

Physics 152L – Electricity and Magnetism Fall 2004

QUESTIONNAIRE

Circle your instructor:

Prof. Burke

Prof. Judge

Prof. Ogawa

Please complete and turn in the following:

NAME (printed) _____

NAME (signed) _____

SOCIAL SECURITY NO. (Only last four Digits) _____

LOCAL ADDRESS _____

CITY, ZIP CODE _____

LOCAL PHONE(optional) _____

USC Email -Address _____

MATH COURSES taken in the last four years _____

High School _____

College _____

SCIENCE COURSES taken in the last four years

High School _____

College _____

MAJOR _____ (1st, 2nd, 3rd, 4th, 5th) Yr. _____

PROFESSIONAL GOAL _____

Physics 152L – Electricity and Magnetism - Fall 2004

WELCOME TO PHYSICS 152L. This is the second course in the physics sequence intended for majors in the physical science and engineering. The subject matter is electricity and magnetism and its applications.

The sequence of courses 151L-153L is to be considered as a whole. This course will freely make use of ideas developed in Physics 151L, and the subject matter studied here will be important in Physics 153L and will lay the foundation for many other fields, including astronomy, chemistry, biology, and engineering.

Prerequisites for this course are Physics 151 (Mechanics and Thermodynamics) and Math 125-126 (Calculus I and II). A co requisite is Math 226 (calculus III).

A certain amount of proficiency in differential and integral calculus is essential to complete this course successfully. If you are rusty, you are strongly advised to review your math.

I. Course Instructors

Prof. Burke

Lecture: MW 12:00 PM–1:50 PM SLH 200
Office hours: MW 11:00 AM –12:00 PM or by appointment
Office: SSC 101
Phone: 740-0867
Cell Phone: (949) 887-6926
Email: burked@usc.edu

Prof. Judge

Lecture: TuTh 12:00 PM–1:50 PM SLH 100
Office hours: TuTh 2:00 PM–3:00 PM or by appointment
Office: SHS 270
Phone: 740-6340
Email: djudge@usc.edu

Prof. Ogawa

Lecture: MW 4:00 PM–5:50 PM SLH 100
Office hours: MW 3:00 PM–4:00 PM
Office: SHS 265
Phone: 740-2581
Email: ogawa@usc.edu

II. Course Materials

II A. Required for the lecture

Randall D. Knight, *Physics for Scientist and Engineers: A Strategic Approach with Modern Physics* (Addison Wesley, Pearson, 2004). This book is available in the USC Bookstore. NOTE: This book is also used in Physics 153L so don't sell your book at the end of the course if you are continuing the sequence.

II B. Required for the laboratory

Laboratory Manual for Physics 152L (USC Department of Physics and Astronomy, 2004), This manual is sold only at the KAP- B16 Lab Office (not the bookstore), between the hours of 8:30 AM and 5 PM., Monday through Friday for \$8, checks or money order only (*no credit cards or cash will be accepted*). All sales are final.

III. Registration

Your registration for this course consists of three separate parts: a lecture, a “quiz” (see below) and a laboratory. You must be registered for one of each. The only exception is if you have previously completed the laboratory and received permission to carry a passing grade into the current semester. In that case you would register only for the lecture and quiz.

Associated with each lecture is its own **quiz** section. The quiz section is a reserved time block for conducting course midterms and possible review sessions. The dates and hours of two midterms and final are given in Section IV C. A summary of important dates is given in Section VI. The location and room for each midterm will be announced during the week before it is given.

The laboratory section meets once a week for three hours. You may choose any laboratory section that suits your schedule, subject to availability. For current laboratory information see

<http://physics.use.edu/Undergraduate/Labs/152>.

Students who need to request accommodations based on **disability** are required to register each semester with the office of Disability Services and Programs (DSP). In addition, a letter of verification from DSP is needed for the semester you are enrolled in this course and is to be provided to your course instructor. If you have any questions concerning this procedure, please contact the instructor and DSP at STU 301 or phone 740-0776.

IV. GUIDELINES

IV A. Grading

Your course grade will be based on the following distribution:

80%	Lecture (break-down immediately below)	
	Homework	15%
	Midterm I&II	40% (20% each)
	Final	25%
20%	Laboratory.	

*In order to receive a passing grade in the course (D– or above), you must receive a passing grade in both the lecture and the laboratory portions. **Each semester a few students fail to complete the laboratory requirements and consequently fail the entire course. Please don’t let this happen!***

IV B. Homework

Homework is due one week following the assignment (M for MW classes and Tu for TuTh classes with the exception of Labor Day where MW classes is due on W). Please turn in your homework on time, because, *late homework will not be accepted* unless approved by your Professor. Please make sure to *staple together* multiple homework sheets, since work submitted as loose pages may not be graded.

We expect that it will take a minimum of four to five hours for most students to complete a homework set. These sets are the central way to master the course material. Understanding physics implies knowledge of the physical laws and the development of the necessary skills to solve physics problems you have not seen. Homework problems will range from the trivial to the difficult. Midterm and final examination questions will most closely resemble homework problems on the difficult end of the spectrum. Experience shows a strong positive correlation between total homework scores and total exam scores. For these reasons we urge you to attempt every homework problem, even if you are not able to complete each one.

