt with according to the University's Academic Integrity Policy. More significantly, cheating would damage the trust I have in you. Don't jeopardize this. Keep in mind that I respect you as individuals, and I respect the effort you put into the class – regardless of your grade. Much of what you learn in class will be forgotten eventually, and the grades you receive will not be as important in the future as they seem to be now. But your honor stays with you.

Disabilities: Classroom accommodations will be provided for qualified students with documented disabilities. Students are invited to contact the Enhancement Program – Disability Services about accommodations for this course within the first two weeks of the term. Telephone appointments are available to students as needed. Appointments can be made by calling 651-962-6315 or 800-328-6819, extension 6315. You may also make an appointment in person in O’Shaughnessy Educational Center, room 119. For further information, you can locate the Enhancement Program on the web at <http://www.stthomas.edu/enhancementprog/>.

Approximate Grading Guidelines: (May be adjusted 2-3%)

A: > 92%	C+: 72-76%	D-: 55-58%
A-: 88-92%	C: 68-72%	F: < 55%
B+: 84-88%	C-: 65-68%	
B: 80-84%	D+: 62-65%	
B-: 76-80%	D: 58-62%	

Class Schedule:	9/5	Introduction and Chapter 15 – Mechanical Waves		
	9/7	Ch 15		
	9/10	Ch 15		
	9/12	Ch 16 – Sound and Hearing		
	9/14	Ch 16		
	9/17	Review		
	9/19	Test 1 (Ch 15-16)		
	9/21	Ch 21 – Electric Charge and Electric Field		
	9/24	Ch 21		
	9/26	Ch 21		
	9/28	Ch 22 – Gauss' Law		
	10/1	Ch 22		
	10/3	Review		
	10/5	Test 2 (Ch 21-22)		
	10/8	Ch 23 – Electric Potential		
	10/10	Ch 23		
	10/12	Ch 24 – Capacitance and Dielectrics		
	10/15	Ch 24		
	10/17	Review		
	10/19	Test 3 (Ch 23-24)		
	10/22	Ch 25 – Current, Resistance, and EMF		
	10/24	Ch 26 – DC Circuits		
	10/26	Fall Break		
	10/29	Ch 26		
	10/31	Ch 26		
	11/2	Test 4 (Ch 25-26)		
	11/5	Ch 27 – Magnetic Field and Magnetic Forces		
	11/7	Ch 27		
	11/9	Ch 28 – Sources of Magnetic Field		
	11/12	Ch 28		
	11/14	Ch 29 – Electromagnetic Induction		
	11/16	Ch 29		
	11/19	Review		
	11/21	Test 5 (Ch 27-29)		
	11/23	Thanksgiving Break		
	11/26	Ch 33 – The Nature and Propagation of Light		
	11/28	Ch 33		
	11/30	Ch 34 – Geometric Optics		
	12/3	Ch 34		
	12/5	Ch 34		
	12/7	Ch 35 – Interference		
	12/10	Ch 35		
	12/12	Ch 36 -- Diffraction		
	12/14	Review		
Final Exam:	Wed	12/19	Test 6 (Ch 33-36)	10:30 am – 12:30 pm