

Physics 303L – Engineering Physics II

Fall 2007 – T Th 11am, PAI 4.42

Unique numbers 61460, 61465, 61470, 6175

Instructor: Prof. H. L. Berk Office: RLM 11.326

<http://peaches.ph.utexas.edu/ifs/personalpages/berk.html>

Office hours: 1:45-2:45 pm T Th or by appointment

Virtual Office Hours: The best way to reach me is by email, hberk@mail.utexas.edu

TA's: Jerry Schirmer, jerryschirmer@hotmail.com and Alex Hawk
ahawk@physics.utexas.edu

TA Office hours:

Jerry Schirmer: Tuesday, 5:30-6:30 pm and Wednesday, 1:00-2:00 in RLM 9.216

Alex Hawk: Tuesday, 4-6 pm in 9.222 RLM.

Course Materials

Textbook: Ohanian and Markert, Physics for Engineers and Scientists, 3rd Ed. (W.W.Norton & Co., 2007), Vol. 2.

Texas Teaching Tools: This course uses Texas Teaching Tools (often referred to as tt), which administers assignments, grading, scheduling, and access to on-line resources. To get a tt account and add yourself to the tt roster for this class, you first must know code, which is **vfq208** (this is case sensitive). There is a \$10 fee for registering in the homework service. Then go to <https://ttt.ph.utexas.edu/instructions.html> and follow the four instructions and then click **iClicker** in the boxed area (eInstruction will not be used).

Clicker: This class will use the Classwork system for in-class participation. You will need to purchase an iClicker remote (available at the Co-op). Then go to “manage account info” (button A.4 in tt) and enter the serial number found on the back of your iClicker (include leading zeros). Be sure to record your “Box number” (the number assigned to you in the homework service) which you will need when using the clicker in class.

Course Requirements

Prerequisites and Co-requisites will be checked by the Physics Department by the second week of class. Students who do not satisfy the official requirements for the course will be dropped!!, usually by the 12th class day, unless they receive permission from the physics undergraduate adviser. From the Course Schedule, the following is required: “PREREQUISITE: PHY 303K AND 103M; M 408D, OR 408L AND CONCURRENT ENROLLMENT IN 408M; AND CREDIT OR REGISTRATION IN PHY 103N.” See Pat Morgan in the Physics Undergraduate Office (RLM 5.216) if you have any questions. The student with deficiencies will be notified. Note that PHY 103N, the co-requisite for our PHY 303L, is a separate course that will begin on the week of Sept. 10.

Discussion Sessions: When you registered for this course you registered for a discussion session that meets one hour each week. Attendance is required and ‘snap quizzes’ will be given from time to time. At the end of the term the lowest of the snap quiz grades will be dropped. Discussion sessions begin the 2nd week of the semester.

Assignments and Exams

Syllabus: The course syllabus is located in the tt section (press B.2). In the subject matter there lists a chapter and a section (e.g. in the first box there the listing is, chapter 22, section 5), and this means that the material you are responsible for will cover all the way up to the stated chapter and section (in this example up to chapter 22, section 5). Sections that you will not be responsible for will be announced in a timely manner.

Homework: Regular homework assignments will be turned in via the Web (in tt). Homework will be assigned once per week, and generally will be due by 4am every Wednesday (very early) morning, unless otherwise announced (e.g. the last homework of the course will be due on Friday Dec. 7) . Answers can be turned in any time after a homework assignment is available for download from the Web. Though there will be no deductions for handing in homework close to the deadline, you are encouraged to complete your homework somewhat early so as not to get overloaded and not to be caught in the ‘ether traffic’ of last minute submissions. Though not likely, any exceptions to deadline date will be announced. Late homework does not exist.

Exams: The four exams will take place from 7-9 pm, on Thursday nights, as specified in the course schedule: The exams are: 7-9PM THURSDAYS, SEPTEMBER 20 (at FAC - 21), OCTOBER 18 (at BEL-328), NOVEMBER 15 (at BEL-328), AND DECEMBER 6 (at BEL-328).” You must take each exam at the specified time and place. There are no exceptions. It is crucial to resolve any potential conflicts at the start of the semester and not wait until the last minute.

