

SCI 102 - Electricity with Chemical and Biological Applications

Spring 2016

This is an inquiry-based science course intended for elementary education majors. It is divided into three main laboratory parts and a group project at the end:

Part I: Concepts of Electricity (Physics)	Jan 19 - Feb 16
Part II: Chemical Applications	Feb 18 - Mar 24
Part III: Biological Applications	Mar 29 - Apr 26
Group Projects & Presentations	Apr 28 & Finals Week

There will be an examination on the last day of each laboratory part. Each instructor will give you more detailed information about other requirements for that part of the course - such as journals, lab reports, quizzes, etc. The final examination for the whole course will consist of a group project and a presentation; this will count as 10% of your overall course grade. The remainder of your course grade will be 30% of your physics grade, 30% chemistry, and 30% biology.

The SCI101/102 sequence satisfies the General Education science requirement for elementary education majors. The hands-on, cooperative experience in class, the written assignments and the group project are designed to allow students to achieve the following Goals of General Education courses:

- 1) Communicate effectively
- 2) Employ quantitative analysis and mathematical methods
- 3) Think critically and analytically.

Attendance Policy:

Due to the highly interactive nature of this course, attendance is essential. If you are unable to attend class, contact the instructor before class or as soon after class as possible. *It is your responsibility to keep up with the course material.* It is, however, the instructor's decision whether laboratory work and/or other assignments can be made up, the due date, and any penalty associated with the student's absence. Excused absences, in accordance with the Excused Absences Policy for University-Sanctioned Events (see Undergraduate Catalog or Ram's Eye View), will not result in a penalty, provided that the student follows this policy.

SCI 102 Electricity - Part I: Concepts of Electricity - Spring 2016

Instructor: Dr. Gary J. Pascuzzo

Office: Merion 102, phone ext. 6932

Office Hours: Tuesdays & Thursdays, 8:00-9:00am & 5:00-6:00pm

E-mail: gpascuzzo@wcupa.edu

Required Text: *SCI102 Part I: Concepts of Electricity* available at the Sykes bookstore (put together by Dynamic Student Services)

Schedule

We will meet on Tuesday (T) and Thursday (R) in Merion 109

Date	Subject	Text Sections
T Jan 19	Introduction, Batteries & Bulbs	E1.1 - 1.5
R Jan 21	Batteries & Bulbs	E1.6 - 1.8
*T Jan 26	Obstacleness & Oomph	E2.1 - 2.3
R Jan 28	Capacitors	E3.1 - 3.3
*T Feb 2	Electric Charge	E4.1 - 4.3, 4.6, 4.7
R Feb 4	Batteries, Bulbs & Capacitors	E5.1, 5.2
*T Feb 9	Charge vs Fluid Model, Ohm's Law	E5.3, 5.4
R Feb 11	Physics "Fun Day" Review	
T Feb 16	Physics Final Exam	

Grading: There will be 3 Journals (worth 10 points each), 4 unannounced Quizzes (10 points each), and a Final Exam (30 points).

***Journals Are Due:** These are your observations, hypotheses, data and assignments for the previous two labs. They can be written out by hand or printed from a word processor - usually from 2 to 4 pages in length. For instance, Journal #1 covers the first week's labs (Jan 19 & 21) and is due on Tuesday, Jan 26. To help guide you, a list of Journal Questions will be given out and/or posted on our D2L website.