

# ELEC 106 – Fundamentals of Electrical Engineering Course Syllabus, Fall 2013

Section 04, MWF 1300-1350 GRIMSLEY 322

## GENERAL INFORMATION

Instructor: Dr. Jason S. Skinner, Grimsley Hall, Room 310, (843) 953-3352  
Email: [jason.skinner@citadel.edu](mailto:jason.skinner@citadel.edu)  
Office Hours: MWF, 0900 – 1000 and 1100 – 1200  
TR, 1500 – 1700  
Additional hours available by appointment  
Required: *Fundamentals of ECE, Adapted from Engineering Fundamentals and Problem Solving*, Eide, et al, and *Electrical Engineering Design*, Ford & Coulston  
*Timer, Op Amp & Optoelectronic Circuits and Projects* by Forrest M. Mims, III  
Lecture notes as provided by the professor  
Professor Website: <http://ece.citadel.edu/skinner>  
Course Website: <http://ece.citadel.edu/courses>

## CATALOG DESCRIPTION

An introduction to the engineering profession, branches and functions of engineering, professional ethics, and the role of engineers in society. Fundamentals of engineering problem solving and the use of engineering tools are covered. Areas common to most engineering disciplines are taught through the use of project-based electrical engineering examples.

## COURSE OUTCOMES

Students successful in ELEC 106 should possess the following:

- An introductory understanding of the profession of engineering
- An understanding of the engineering design process, teamwork, and problem solving skills
- Enhanced skills needed for academic success in electrical engineering
- Enhanced critical thinking and communication skills
- An ability to communicate ideas through graphical representations

## SPECIAL ACCOMMODATIONS

If you need accommodations due to a disability please see me privately within two weeks of the semester start or immediately after diagnosis. Academic accommodations must be requested through The Citadel Academic Support Center. For appointments with The Center, call (843) 953-5305, email [wcenter@citadel.edu](mailto:wcenter@citadel.edu) or stop by Thompson Hall room 117.

## ACADEMIC INTEGRITY

Cheating in any form will be fully prosecuted. The Citadel's policy requires that "All papers, reports, senior essays, theses, or other written work performed outside the classroom for which a grade is received will be the individual's work and is subject to the limitations imposed by the definition of plagiarism." According to Webster's New International Dictionary, 3rd Edition: to plagiarize is defined as "to steal and pass off as one's own the ideas or words of another" or to "present as new and original an idea or product derived from an existing source."

## ATTENDANCE AND PARTICIPATION POLICY

Attendance is required. If possible, students should notify the professor in advance of any absence and must understand that they are responsible for any material missed. Missing more than 20% of the class meetings may result in a failing grade.

## CLASSROOM POLICY

Classroom environment is an important factor for effective learning. Students are expected to strictly follow certain rules and regulations so as not to create unnecessary distractions and interruptions during class.

- 1) Food and drinks are strictly prohibited in the classroom.
- 2) All electronic devices with audible alarms (cell phones, pagers, watches etc.) must be turned off.
- 3) Students are expected to show up to class on time. Attendance will be called at the beginning of every class, and the results reported via the Citadel's electronic class absence system.
- 4) Students are to refrain from talking to other students during class. Extraneous conversation creates noise and diminishes one's ability to concentrate and pay attention.

## FALL 2013 IMPORTANT DATES

SEP 3	Last day to add or drop a course, or change sections
OCT 29	Last day to withdraw with a grade of "W"
NOV 4	Academic advising begins
NOV 22	Fall break for Day Program begins <b>after last class</b>
DEC 11	Classes end (final exams 12/12 – 12/18)

## SPECIFIC ELEC 106 GUIDELINES

Design projects and presentations must be your own (or assigned team's) work. Collaboration is allowed on homework without penalty, but each collaborator must submit the problem in his or her own handwriting and must have provided a significant contribution to the solution.

## GRADING

Event	Weight	Event	Weight
Homeworks	10%	Robot Design	10%
Midterm Test	10%	Resume	5%
Breadboarding Projects	10%	Drafting Homeworks	10%
Research Presentation	10%	Professor Meetings	10%
Research Paper	10%	Final Exam	15%

## PROFESSOR MEETINGS

You must meet with me at least twice during the semester, once before the end of the midterm grading period and once after the midterm grading period. **The first meeting must occur between 2 SEP and 12 OCT and the second meeting must occur between 21 OCT and 30 NOV.**

## LESSON PLAN

WEEK	MONDAY	WEDNESDAY	FRIDAY	READING ASSIGNMENTS/HOMEWORK (DUE ON FRIDAYS)
26 AUG		Introduction	Engineering Video	<i>Fundamentals of ECE</i> , Unit 1, “The Engineering Profession”
2 SEP	What is Engineering?	What is Engineering?	Engineering Video	Units 2 & 3, “Engineering Solutions” & “Teams and Teamwork”
9 SEP	The Engineering Method	Engineering Design	Career Panel Discussion	Units 4 & 5, “Introduction to Engineering Design” & “The Engineering Design Process”
16 SEP	Analysis and Presentation	Engineering Design	Robot Design Lab	Unit 6, “Engineering Measurements and Estimations”
23SEP	Engineering Math	Engineering Math	Robot Teamwork	Units 7-9, “Dimensions, Units and Conversions”, “Statistics” & “Inferential Statistics and Decision Making.”
30 SEP	Engineering Math	Statistics, Accuracy & Precision	Robot Teamwork	Unit 10, “Electrical Theory”
7 OCT	Electric Circuits Concepts	Electric Circuits Concepts	Electric Lab	
14 OCT	Electric Circuits Concepts	Electric Circuits Concepts	Electric Lab	Unit 11, “Ethical and Legal Considerations”
21 OCT	Engineering Ethics	<b><i>Leadership Development Day</i></b>	Engineering Ethics	
4 NOV	Drafting	Drafting	Breadboard Circuits	
11 NOV	Drafting	Computer-based Drafting	Breadboard Circuits	Unit 12, “Energy Sources and Alternatives”
18 NOV	The Energy Challenge	The Energy Challenge	Breadboard Circuits	Unit 13, “Oral Presentations”
25 NOV	<b><i>Fall Break</i></b>			
2 DEC	Presentations	Presentations	Presentations	
9 DEC	Presentations	Wrap Up		

**NOTE:** *Changes to the following schedule are likely and will be published as revisions.*