Phys 309L

Elementary Physics for Nontechnical Students II

Spring 2013

Section unique 58310

Schedule: T Th 8-9:30 AM, in Painter 4.42

Instructor: John Yeazell, Department of Physics, Office: RLM 11.320
Contact: By e-mail: jyeazell@austin.utexas.edu. Please include PHY309L on the subject line.
Instructor's Office Hours: T Th 10-11AM or by appointment

Teaching Assistant: ????? , e-mail: ?????
TA Office Hours: ?????

Text: *The Physics of Everyday Phenomena, A Conceptual Introduction to Physics*, Griffith and Brosing, 7th edition

Content: The topics covered include: Wave Motion, Electricity, Magnetism, Electromagnetic Waves, Optics, Atomic Physics, and Nuclear Physics Chapters (12-19). This is a conceptual course, so the math level will be relatively simple. No prior math course is required beyond the usual high school math. The goal of the course is draw connections with your everyday experiences and to current topics and applications of science in such areas as energy, health, and nanotechnology. **See Lesson Plan at the end of this syllabus**.

Web Site: This course makes use an online system, the web-based Quest content delivery and homework server system maintained by the College of Natural Sciences. This homework service will require a $25 charge per student for its use, which goes toward the maintenance and operation of the resource. Please go to http://quest.cns.utexas.edu/ to log in to the Quest system for this class. At some point during the second or third week, when you log into Quest, you will be asked to pay via credit card on a secure payment site. You have the option to wait up to 15 days to pay while still continuing to use Quest for your assignments. If you are taking more than one course using Quest, you will not be charged more than $50/semester. Quest provides mandatory instructional material for this course, just as is your textbook, etc. For payment questions, email quest.fees@cns.utexas.edu.

All course materials and course communication will be handled through Quest. Check for announcements at the top of your Quest page. Course materials may be found under the Course Resources link in the left column.

- Your quest account has been auto-created for you through Registrar/Quest interface. It is identified by your unique number. For a student newly transferred into this class it could take up to a 24hr delay to auto-create the new Quest account. During the semester this account keeps track of all of your record. Read FAQ to get you started.

Homeworks: There will be approximately weekly homework assignments, usually due on Tuesday before class (8AM) unless otherwise indicated. These Homework Assignments will be posted on the Quest-system at https://quest.cns.utexas.edu/ one week prior to the due date. **The due date on Quest is the official deadline**. Submit your homework using the same website. If you are registered for this course, you'll find it listed as PHY309L after you log into Quest. You are encouraged to discuss homework with anyone you wish and to work in groups. **The worst two homeworks will be dropped. There are no makeups for missed assignments (check the due dates carefully).**

Midterm Exams: Three exams will be given in class. They will constitute 30% of your grade.

Midterm 1: Thursday, February 14, 8-9:30AM
Midterm 2: Thursday, March 21, 8-9:30AM
Midterm 3: Thursday, April 25, 8-9:30AM

Final Exam: The Final exam is comprehensive and mandatory. It will constitute 40% of your grade. The Final Exam will be held at the site and time scheduled by the UT-registrar's office.

Make-up exams

No make-up for exams will be given. In the case of a documented absence, the grade on a missed midterm will be calculated from the relevant questions on the final exam. A documented absence is a sickness or a family emergency that is documented by a physician's note or a letter from the Dean's office.

Lectures: There are 2 Lectures per week. The purpose of the lectures will be to illustrate, explain, and otherwise illuminate *some* of the more important and difficult concepts in the course. In order for the lectures to have maximum effectiveness, you need to come prepared. IT IS ESSENTIAL THAT YOU READ THE ASSIGNED MATERIAL BEFORE EACH LECTURE!

TA Sessions: There will be one TA session each week (except for the first week). During TA sessions we will help you understand the physics concepts through problem solving. These sessions will be conducted by your TA. He or She will go through a couple of problems and assign additional problems for you to work on in groups. Bring pencil, paper, and a calculator to the TA sessions.

Grades

Grades for the class will NOT be curved and the following bounds will be used to assign letter grades:

A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
90-100	85-89	81-84	78-80	75-77	71-74	68-70	65-67	61-64	58-60	55-57	Below 55

The following example shows how rounding will be handled: 84.499 is the same as 84, while 84.500 is the same as 85. No exceptions.

Point Distribution

Midterm Exams (30%)
Homework 30%
Final Exam 40%
Total Points 100%

Disability Accomodations:

Students with disabilities may request appropriate academic accommodations from the Division of Diversity and Community Engagement, Services for Students with Disabilities, 512-471-6259, http://www.utexas.edu/diversity/ddce/ssd/

ADDING AND DROPPING COURSES

The academic calendar for each semester is provided at http://registrar.utexas.edu/calendars. The College of Natural Sciences adheres strictly to the published deadlines of the University. Check the academic calendar for these deadlines.

- Students who experience significant nonacademic problems such as extended health-related problems or family emergencies should contact the Dean's Office.

- **New One-time Drop Policy:** This new policy was proposed and approved by UT Faculty Council on May 9, 2011, and more information is available at http://www.utexas.edu/faculty/council/2010-2011/legislation/EPC_OTE.html.

Academic dishonesty will not be tolerated.
UT Honor Code http://registrar.utexas.edu/catalogs/gi09-10/ch01/index.html

Physics 309L Lesson Plan, spring 2013, Section 58310

Day	Date	Topic	Chap.	Homework/ Notes
T	1/15	Electric charge, force	12	
Th	1/17	Electric force, and field	12	
T	1/22	Electric potential	12	
Th	1/24	Electric circuits, current	13	
T	1/29	Ohm's Law, emf, resistance	13	**Homework #1**
Th	1/31	Power, AC circuits	13	
T	2/05	Magnetism, force, currents	14	**Homework #2**
Th	2/07	Loops and Torque	14	
T	2/12	Faraday's Law and Generators	14	**Homework #3**
Th	2/14	**Midterm 1**		
T	2/19	Waves	15	
Th	2/21	Interference	15	
T	2/26	Sound waves and Music	15	**Homework #4**
Th	2/28	Electromagnetic Waves	16	
T	3/05	Color, Interference	16	**Homework #5**
Th	3/07	Diffraction, Polarization	16	
T	3/12	Spring break		
Th	3/14	Spring break		
T	3/19	Review for Midterm 2		
Th	3/21	**Midterm 2**		
T	3/26	Reflection and Refraction	17	**Homework #6**
Th	3/28	Images: Lenses and Mirrors	17	
T	4/02	Optical Instruments	17	**Homework #7**
Th	4/04	Atoms, electrons, and the nucleus	18	
T	4/09	Atomic spectra; Bohr's Model	18	**Homework #8**
Th	4/11	Particles and Waves; Quantum	18	
T	4/16	Structure of the Nucleus	19	**Homework #9**
Th	4/18	Radioactive Decay; Fission	19	
T	4/23	Nuclear Energy; Fusion	19	**Homework #10**
Th	4/25	**Midterm 3**		
T	4/30	Current Topic in Physics		**Homework #11**
Th	5/2	Review for Final		Last Class

Final Exam Wednesday, May 8, 9:00-12:00 noon