Instructor: Prof. Tabetha Hole

Office: SL 204

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Office Hours: I'm happy to schedule additional appointments. My weekly hours are

M: 10-11; Tu: 1:30-2:30; W: 10-11; Th: 10-12; F: 1:30-2:30 in SL 204 (my office)

Th: 4:00-5:30 PM **in SL 220** (the Physics computer lab)

Welcome!

Welcome to the first semester of College Physics. As a physicist, I am excited to share my field with you, along with the profound change in how you see the world that can come with this course. Physics is the study of how the material universe behaves: the way an apple falls off a tree; how electrons orbit an atomic nucleus; what water does to light to make a rainbow; and even the nature (and relativity) of time. It requires looking at familiar things in new ways, but the tools it gives us allow us to do extraordinary things, from building structures atom by atom, to launching satellites into space that tell us exactly where we are on the surface of the Earth.

In this course, we begin building the foundation that all physics is based on. It will challenge your intuition and your understanding, but by the end you will have a new and deeper awareness of the world around you.

Course Objectives:

Students who successfully complete this course should be able to:

- Demonstrate and apply conceptual understandings of physics in the areas of *mechanics*, *waves*, *fluids*, and *thermodynamics*.
- Think critically about and solve problems regarding the above concepts.
- Use laboratory measurements and analysis to study the above concepts.

This course is designated PS, and therefore conforms to the general education learning outcomes as described here: http://www.weber.edu/AcademicAffairs/natural_sciences.html

The Text

College Physics, A Strategic Approach 2nd Edition [Technology Update] by Knight, Jones and Field, available at the bookstore. You can also buy it elsewhere, and with whatever format you want as long as it is the right edition. I have requested that they carry the unbound version, because that is the least expensive. A *Mastering Physics Student Access Kit* is included with the text at the bookstore. If you buy a

textbook elsewhere make sure it either has Mastering Physics, or you will need to purchase access separately -- note that it is approximately $60 when purchased from the Mastering Physics website.

Finally, you will need the *laboratory manual*, also available at the University bookstore.

Final Exam:	= 20%
Midterm Exams: (4 @ 10% each)	= 40%
Quizzes: (lowest quiz dropped)	= 10%
Homework:	= 13%
In-Class Activities:	= 2%
Lab reports:	= 13%
Lab exam:	= 2%
Total:	= 100%

Grades

I'm sure most of you don't really care about grades, because you are motivated purely by the desire for knowledge. But just for the record, here is how the grades will be determined in this class. NOTE that your grades will be entered into the Canvas course gradebook throughout the semester, so you can always check how you are doing.

1. There will be four midterm exams, one about every three weeks. The they will be worth 10% each, for 40% of your final grade.

2. You will have a final exam at 8:30am on Dec 11. Half the exam will be on the last 3 chapters of the course. The other half will be comprehensive, covering material from the whole course.

3. There will be a quiz every week on Friday when there is not an exam. The lowest quiz score will be dropped.

4. You will have homework due each week on Thursday night at 11:59 PM, which will be worth 13% of your total grade. These homework assignments will be done through the Mastering Physics website.

   a) Register with masteringphysics.com using the access code that came with your text, or by purchasing one from the website directly. The course ID is THOLE2013B.

   b) You will have a 'practice' assignment the first week that will help you learn the system. This assignment is extra credit, to get everyone started off well in the course.

   c) We will average about 15 questions per week, and one extra-hard, extra-credit question to make up for those bad days that happen to everyone once in a while.

   d) The majority are ordinary, odd-numbered end of chapter problems, but with different numbers than in the text. You can work the problem with the book numbers first, check your answer with the back of the book, and then work them again with the numbers in your homework. The other questions are "tutorials" (which are not in the book) and occasionally even numbered problems. These are good practice for a crucial exam skill: checking your own answers.

   e) For short answer questions, each time you answer incorrectly, you will lose 5%, up to six chances per question. For T/F or multiple choice questions, you lose a fraction of points based on the number of choices available.

   f) Note that I will hold an office hour in the Physics computer lab (SL 220, *not* the testing center) on Thursday afternoon. This is a good time to come and work on your homework with a professor on call to answer questions.

   You should also explore the Mastering Physics website, which also provides other study and visualization tools to help your understanding.

5. In-class activities: These are designed to make sure you are reading the text before class, and to increase your understanding of the material.

   a) Some of these will be graded for correctness or for participation, others will not be graded.

   b) Activities graded for correctness will receive 2 pts for a correct answer, 1 pt for handing any answer in, and 0 pts if nothing is handed in in class.

   c) The graded activities will worth 2% of the course final grade. An average score of 1.5 pts will get you the full 2%.

   Note that this system allows you to make up for days when you are not there, or don't get the questions correct.

6. **Lab** (**13% lab reports, 2% lab final**): Lab is mandatory and you should be signed up for one already. Please note that making up a lab is awkward and difficult at best, and impossible in some instances. If you know ahead of time that you will miss a lab, contact your lab instructor beforehand.

In Summary

I'm excited to have you in this class. I respect your time and appreciate your attention. I expect that you will respect me and the rest of the class by doing your own work, and by silencing your cell phones and minimizing disruptions during lecture. In return, I hope to share with you the understanding of the beautiful and subtle ways of the physical universe.

Note: Any student requiring accommodations or services due to a disability must contact Services for Students with Disabilities (SSD) in room 181 of the Student Service Center. SSD can also arrange to provide course materials (including this syllabus) in alternative formats if necessary. The SSD office may be reached by phone at (801) 626-6413 or e-mail at ssd@weber.edu.