Final Examination: Scheduled for 9-12 am on Monday, December 17, location TBA.

Grading Policy

Components of Your Course Grade: To see how different types of assignments will be weighted in determining your final grade, look at a report of your “semester grades” on tt (button C.3). At the end of your grade list is a table which gives the “percent of overall grade” and the “number of assignments to drop” for each type of assignment.

Attendance at lecture and discussion sessions is expected and may count toward your grade in the course. Lecture attendance will be checked using the Classwork system, and will contribute to your grade as “inclassquiz” assignments. We are required to report significant absences from class to your academic Dean, and typically will do so about the middle of the semester.

Exams: Students are required to take all four exams during the term. At the end of the semester, the exam with the lowest scaled (i.e., curved) grade will be dropped. No make-up exams will be given. If a student misses a midterm due to a legitimate, documented reason approved by the instructor, the student’s scaled score of the three taken exams may serve as the score of the missing exam, provided the student has taken the other three exams. Otherwise, if you miss an exam, there will be no dropped exams.

Final Exam: The final exam is comprehensive and mandatory. If you earn a score of 90% or better on the final, you will receive an A in the course; 85% or better and you will receive at least a B, no matter what your other grades are. Your attendance at lectures will be used to determine the final grade of students who are just below a letter-grade cutoff at the end of the semester.

Snapquiz: The ‘snapquiz’ will be given at un-announced times during the discussion section. It will consist of 1 or 2 questions that are based on past homework or past exams. A separate grade for discussion sessions, based mainly on your snap quiz grades, will be entered into tt by your TA at the end of the semester.

Other Resources and Suggestions

Coaching Service: In addition to instructor and TA office hours, the physics department supplies a service where physics graduate students are available on class days for free tutoring on the 5th floor of RLM (between the elevators and the Physics Department offices). The coaching schedule is posted on the bulletin board in that area.

Course Summary Sheets give, in mathematical form, the basic physical principles which you need to learn this semester. You will be provided with a fresh copy of the relevant Course Summary Sheet(s) to use during each exam and final exam. You may download your own copies at https://hw.utexas.edu/bur/Formulae_EM_page1.pdf. and https://hw.utexas.edu/bur/Formulae_EM_page2.pdf .

Chit Sheets: In addition to the Course Summary Sheet(s) provided for your use at every exam (including final), you may bring to each midterm a “chit sheet” consisting of one sheet (two for the final exam) of 8 1/2 x 11 paper with anything you want hand-written on it (both sides). The idea is that by the time you have organized the covered material well enough to make a “quality” chit sheet, you will have it well organized in your mind as well.

Study Suggestions: In the lectures, there is only time for highlights and some examples to be given. Nevertheless, you are responsible for all assigned sections of the book even if they are not covered in class or on the homework. You are strongly suggested to read the material before class, and a second time afterward. Start working on your homework as soon as it is available and begin turning it in as soon as you have worked some of the problems. Get help immediately if you have trouble with the material. The importance of doing the homework assignments (and understanding them) cannot be overemphasized. Very few students pass who do not do well on their homework. Finally, no matter how good a physics student you believe you are, you will benefit from a look at **How to Study Physics** at <http://www.ph.utexas.edu/~phy302k/how.html> .

Some Ground Rules for Class: In this class, common courtesy should be all we need to keep things running smoothly. A few specific guidelines:

- This is a very large class, so that when you come to class please fill in the central regions and do not leave gaps between your seat and your neighbor's. Otherwise when the later students arrive, they will be walking over the seated students (who may then get pinched toes) when the late students attempt to find a seat.
- Please be on time. Late arrivals can be very disruptive.
- Please do not read a newspaper or talk to your neighbor during the lecture.
- Please remember to turn off all personal electronics before class. This includes computers, cell phones, ipods or other mp3 players, etc.