**ECE 211 – Electrical Engineering Laboratory I**

**Clemson University**

**Fall 2011**

**Section 003 6:30 – 8:30 PM Tuesday, Riggs 200A**

**Credit Hours: 1**

**Instructor:**

Name: TA Name

Email: name@clemson.edu

Office: NA

Office Hours: As needed (email for appointment)

**Lab Coordinator:**

Name: Dr. Timothy Burg

Email: tbur@clemson.edu

Office: 307 Fluor Daniel (EIB)

Phone: 864-656-1368

**Text (required):**

 ECE 211 – Electrical Engineering Lab I. Latest Revised July 2010

 Download from: <http://www.clemson.edu/ces/departments/ece/resources/lab_manuals.html>

**Objective:**

This laboratory course operates in co-ordination with the companion lecture course, ECE 202, Electric Circuits 1. Each course compliments the other: Several ECE 211 exercises require knowledge of theory developed in ECE 202, and several assist in understanding ECE 202 concepts. Through this lab, students are expected to

1) Gain proficiency in the use of common measuring instruments.

2) Enhance understanding of basic electric circuit analysis concepts.

3) Develop verbal and written communication skills.

4) Compare theoretical predictions with experimental results and explain any differences.

**Co-requisites:**

ECE 202

**Grading:**

 10% Participation

 10% Attendance

 20% Pre-Lab

 40% Lab Reports

 20% Final Exam

**Tentative Grade Scale:**

 A: 90% - 100%

 B: 80% - 89%

 C: 70% - 79%

 D: 60% - 69%

 F: <60%

Blackboard will be used to post grades and any other information.

**Lab Notebooks:**

A lab notebook should be maintained for this lab by the student. While this will not be checked, it is expected that the student will have all of their results available for the duration of the semester. The last lab of the semester will include giving practical and written exam of the labs.

**Pre-Lab:**

Each lab has a “Preparation” section which should be read and completed prior to each lab. This will be checked at the beginning of each lab session.

**Lab Reports:**

Three labs will require a full lab write-up. The labs for which full reports are required will be identified at a later date. Lab reports are to be completed individually, printed and turned in on the specified date.

**Late Work:**

All full lab write-ups are due two weeks from the date the lab is performed. Lab write-ups are expected at the beginning of class on the day it is due. The instructor reserves the right to refuse any late work. If there is a reason that a student cannot complete an assignment on time, please discuss this with the instructor as soon as possible.

**Final Exam:**

The final exam will be given in lab on the last meeting. This exam will be closed-book and closed-notes. Use of calculator is permitted. Cell phones, iPods, etc. will not be allowed in the exam. If they are seen throughout the exam, the instructor reserves the right to take the exam away and give the student a grade of 0.

**Late Instructor:**

If the instructor is late, the students are expected to stay 15 minutes.

**Attendance:**

Attendance is mandatory for every lab. If special circumstances arise that prevent attendance, the student must notify the instructor, and a makeup lab session will be given at the instructor’s discretion.

**Academic Integrity:**

*“As members of the Clemson University community, we have inherited Thomas Green Clemson’s vision of this institution as a ‘high seminary of learning.’ Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.”*

*“When, in the opinion of a faculty member, there is evidence that a student has committed an act of academic dishonesty, the faculty member shall make a formal written charge of academic dishonesty, including a description of the misconduct, to the Associate Dean for Curriculum in the Office of Undergraduate Studies. At the same time, the faculty member may, but is not required to, inform each involved student privately of the nature of the alleged charge.”*

**Note:** The instructor reserves the right to modify the syllabus as needed during the semester. Students will be notified prior to any changes.

**Tentative Schedule:**

**Date Lab # Description**

Sep-06 1 Orientation

Sep-13 2 Workstation Characteristics \*

Sep-20 3 DC Measurements

Sep-27 4 Introduction to SPICE

Oct-04 5 Networks Theorem I \*

Oct-11 6 Network Theorems II

Oct-18 No Lab Fall Break

Oct-25 7 Oscilloscope

Nov-01 10 Statistical Analysis

Nov-08 11 Design Lab \*

Nov-15 8 RC and RL Circuits

Nov-22 9 Series RLC Circuits

Nov-29 12 Final Exam

\* Indicates labs for which reports will be assigned.