

Physics 211: Physics for Scientists and Engineers I (Summer 2016)

Instructor: Dr. Ahmed M. Hamed
Office: 5 Kennon Observatory
Phone: 662- 915 -7849
Email: hamed@phy.olemiss.edu
Online: <http://www.phy.olemiss.edu/~hamed>
Lectures: 8:00am - 9:50am, M T W TH F, HELD Lewis Hall, Room 101 (Auditorium)
Office Hours: 10:00am - 12:00pm, M W and by appointment

Textbooks: "Physics for Scientists and Engineers" 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 3rd is the last day of refund period, and June 10th is the last day for course withdrawals.
4. Final exam (comprehensive): Tuesday June 28th, 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
1 June 1	<u>Chapters 1&2:</u> Dimensional analysis, motion in 1d
1 June 2	<u>Chapter 3:</u> Vectors
1 June 3	<u>Chapter 4:</u> Motion in 2d
2 June 6	<u>Chapter 5:</u> Motion laws
2 June 7	<u>Chapters 6:</u> Circular motion
2 June 8	<u>Chapters 7&8:</u> Work; energy; conservation of energy
2 June 9	<u>Exam I</u>
2 June 10	<u>Chapter 9:</u> System of particles, linear momentum
3 June 13	<u>Chapter 10:</u> rigid object, torque
3 June 14	<u>Chapter 11:</u> Angular momentum
3 June 15	<u>Chapter 12:</u> Static equilibrium
3 June 16	<u>Chapter 13:</u> Gravitation
3 June 17	<u>Chapter 14:</u> Fluid dynamics
4 June 20	<u>Chapters 15&16:</u> Simple harmonic motion, waves
4 June 21	<u>Exam II</u>
4 June 22	<u>Chapters 17&18:</u> Sound, resonance
4 June 23	<u>Chapters 19&20:</u> Temperature, 1 st law of thermody.

Week/Date	Chapter/Topic
4 June 24	Chapters 19&20: Temperature, 1 st law of thermodynamics
5 June 27	Chapters 21&22: Kin. th. of gases, 2 nd laws of thermody.
5 June 28	Final Exam (comprehensive), time: 8:00am -11:00am

Disclaimer:

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

***Attendance**

"The university requires that all students have a verified attendance at least once during the first two weeks of the semester for each course. If your attendance is not verified, then you will be dropped from the course and any financial aid will be adjusted accordingly. Please see <http://olemiss.edu/gotoclass> for more information." Attendance will be taken each day by using the scanners. A bonus of 10 points will be given for perfect attendance. Every absence will be subtracted from this bonus, up to ten days. For more than ten absent days, no bonus will be given. There are NO excused absences; if you forget your student ID, you lose a bonus point. Consistent with the Honors College standards, any student who misses more than three classes may suffer a grade penalty. To comply with attendance verification requirements, data captured by the attendance scanners will verify your attendance during the first two weeks of class.

****Online Homework (WebAssign Instruction):**

You must self-enroll, the class key for Phys 211 is: **olemiss 4134 5050**, 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

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.

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) 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

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.