

## PHYS 2126 PHYSICS LABORATORY II Spring 2006

All sections of this class meet in Founders North FN 2.212. The times at which sections meet are as follows:

Section	Call	Instructor	Start	End
101	11556	<a href="#">MacAlevey P</a>	T 10:00 a.m.	12:45 p.m.
102	11557	<a href="#">MacAlevey P</a>	F 12:00 p.m.	2:45 p.m.
601	11558	<a href="#">MacAlevey P</a>	M 7:00 p.m.	9:45 p.m.
602	11559	<a href="#">MacAlevey P</a>	W 7:00 p.m.	9:45 p.m.

**Instructor:** Paul MacAlevey  
**Office:** FO 2.708B extension 4634  
**E-mail:** [paulmac@utdallas.edu](mailto:paulmac@utdallas.edu) I will send e-mail to UTD e-mail addresses only. Regulations prevent me from sending some information to any other e-mail address.  
**Mailbox:** in office FO 2.724

**Office hours:** By appointment at my office. Several TAs will be assigned to this course. Their office hours have yet to be arranged but will be posted on the WebCT site for the course.

**TA:** To be arranged ☺

### Overview:

The course includes experiments designed to explore several areas in Electricity and Magnetism. The experiments in PHYS 2126 give you the opportunity to examine several phenomena in great detail. As always in Physics, there is interplay between the theory that you see in a class and experimental work. One is not more important than the other but one informs the other: theoretical predictions are a natural focus of experiment and experimental results help to develop theory. That is why you need to study both.

Some labs involve the building of electrical circuits but this lab course is not an introduction to electric circuits. An understanding of electric current is important to an understanding of many electromagnetic phenomena and about half of the experiments develop knowledge about electric current. The others concern electrostatics, magnetic fields caused by currents and induction, etc.

### Co-requisites:

You need to be doing PHYS 2326 Electromagnetism & Waves.

### Textbook:

**You need a lab manual at every lab meeting of your section.** You can get a voucher for one at the campus bookstore for about \$15. (I have put the first two weeks-worth of material from the

manual on WebCT sites for 2126. If you have difficulty getting a printed copy, then print from the WebCT site.)

### Grading:

There are no exams in this course. Your course grade is determined by grades on your lab reports. **It is important that lab reports are your own work.** Every individual student will turn in a lab report at every meeting of their section. (You will also turn in a pre-lab at all meetings except the first.) Lab reports must be turned in on the same day that any experiment is done in order to attract credit. The average of these grades will be used to compute your numerical grade for this course. These numbers are turned into letter grades as follows. If  $x$  is a numerical grade then,

$x \geq 95$	A+	$70 > x \geq 65$	C+
$95 > x \geq 90$	A	$65 > x \geq 60$	C
$90 > x \geq 85$	A-	$60 > x \geq 55$	C-
$85 > x \geq 80$	B+	$55 > x \geq 50$	D+
$80 > x \geq 75$	B	$50 > x \geq 45$	D
$75 > x \geq 70$	B-	$45 > x \geq 40$	D-
		$40 > x$	F

You need to make-up a lab if you miss the meeting of your section. Deciding not to turn in a report will give you a zero and will hurt your grade. **No result from a lab report will be dropped.** You may attend another section of the lab class only if the following procedure is followed. E-mail both the TA in charge of the section that you would like to attend and your own TA saying why you need to attend the other section. If there is enough apparatus etc. to accommodate you at the other section, an e-mail will be sent to you saying that your suggested change is possible. You must wait for this reply.

If you are unable to attend another section in the week of an absence, then attend the make-up session at 9:30 on Friday. **A student can make up one experiment at any of the next three make-up sessions following their absence. A completed pre-lab must be brought to the make-up session.** (If nobody shows up twenty minutes after the beginning of any make-up session or office hour then the TA in charge is free to leave.) These makeup sessions will be held on Fridays of weeks in which we meet in lab. (Please check WebCT for details.)

Irrespective of whether you make-up a lab in another section or in a make-up session, you should check that the TA for the section in which you are registered records the score for the lab. **In general, labs that are missed should be made up as soon as possible.** However, circumstances may prevent you from making up a lab quickly. (These include an illness certified by a medical doctor, jury duty ...) In such cases, send me an e-mail as soon as possible after the absence. I will ask you to bring the completed pre-lab for any missed experiment to my office. If I think that the reason for the absence is adequate, I'll then give you pre-lab/instructions for another experiment (that isn't in manual). After this pre-lab is completed then we can organize a time for you to do this experiment. I urge students to **make-up any missed lab early in the semester** rather than using this last option.

This course is associated with PHYS 2326 (Electromagnetism and Waves) and with PHYS 3342 (Physics for Bio Science II). These courses emphasize different topics and are conducted according to different schedules. This means that you should expect to see some topics for the first time in this lab course. Lab time is limited so I ask all students to read the introduction to each experiment

and do the Pre-lab in the week before the experiment. That gives plenty of time to ask questions during office hours before your lab meeting.

**Scholastic dishonesty:**

**Of great importance to you as a student is that others perceive your degree as having value. That value is diminished if others suspect that a degree can be obtained through dishonest means. As your instructor, academic dishonesty gives me a false picture of the capabilities of the individual that is being dishonest. In a wider context, it gives me a false picture of what can be reasonably expected of my students.**

In order to further the objective of eliminating scholastic dishonesty, the University has a policy on scholastic dishonesty for several reasons. This policy is clearly articulated in Subchapter F section 49.36 of the policy on student discipline & conduct adopted by the University and used in this course. The full chapter 49 is at <http://www.utdallas.edu/student/slife/chapter49.html> Students enrolling in the course are bound by this policy and are encouraged to read it. Any questions about this policy can be asked of the Dean of Students. **Any suspected cases of scholastic dishonesty will be passed along to the Dean of Students.**

**Semester dates:**

Jan 9 to May 3. The last class day in April 24

Last day to drop a class without a "W"... Wed., January 25  
WP or WF withdrawal period  
begins.....Mon., February 13  
last day to withdraw with  
WP/WF.....Thurs., March 16