

GENERAL PHYSICS II LABORATORY (419611)

COURSE: PHY2054L; *General Physics II Laboratory*

CREDIT HOURS: 1

PRE-REQUISITE: MTB1322 or MAC1133

CO-REQUISITE: PHY2054

CLASSROOM: 7-277

TIME: Thursday, 2:00 to 3:50 PM

INSTRUCTOR: David Michael Judd

OFFICE: 7-142 **PHONE:** 954-201-6707 (There is voicemail at this number!)

TEXT: *Laboratory Manual for PHY2054L; January 2011 Version*

This lab manual can be found free of charge in PDF format at:

<http://browardcentralscience.org/judd.htm>

AUTHOR: David Michael Judd

CATALOG DESCRIPTION: A continuation of laboratory experiences chosen to coincide with the topics of electricity, magnetism, and optics.

COURSE OUTCOMES:

- 1.0 The students should be able to perform experiments correctly and collect data accurately.
- 2.0 The students should be able to analyze the data collected.

PHY2054L Laboratory Schedule

<i>Date</i>	<i>Experiment</i>
1/	5 Laboratory Introduction and Safety Review
	12 Introduction to Circuits and Circuit Elements
	19 Current and Voltage Characteristics of Resistors
	26 Resistors in Series and in Parallel
2/	2 Voltmeters and Ammeters
	9 The Electric Field and Equipotential Lines
	16 Measurement of Capacitance
	23 The Oscilloscope
3/	1 The <i>RC</i> Time Constant
	8 No Lab
	15 The Charge to Mass Ratio of the Electron: e / M_{e^-}
	22 Measuring the Refractive Index
	29 Measuring the Wavelength of Light
4/	5 The Photoelectric Effect
	12 Makeup Lab: Measuring the Earth's Magnetic Field

EVALUATION OF STUDENTS:

ATTENDANCE: You are expected to come to scheduled labs and to **be on time with all of your lab materials!** While in the lab, I expect your **undivided attention** to the laboratory exercise being performed that day; you are not to be working on finishing old lab reports until you have finished the day's scheduled lab. You are expected to **work quietly and safely**. Failure to comply with correct lab procedures may result in your being removed from the lab and getting a zero for that lab. **Never turn in a lab report for an experiment you did not do.** Such a report will get an F.

GRADING: **Your grade will be determined by averaging your 11 best lab report scores.**

SCALE:	90	A
	80	B
	70	C
	60	D
	< 60	F

LAB REPORTS:

In general, each experiment will require a written lab report to be turned in. This report will contain a cover sheet, data sheets, answers to questions asked, and graphs, when appropriate. In class, I will give more detail on the format of the reports. Except for the last lab, reports will be due at the **very beginning of the next scheduled lab**. The last lab report needs to be in my mailbox by April 19, 2012.

OFFICE HOURS:

My tentative office schedule is given below. I am also happy to schedule appointments if needed.

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8 : 00		Office	Office	Office	B
8 : 30		Office	Office	Office	Y
9 : 00		PHY2053L	PHY2053L	Office	
9 : 30		PHY2053L	PHY2053L	Office	A
10 : 00		PHY2053L	PHY2053L	PHY2054	P
10 : 30		PHY2053L	PHY2053L	PHY2054	P
11 : 00	PHY2053	PHY2054	PHY2053	PHY2054	O
11 : 30	PHY2053	PHY2054	PHY2053	PHY2054	I
12 : 00	PHY2053	PHY2054	PHY2053	PHY2054	N
12 : 30	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	<i>Lunch</i>	T
1 : 00	Office	PHY2053L			M
1 : 30	Office	PHY2053L			E
2 : 00	PHY2053	PHY2053L	PHY2053	PHY2054L	N
2 : 30	PHY2053	PHY2053L	PHY2053	PHY2054L	T
3 : 00	PHY2053	Office	PHY2053	PHY2054L	
3 : 30	PHY2054	Office	Office	PHY2054L	O
4 : 00	PHY2054				N
4 : 30	PHY2054				L
5 : 00	PHY2054				Y
5 : 30	PHY2054				
6 : 00	PHY2054				
6 : 30					
7 : 00					