

## **Physics 212: Physics for Scientists and Engineers II (Summer 2014)**

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Lectures: 8:00am - 9:50am, M T W TH F, HELD Lewis Hall, Room 109  
Office Hours: 10:00am - 12:00pm, M W 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. June 30<sup>th</sup> is the last day of refund period, and July 8<sup>th</sup> is the last day for course withdrawals.
4. Final exam (comprehensive): Tuesday July 24<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\*)

<b>Week/Date</b>	<b>Chapter/Topic</b>
1 June 26	<b>Chapter 23:</b> Electric field
1 June 27	<b>Chapter 24:</b> Gauss's law
2 June 30	<b>Chapter 25:</b> Electric potential
2 July 1	<b>Chapter 26:</b> Capacitors
2 July 2	<b>Chapter 27:</b> Ohm's law
2 July 3	<b>Chapter 28:</b> Kirchhoff's rule
3 July 7	<b><u>Exam I</u></b>
3 July 8	<b>Chapter 29:</b> Magnetic forces
3 July 9	<b>Chapter 30:</b> Magnetic fields
3 July 10	<b>Chapter 31:</b> Faraday's law
3 July 11	<b>Chapter 32:</b> Inductance
4 July 14	<b>Chapter 33:</b> Alternating currents
4 July 15	<b>Chapter 34:</b> EM waves
4 July 16	<b>Exam II</b>
4 July 17	<b>Chapter 35:</b> Light
4 July 18	<b>Chapter 36:</b> Image formation

<b>Week/Date</b>	<b>Chapter/Topic</b>
5 July 21	<b>Chapter 37: Wave optics</b>
5 July 22	<b>Chapter 38: Polarization</b>
5 July 23	<b>Chapter 39: Relativity</b>
5 July 24	<b>Final Exam (comprehensive), time: 8:00am -11:00am</b>

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

You must self-enroll, the class key for Phys 212 is: **olemiss 3786 9425**, 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**

We will set up time (after 5:00 pm) for recitation sessions according to the students' schedule and the room availability. The recitation sessions are very important in order to practice solving the homework problems, enforce the physics concepts, and to obtain a good grade in this course.

### **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 electricity and magnetism phenomena. The subject describes the motion of charged particles, and accordingly the sub-atomic particle dynamics, was developed in the 18th century and is called "classical electrodynamics". This course provides a foundation for almost all of the current technology, which stems from the Maxwell's Equations and atomic physics. This course is essential for most natural sciences and engineering majors. Among many several rather broad goals, the student will learn a few new important concepts in physics, learn to apply these concepts to practical problems, and gain the ability to reason qualitatively and quantitatively about physics.