We encourage you to work with friends on deciding how to do the homework. This does not imply simply copying solutions from each other. You can learn a tremendous amount by cooperating and explaining to each other how to analyze a problem, but everyone must turn in individual solutions.

The Supplemental Instruction (SI) Program provides a structured way to cooperate on solving homework problems – see Section V E. below.

IV C. Examinations:

There will be two midterm examinations and a final examination. The midterm exams will last 90 minutes and will be given at 5 PM on Thursday September 30, 2004 and Thursday November 4, 2004. The final examination will last 120 minutes and will be given at 8 AM on Wednesday December 15, 2004 (See the Schedule of Final Examinations, and be alert that the Physics 152L course is under the **Exceptions section** on the USC Web-site.)

*All examinations are **closed book**. You are allowed to use your own one-page formula sheet as well as a pocket calculator.*

There are no scheduled make-up examinations for either the midterms or the final. A missed exam will prevent you from passing unless you have approval from the instructor.

IV D. Laboratory

Physics 152L laboratories **will meet** during the first week of classes (do not miss it or you may lose your registered lab period).

Your laboratory grade will be derived solely from your performance in the laboratory. As noted previously, it is necessary to pass the laboratory portion of the course in order to pass the course as a whole.

If you miss a laboratory period, *it is your responsibility* to make arrangements with your TA to make up the missing experiments. Your TA will not make this arrangement for you. *Do not simply attend a different laboratory section unannounced.* TA's will not accept students in the laboratory who are not registered in their section without prior official arrangements. Questions concerning the laboratory should be referred to the Laboratory Director (Gökhan Esirgen (KAP- B19, 740-1138, email esirgen@usc.edu)

V. Assistance

You have a variety of opportunities for assistance available to you. We list some of these below.

V A. Lectures

Don't underestimate the value of questions during the lecture period. Almost always, if one student asks a question, there are several others who have been bothered by the same question. Stopping the lecture on these issues *is much more useful* than continuing the lecture without clarification.

V B. Instructors Office Hours

For more personal attention you can come to office hours. It may sometimes be possible to schedule an appointment at a different time.

V C. Laboratory TA's

All laboratory-teaching assistants are graduate students, usually pursuing a Ph D. in physics. They are all capable of answering any questions you have regarding subject material. Usually your lab TA can answer questions immediately, either at the beginning or at the end of the lab period. However, some problems you pose may require some additional thought. In either event, you should regard your lab TA as a resource not only for the laboratory, but also for lecture-related questions.

V D. Published Solutions

Homework solution sets, answers to even homework problems, as well as sample midterms and final examinations from previous semesters, will be made available on the USC Blackboard Class Web-site

<http://totale.usc.edu>

V E. Supplemental Instruction Program (SI)

The SI Program is an academic program designed to improve student performance in this course and in several other traditionally difficult courses. It is free and does not require registration. Each week there will be several sessions, led by an SI leader who will be working with the instructors and attending the same lectures you do. All Physics 152L students can attend any of the weekly sessions and exam reviews that will be announced in your lecture. For further information, you can contact Judy Haw at 740-5295 or an SI leader. There is also an SI web page for a schedule of weekly sessions and exam reviews. Its address is

www.usc.edu/dept/LAS/si

VI. Important Dates for Fall 2004

Aug 23	Spring semester classes begin
Aug 25-27	Late registration and change of program
Sept 6	Labor day (University Holiday)
Sept 10	Last date to drop without a "W"
Sept 30	Midterm 1 Thurs. September 30, 5:00-6:30 PM
Nov 4	Midterm 2 Thurs. November 04, 5:00-6:30 PM
Nov 12	Last date to drop with a mark "W"
Nov 25-27	Thanksgiving recess
Dec 3	Fall semester classes end
Dec 15	Final Examination (<i>Caution see Exceptions section</i>) Wednesday 8-10 AM

Physics 152L SCHEDULE Fall 2004

week of	Reading	Homework	Due Date (M-Tu)
1. 8/23	set #1: Ch. 25	Ch. 25: 2, 8, 13, 25, 45, 53, 67, 68, 77.	8/30-31
2. 8/30	set #2: Ch. 26	Ch 26:	9/7-8 (Tu-W)
Labor day Monday September 6, 2004			
3. 9/6	set #3		9/13-14
4. 9/13	set #4		9/20-21
5. 9/20	set #5		9/27-28
Midterm 1 Thursday, September 30, 2004			
6. 9/27	set #6		10/4-5
7. 10/4	set #7		10/11-12
8. 10/11	set # 8		10/18-19
9. 10/18	set #9		10/25-26
10 10/25	set # 10		11/1-2
Midterm 2 Thursday, November 4, 2004			
11 11/1	set # 11		11/8-9
12 11/8	set # 12		11/15-16
13 11/15	set # 13		11/22-23
14 11/22	set # 14		11/29-30
15 11/29	REVIEW		

Lecture Final Exam (Cumulative) –Wednesday, December 15, 2004; 8-10 AM