

## Physics 211: Physics for Scientists and Engineers I (Fall 2014)

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 Lectures: 8:00am - 9:15am, T TH, HELD Lewis Hall, Room 101 (Auditorium)  
 Office Hours: 9:30am - 10:50pm, T TH and by appointment

**Textbooks:** "Physics for Scientists and Engineers" 9th Ed. By Serway and Jewett;

**Teaching Assistant:** TBA

### Notes:

1. The grades in this course will be determined by your performance in two term exams (20% each), final exam (40%), homework (10%), attendance (4%), pre-lecture quizzes (2%), in-class quizzes (2%), and bonus problems (2%). The grade ranges are: 90-100 = A; 80-90 = B; 65-80 = C; 50-65 = D.
2. The Final Exam will replace the worst of the two term exams if it is higher than any of them. The final exam grade cannot be used to replace a term exam that was missed.
3. September 8<sup>th</sup> is the last day of refund period, and October 6<sup>th</sup> is the last day for course withdrawals.
4. Final exam (comprehensive): Tuesday December 9<sup>th</sup>, 8:00am-11:00am. Please note there is no make-up for the final exam.
5. Access and do the homework problem online at <https://www.webassign.net> (see instructions\*)

Week/Date	Chapter/Topic	Chapter/Homework
1 Aug 26; 28	<b>Chapters 1 &amp; 2:</b> Dim. analysis, motion in 1d	HW1: Chapters 1 & 2: due Sep 9
2 Sep 2; 4	<b>Chapters 3 &amp; 4:</b> Vectors, motion in 2d	HW2: Chapters 3 & 4: due Sep 16
3 Sep 9; 11	<b>Chapters 5 &amp; 6:</b> Motion laws, circular motion	HW3: Chapters 5 & 6: due Sep 23
4 Sep 16; 18	<b>Chapters 7 &amp; 8:</b> Work, conservation of Energy	HW4: Chapters 7 & 8: due Sep 30
5 Sep 23; 25	<b>Chapters 9 &amp; 10:</b> Many particles, torque	HW5: Chapters 9 & 10: due Oct 2
6 Sep 30; Oct 2	<b>Chapter 11:</b> Ang. momentum <b>Oct 2 TH EXAM I</b>	HW6: Chapters 11 & 12: due Oct 14
7 Oct 7; 9	<b>Chapters 12 &amp; 13:</b> Static equilibrium, gravitation	HW7: Chapters 13 & 14: due Oct 21
8 Oct 14; 16	<b>Chapters 14 &amp; 15:</b> Fluid dynamics, SHM	HW8: Chapters 15 & 16: due Oct 28
9 Oct 21; 23	<b>Chapters 16 &amp; 17:</b> Waves and sound, resonance	HW9: Chapters 17 & 18: due Nov 4
10 Oct 28; 30	<b>Chapters 18 &amp; 19:</b> Resonance, Temp.	HW10: Chapters 19 & 20: due Nov 13
11 Nov 4; 6	<b>Chapter 20:</b> 1st law of Thermo, <b>Nov 6 TH EXAM II</b>	HW11: Chapters 21 & 22: due Dec 2
12 Nov 11; 13	<b>Chapter 21:</b> Kinetic th. of gases	
13 Nov 18; 20	<b>Chapter 22:</b> Entropy, 2 <sup>nd</sup> law of therm.	
14 Nov 25; 27	<b>Thanksgiving holiday</b>	
15 Dec 2; 4	<b>Reviews</b>	
16 Dec 9th	<b>FINAL EXAM: 8:00 - 11:00 am</b>	

### **\*Online Homework (WebAssign Instruction)**

You must self-enroll, the class key for Phys 211 is: **olemiss 8623 1494**, please supply your entire student Id accurately in order for the system to transfer credit from Web Assign to Blackboard. Student quick start guide is available at: [http://www.webassign.net/manual/WA\\_Student\\_Quick\\_Start.pdf](http://www.webassign.net/manual/WA_Student_Quick_Start.pdf)

### **Do Yourself (and Me) a Favor**

Read about the topics before I discuss them in lectures. It is not necessary that you study them carefully, but at least get the “smell of it”. This should make it much easier for you to follow the lectures and that should make them more interesting.

### **Recitation Sessions “OPTIONAL”**

We will set up time (after 5:00 pm) for recitation sessions according to the students’ schedule and the room availability. The recitation session is **not mandatory**, however it is very important in order to practice solving the homework problems, and enforce the physics concepts.

### **Disclaimer**

This is a tentative syllabus and a slight adjustment might be made in due course.

### **ADA statement**

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Office of Student Disability Services (SDS) at 234 Martindale Center ([sds@olemiss.edu](mailto:sds@olemiss.edu)) phone: 662-915-7128

### **Academic Integrity statement**

As an Olemiss student I have abided by the UM academic integrity policy. My words and actions will reflect Academic Integrity. I will not cheat or lie or steal in academic matters.

I will promote integrity in the University of Mississippi community. For more information, refer to: [http://www.olemiss.edu/depts/general\\_library/instruction/resources/plagiarism\\_resources/reinforcing.html](http://www.olemiss.edu/depts/general_library/instruction/resources/plagiarism_resources/reinforcing.html)

### **Objective**

This course is primarily about motions of objects and forces, which underlie these motions. The theory that describes the motion of “large mass” objects, which move with low speed compared to the speed of light, was developed by Isaac Newton in the 17th century and is called “classical mechanics”. Historically, this theory gave a foundation for development of all modern physics. Therefore, this course is an introduction to physics in general. Physics in turn provides a foundation for most other natural sciences and engineering. This course has several rather broad goals. They include that you develop a good understanding of a few important concepts in physics, learn to apply these concepts to familiar and unfamiliar situations, and gain the ability to reason qualitatively and quantitatively about physics.