

COURSE SYLLABUS (2 Page)

Course Number: PHYS 2102L
Course Name: Physics for Science and Engineering II Lab

Credits and Contact Hours: 1

Instructor: Staff

Textbook: Realtime Physics Active Learning Laboratories, Module 2, Electricity and Magnetism “The Physics Suite”, by Sokolof, Thornton, Laws, Gugsa, and Aktas.

Catalog Description: A continuation of PHYS 2101L. Experiments selected from series and parallel circuits, RC circuits, EMF and terminal potential difference, electromagnets, and magnetic induction. If a student has completed PHYS 1102L with grade of C or above in a previous semester, the student is exempted from taking PHYS 2102L.
Most Recently Offered (Day): Spring 2016, Fall 2015, Summer 2015
Most Recently Offered (Evening): Spring 2016, Spring 2015, Spring 2014

Pre-Requisites/Co-Requisites: PHYS 2101 (Pre- or Corequisite)

Course is: Required (R)

Goals: To conduct an organized and scientific investigation in order to experimentally verify the theoretical concept introduced in the lecture; to familiarize students with experimental apparatus and scientific method of data collection and analysis; to derive conclusions from the results based on your understanding of the relevant physics; and to study and understand introductory physics concepts via computer simulation experiments and exercises.

Student Outcomes Addressed:

- A. an ability to apply knowledge of mathematics, science, and engineering
an ability to design and conduct experiments, as well as to analyze and interpret data

Course Topics:

- Electric Fields and Potential Difference
- Resistance in a wire and Ohm’s Law
- Current in a simple DC Circuit and Circuit Construction
- Voltage in a simple DC Circuit and Ohm’s Law
- Magnetic Force and Electric Current
- Faraday’s Electromagnetic Lab and Faraday’s Law