PHYS 265
University Physics II
Spring 2009 Syllabus

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NOTICES: Bulletins, schedule changes, and general announcements will be made in class and posted on the course homepage.

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• Course Description

Phys-265 is a 4-credit course which may be applied toward the General Education Natural Sciences - Mathematics (D-1) requirement. Students must be registered both in the lecture section and in the laboratory section. The course and laboratory must be taken together or dropped together.

Prerequisites: PHYS 255 and MATH 227, or equivalents, each with a grade of C or better
Corequisites: PHYS 266

• Required and Recommended Texts

Text: University Physics, 12th Ed. by Young and Freedman, Addison Wesley

On-Line Homework: all students will required to use MasteringPhysics. Depending on which section you are registered for, the MasteringPhysics course number is either
GELDERMAN265S2009 if you are in section -001, meeting on MWF 09:10 and R 09:35; or GELDERMAN265S0911 if you are in section -002, meeting on MWF 11:30 and R 11:10.

Optional: Student Solutions Manual for University Physics 12e, Vols 2 and 3

• Office Hours

I consider myself to be open and accessible to my students. You are always welcome to drop by my office to seek advice, discuss your progress, or ask questions. If my door is open and I am around, then I will do my best to make time to sit down with you. Anyone who finds that my availability does not live up to my desires can catch me during my scheduled office hours or make an appointment at our mutual convenience.

• Course Goals and Philosophy

University Physics is an introduction to classical physics for students in the physical sciences (including chemistry, computer science, geology, mathematics, physics, and engineering related degree programs. The emphasis will be on developing problem solving skills and understanding the basic concepts and definitions used in the study and application of physics. A calculus course equivalent to MATH 227 is a prerequisite. Calculus will be an integral part of the course work.

The goal of early physics classes is to introduce the fundamental laws and to develop good problem solving skills. At this introductory level, the material will be a cartoon of the real world, often simplified to an unrealistic and unsatisfying level. Successful students will learn to see behind the elementary problems introduced in this class and apply the overall concepts to the complex world.

Each student will be evaluated on the ability to communicate her/his progress to the instructor. Thus, the process of solving a problem is more important than the final answer. Working to solve sample problems, both those assigned for homework and as many additional exercises as possible, is the single most important key to success in this course. However, it is not possible to learn this material just by doing problems. Successful students will also understand how the main concepts and laws came about. Memorization will not be a large component of the course. On the other hand, each student will be expected to know enough about the definitions, concepts and techniques to be able to expand their knowledge and apply it to new situations.

• Guidelines to Academic Success

It is important that students take responsibility for their education. Ask questions, both inside and outside the classroom. Discuss the material with friends and classmates how this course relates to the real world. Manage your time and do not cram for exams. The student and professor make a team, you both want to learn the material and earn a good grade. During the first week of the semester, you should read these brief essays: how to achieve academic success and taking good notes. You might also check out the links on this webpage for other study skills information.
• **Attendance Policy**

I expect prompt and regular attendance. Material presented in lecture takes precedence over the text. Lectures will largely follow the order of the book, though lecture content may differ somewhat from the text. Students are advised to keep their notes up to date and to read the text as an accompaniment to their notes. Missed classes should be covered by obtaining notes from other students.

You must attend all tests and the final exam at the scheduled times. If you are unable to take an exam with the rest of the class you must notify the instructor *before* the regularly scheduled exam time. The only makeup exams allowed after the class takes the test will be for students with a verified excuse of illness or extraordinary crisis. A missed exam will otherwise be scored as a zero.

• **Students with Disabilities**

Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course must contact the Office for Student Disability Service, 445 Potter Hall, (270) 745-5004 V/TDD. Please do not request accommodations directly from the professor without a letter from the office of Student Disability Services.

• **Grading**

The final grade will be determined from the following formula:

\[
\text{Final Grade} = 0.15 \text{ Homework Avg} + 0.15 \text{ Test1}\% + 0.15 \text{ Test2}\% + 0.15 \text{ Test3}\% + 0.15 \text{ Test4}\% + 0.25 \text{ Final}\% 
\]

Your grade for the course will be determined by your ultimate point total in comparison with the rest of the class. Appeals of test and homework grades will be considered up to a week after return of work. Later changes in grades are entirely at my discretion!

• **Policy on Collaboration**

All work turned in for a grade must be your own. Collaboration is allowed only up to the point at which you determine the approach to solving a problem. When it comes time to actually solve a given problem and record the answer for grading, each student must work independently. No credit will be given for work that is not demonstrably your own. When solutions which are too similar are submitted for grading, a grade of zero will result for all parties involved. With the above restrictions in mind, studying and working in groups is strongly encouraged.

• **Reading the Textbook**
You are responsible for reading the textbook before the material is introduced in lecture. Only by staying ahead of deadlines with thorough reading of the assigned chapters in the textbook and diligent practice with example problems will you be able to start your homework early and master the material. I suggest that you initially preview the readings by slowly flipping through the assigned sections and paying attention to the headings, pictures/figures and their captions, and the boxed or emphasized text. When you sit down to thoroughly read the sections, make sure you give the task your full concentration. Don't let your mind wander, read only as fast as you can thoroughly understand the material, and reread the sections until everything is completely clear to you. DO make notes in the margins. DO NOT waste your time using a highlighter.

**About the Homework**

In general, a homework assignment will be due every week of the semester. All homework will be assigned and submitted via the MasteringPhysics system. The access code used during PHYS 255 should still work, they were set up to be valid for two years. It is also possible to purchase a standalone access code from MasteringPhysics website. When you log onto MasteringPhysics, update your profile to register for the course number corresponding to your section: **GELDERMAN265S2009** for the 9:10 class or **GELDERMAN265S0911** for the 11:30 section. Your should then have access to our PHYS 265 assignments. Each assignment will be viewable about two weeks before the due date.

The homework will be submitted through MasteringPhysics for grading; however, each student is required to maintain a complete, legible hardcopy record of their work, showing all work necessary to reach the clearly indicated final result. The hardcopy of your homework is being required, in part, to encourage every student to prepare clear, logically outlined homework which will be a valuable study aid when it is time to study for exams. This hardcopy record of your homework will be collected randomly from each group and graded. To receive full credit for that week's WebAssign submission, the randomly selected group must turn in the written solution with the final answer clearly indicated and showing the good problem solving strategy used to reach that result. Neatness and organization count! Make certain that the work you turn in for a grade is concise, legible, and easy to follow. State your assumptions, define your variables, give the relevant equations, and show the steps as you manipulate the formulae to solve the problem. It is strongly advised that you do not substitute numerical values for variables and constants until the final step.

Homework problems may be assigned on material which has not been covered in lecture. No homework will be accepted after the MasteringPhysics homework solutions are posted, with the remote possibility of exceptions for truly extraordinary circumstances. Appeals of homework grades will be considered up to one week after the scores are returned. Later changes in grades are entirely at the instructor's discretion.

**About the Exams**

The questions will be primarily quantitative problems. A diligent effort to solve assigned homework and additional problems is the best strategy for a passing grade. However, be aware
that the problems on the exams will be variations of the homework; a firm grasp of the big picture is needed to score high on exams.

You are required to bring pencils and a calculator to each exam. In addition, you may also bring a single 8.5x11 sheet with formulae and constants. No other outside material, notes, texts, etc., will be allowed.

Individual exam grades will not be curved. Appeals of exam grades will be considered up to one week after tests are first returned to the class. Later changes in grades are entirely at the instructor's discretion.

- **Course Schedule** A weekly schedule of the material to be presented, with appropriate sections of the textbook, is available: PHYS 265 Course Schedule.

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