The specific goals of this class are to:

- LEARN THE PHYSICS!! 3 Primary Topics: 1)Thermodynamics, 2) Waves: Oscillators, Sound, Light, and 3) Optics.. REALLY... LEARN the Physics, not rote memorization of how to solve a particular problem! You will not do well on exams if this is your method of learning Physics. Learn the concepts and apply the appropriate math, solve the Algebra... DONE! However, you need to understand the Physics to set-up the solution.
- To use the conceptual understanding of physics and algebraic mathematics to solve problems.

Textbook:

- "Physics, Custom Edition Douglas Giancoli (Prentice Hall, 2004) Edited by Richard Taylor and Stanley Micklavzina for The University of Oregon. In a collaboration with Prentice Hall, a reduced-cost customized version of this book that includes a Mastering Physics homework system access code is available at the Duckstore. The Customized Edition versions of the book have identical content to a standard Giancoli 6th Edition, but the order and organization of the material is different, so it is highly suggested you purchase the customized textbook. We will be using Mastering Physics in all sections of PHYS 202. If you are sharing a book, or choose to use a book at the library, a separate Mastering Physics code can be purchased online or at the information kiosk on the second floor of the Duckstore.
- iClickers Required!

Other Helpful Books:

- Most any other basic physics text

Course Organization

- The lectures for this course will incorporate, interactive learning utilizing iClickers. YOU ARE EXPECTED TO READ THE MATERIAL BEFORE COMING TO CLASS! At the end of each lecture I will announce what sections of the book you should read to prepare for the next class. Announcements, assignments, exam results will be posted at the web site which is accessible through Blackboard. Changes occur regularly. It is the responsibility of the
Office Hours:

- Make use of office hours! Both mine and the Teaching Assistants. Also Drop-in Help Sessions are available. Pick up a schedule in the Physics Office

Homework:

We will be using an Web Based Homework system called Mastering Physics. You will submit most of your homework answers via computer. This is to give quick feedback to homework questions. You will be allowed a stated number of attempts to submit a correct assignment (Homework can be saved. This would not count as a submission) **THE DUE DATES ARE SET AND NO LATE HOMEWORK WILL BE GRADED.** Note: the values for the problems in the web question will be different for each student. If you figure out how to solve the problem as a group, you will still have to calculate your values for your own answer. The WEB based homework frees up Teaching Assistant time for teaching you in office hours rather than grading. **UTILIZE OFFICE HOURS FOR HELP IN THE COURSE AND HOMEWORK!**

I HIGHLY ADVISE AGAINST USING OBTAINED HOMEWORKS SOLUTIONS. It is actually plagiarism and you don't learn a darn thing and your exam grade suffers. If you should happen upon Homework solutions to this book or course, put them aside. Go to TA Office Hours or the Drop In center for help.

The homework will help you keep pace with the course and the feedback will let you know how well you are doing.

**The COURSE ID in Mastering Physics is: PHYS202MICKLAVW2014**

Reading Assignments are questions you should have no problem with if you have read and prepped for lecture. Reading the book will help your grade immensely and prepping for lecture will aid in answering clicker questions.

Tutorials:

In additional to your three lectures, there is a required one tutorial session each week. Tutorials begin on Friday January 7. An iClicker is also required for the course and Tutorial sessions.

Objectives: Tutorials give you the opportunity to discuss the physics you have experienced in lectures with your classmates, and the teaching assistants. With our support, you will work collaborative with your classmates to solve a set of tutorial problems. Given out at the beginning of each tutorial, these problems are designed to help you with your homework by developing and practicing your problem solving skills. The tutorial problems are not marked but attendance will be taken through the use of the iClickers.

Further help: in addition to your tutorial session and your teaching assistant’s weekly office hours, you
can also use the “drop in” help-center: located at Willamette Room 147.

**EXAMS:** *Since this course covers three different topics in Physics, there will not be a comprehensive final during finals week.* There will be 3 exams worth 20% each. The last exam will be given in the last tutorial session of the term, Friday March 14th. **YOU MUST ATTEND YOUR REGULAR TUTORIAL SESSION THAT WEEK. The other two exams will be given on evenings, Jan 28 and Feb 18th 6:00 - 7:20pm in Room 100 Willamette Hall.** This is so you can have 80 minutes to take the exam instead of 50 minutes.

**Grading:**

<table>
<thead>
<tr>
<th>Grading Method</th>
<th>Note</th>
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<tr>
<td>Mastering Physics: 20% No dropped scores.</td>
<td>The homework and exam dates are posted. Homework is due by the posted time. The exam questions will test your knowledge of the material AND your ability to communicate clearly.</td>
</tr>
<tr>
<td>Tutorials: 10% (Can miss one)</td>
<td>Reading assignment dues dates are posted in Mastering Physics. No dropped scores. This is intended for you to keep up with the lectures even if you are sick.</td>
</tr>
<tr>
<td>In Class Clickers: 5% (lowest 2 dropped)</td>
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<tr>
<td>Reading Assignments 5% No dropped Scores</td>
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<tr>
<td>Exams 1, 2 and 3 60% (20% each)</td>
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**A few more notes, and some advice:**

- Best use of the text and lectures can be made by reading the chapter assignments before lectures.
- University courses, in general, require at least 3 hours/week of work outside the course for each hour spent in class. **This means you should devote at least 12 hours/week working outside class to do well in this course!**
- There is a laboratory course, PHYS 205, which accompanies this course. The requirement of this lab depends on your major.
- By devoting adequate time, managing your time effectively, and practicing good study/problem solving skills you should succeed in this course.
- **BIG HINT FOR SOLVING PHYSICS PROBLEMS: LEARN THE PHYSICS!!!** Do not just look for equations to plug in. Know the Physics behind each equation. It will make things so much easier. READ THE BOOK! You paid a lot of money for it. Use it until it turns into a rag!

**Successful Problem solving:** Here are a few guidelines on solving problems:

1. Draw a clear diagrams indicating the situation
2. Think about the principles involved. Write them down!
3. Write down the quantities that are known and the quantities you want to know
4. State any appropriate equations
5. Write down numbered steps indicating the logical progression of your reasoning
6. Clearly mark your answer (underlined or in a box)
7. Don't forget units! Check your significant figures.
8. Check your answer to see if it is reasonable. E.g. perform an “orders of magnitude” estimate
Academic Honesty:

Every effort will be made in this class to deter dishonesty through classroom procedures. You are all welcome to work in groups on Homework assignments, but each person must submit their own assignment on-line. Additionally, exams must be based on individual work only (i.e. don't look at someone else's exam). It is degrading to impose draconian security measures to enforce honesty. Instead, we will use the honor system in this course and allow each of you to uphold your personal standards of conduct. For those of you who have failed to develop your own ethics, the University has designed the Student Conduct Program. Suspected academic dishonesty will be reported.

Accommodations:

If you have a documented disability and anticipate needing accommodations in this course, please see me as soon as possible.