
Physics 123 Syllabus

Instructor

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or by arrangement

Course Description: Physics 123 is a calculus-based introductory physics course that focuses on electricity and magnetism, and optics. Because this is the second semester of general physics, I assume that everyone is familiar with differential and integral calculus, so the general mathematical level of this course will be more rigorous than in physics 121. Lectures in this course will assume that you have read the text and will focus on concepts, problem solving and the clarification of important concepts in the text.

Technology: As part of the course materials, you are expected to purchase from the USM bookstore a radio frequency "clicker" which will allow you to electronically respond to questions in class. This classroom response system will be used almost every lecture, so be sure to bring them to class. In addition, you should purchase an extra set of batteries and bring those to every class; if we have an electronic quiz, you will not receive credit due to dead batteries.

Expectations: My expectations of you in this course are as follows:

- I expect you to be an active, engaged, thinking, participant in class.
- I expect you to read and work through the relevant sections in the text **before** they are discussed in class. Accordingly, I may begin every lecture with a short reading quiz to assess whether you have done so. (Reading a physics textbook is an activity that involves taking notes and thinking and working through problems and examples with paper and pencil; it's not like sitting down to read a good novel.)
- I expect you to study and construct a working *content* knowledge of the physics topics we discuss in class. I also will be looking at your *problem solving* skills. The goal is to be able to understand the *underlying concepts* and be able to apply them to systems you have never seen before.
- I expect the utmost academic honesty. If I find that you have been cheating in any way, you will receive a failing grade, be asked to leave the course, and I will send a letter documenting the offense to the Office of Student Judicial Affairs and the Dean of Students.

Attendance/Participation Policy: I expect that all of you will attend class and actively participate; since we will be using a classroom response system (the "clickers") I will obviously know if you are not participating in class, and therefore whether you are in class. Classroom participation counts for part of your course grade. If you are late to class or miss a class in which a quiz or test is given, you **will not** be given a makeup except in exceptional cases, or if you have prearranged due to a conflict. Reading quizzes will be given at the beginning of class, so be on time to lecture.

Textbook: Physics for Engineers & Scientists, by Ohanian and Markert.

This is the only required textbook for the course, and we will make extensive use of it, from readings to homework problems. It is available at the Portland USM bookstore. You only need volume 2.

Assessment A variety of methods will be used to assess your understanding of physics, including reading quizzes, in class participation, homework (via Smartwork), and exams. This semester, I will take the higher percentage of two scores to determine your grade: (1) the total percentage of all course work, including Smartwork and in class “clicker” scores, or (2) the total percentage of the three hour exams and the final. The upshot of this is that you are completely free to only appear for the three exams and the final and have your grade based on these scores. Of course, very few people do better in this scenario, so I do not recommend it. Here are the exam dates for the semester and the point values for each item:

Exam # 1	Friday, Feb 27, 2009	200 pts
Exam # 2	Friday, March 20, 2009	200 pts
Exam # 3	Friday, April 24, 2009	200 pts
Participation & Misc	throughout semester	150 pts
Mandatory Final Exam	Tuesday, May 12, 2009 8-10 am	250 pts
	TOTAL Points:	1000 pts

Keep in mind that although homework is not figured into your grade (there’s no way for me to give meaningful feedback on written homework without a teaching assistant), you will likely not pass the class unless you do all the assigned problems. Succeeding in physics entails struggling and solving many physics problems so that you build a clear and deep understanding of the laws that describe how nature works. Particularly in this course, where we study topics more removed from direct experience, you must work a little harder to build up your understanding of these rules. I encourage you all to form homework groups and help each other out.

Outside Help/Office Hours

In general, if my office door is open and I have time, I am happy to help you, so feel free to stop in and ask questions. My dedicated office hours are listed at the top of page 1 of this syllabus.

Students with disabilities

If you have any disabilities that I should know about, please inform me as soon as possible (i.e. not the day before the first exam). I will make every effort to accommodate any special needs you may have.

Academic Integrity

As previously mentioned, I expect the utmost academic honesty. If I find that you have been cheating in any way, you will receive a failing grade, be asked to leave the course, and I will send a letter documenting the offense to the Office of Student Judicial Affairs and the Dean of Students.

Complaints

If you feel that I — or any other faculty member—have behaved inappropriately, you may send a letter or request a meeting with the Dean of Arts and Sciences (Dr. Devinder M. Malhotra, Dean and Professor of Economics (207) 780-4221 Address: USM College of Arts and Sciences, 228 Deering Avenue, Box 9300, Portland, ME 04104-9300) Any such complaints are handled anonymously, and I will have no knowledge of who made the complaint.