PHYS 2010
Physics Laboratory II - Section 001
Spring 2016

Class Meeting Times and Locations:
Lab: Mondays, 2:00 PM – 4:50 PM, in McEver 37
Lecture: Various (you must be separately registered for the lecture, PHYS 2024 or PHYS 2124)

Instructor:
Benjamin L. Davis, PhD
Office: McEver 11
Phone: 479-968-0310
Email: bdavis47@atu.edu

Office Hours:
Mondays & Fridays: 10:00 AM – 10:50 AM & 12:30 PM – 1:50 PM
Wednesdays: 10:00 AM – 10:50 AM

Catalog Course Description:
Introductory laboratory associated with electricity and magnetism. Co-requisite: PHYS 2024 or PHYS 2124.

Lab Manual:
Physics Lab Manual 2024 & 2124

Justification/Rationale for the Course and Its Objectives:
This course is the laboratory associated with the second semester course of a two-semester unit intended to provide an introduction to the fundamental laws and theories that govern the physical world that surrounds us. The main focus of this course will be the topic of electricity & magnetism. Upon completion of this course, the student should be able to:

1. Demonstrate a solid conceptual understanding of electricity & magnetism.
2. Use the scientific method to evaluate information and make quantitative predictions.
3. Efficiently use critical thinking and problem solving skills to deduce information from the facts at hand.

Blackboard:
Grades as well as various documents such as the syllabus will be posted on Blackboard, which may be accessed at https://bblearn.atu.edu/. All post-lab quizzes will be taken via Blackboard.

FERPA:
Due to the Family Educational Rights and Privacy Act (FERPA), grades can only be communicated in direct conversation with (and only with) the student or via Blackboard.

Email is not considered a secure means of communication for grades. Please understand that I will not answer any grade-related questions via email.

Assessment:
Each laboratory assignment will be graded on a 20-point scale with the following breakdown:

Laboratory Completion	10 points
Post-lab Quiz	10 points
TOTAL	**20 points**

The overall grade you earn from the laboratory course will be combined with your lecture course to form one grade representing both courses for Physics II.

Post-lab Quizzes:
Post-labs will cover the material from that week's lab. Post-labs are programmed to appear on Blackboard immediately following a lab (4:50 PM) and will remain visible until the start of the next lab (2:00 PM).

Attendance / Make-up Policy:
Labs must be attended and completed accurately in order to receive full Laboratory Completion credit. If you miss a lab for any reason, you are welcome to attend a different Physics II Lab section that week (see course listing below). Please communicate with both the instructor whose lab you intend to attend and myself. Additional make-up labs will not be allowed if a student fails to attend lab and does not make it up that week by attending a different lab section. Post-lab quizzes must be completed during the window of availability following a lab and before the next lab. Once the link on Blackboard has vanished, students will receive an automatic zero for that lab's quiz and make-up opportunities will not be offered.

SUBJECT	COURSE	SECTION	TITLE	INSTRUCTOR	ROOM	DAYS	TIMES
PHYS	2010	1	Phys Lab II	DavisB	MCE 37	M	2-4:50
PHYS	2010	2	Phys Lab II	Sierra	MCE 37	T	9:30-12:20
PHYS	2010	3	Phys Lab II	Shojaei	MCE 37	T	1-3:50
PHYS	2010	4	Phys Lab II	Hemmati	MCE 37	W	2-4:50
PHYS	2010	5	Phys Lab II	Sierra	MCE 37	R	9:30-12:20
PHYS	2010	6	Phys Lab II	Shojaei	MCE 37	R	1-3:50

Schedule (Tentative):

Date	**Laboratory Assignment**
January 11	Radioactivity
January 18	Dr. Martin Luther King, Jr. Day
January 25	Spectroscopy

February 1	Electric Field
February 8	Ohm's Law
February 15	Series and Parallel Resistors
February 22	Series and Parallel Circuits
February 29	Circuits (RC)
March 7	Circuits (RLC Resonance)
March 14	Circuits (AC)
March 21	Spring Break
March 28	Geometric Optics
April 4	Wave Optics

SAFETY RULES AND PROCEDURES

1. **KNOW WHAT TO DO IN CASE OF AN EMERGENCY.** Observe the location of the fire extinguisher. Report all accidents, injuries, and close calls to the instructor immediately

2. **PERFORM ALL EXPERIMENTS AS DIRECTED.** Do not do anything that is not part of an approved experimental procedure. Follow all instructions given by your lab instructor.

3. **BE PROPERLY PREPARED TO DO THE EXPERIMENT**. Read all written procedures in advance and understand what you are going to do. Know the hazards before you perform the experiment.

4. **IF INSTRUCTED TO DO SO, WEAR THE APPROPRIATE PROTECTIVE EQUIPMENT.** This may include eye protection and/or gloves.

5. **ACT IN A RESPONSIBLE MANNER AT ALL TIMES.** No horseplay will be tolerated in the lab or experimental area.

6. **ALWAYS WEAR APPROPRIATE CLOTHING TO THE LAB.** Tie back long hair to keep it away from moving objects.

7. **SMOKING, EATING, AND DRINKING IN THE LAB OR EXPERIMENTAL AREA IS PROHIBITED AT ALL TIMES.**

8. **FOLLOW ELECTRICAL AND LASTER SAFETY RULES AND DESCRIBED BY YOUR INSTRUCTOR.**