Instr: S. Cocca
Office: TA207C
Phone: 310-660-3593 Ext.3617
Email: scocca@elcamino.edu
Off Hrs: MTWTH 5:30-6 pm

ECHT 11 Introduction to Electronics (Fall 2015)
TTH 6:00 pm-9:20 pm
3units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU

This course is an introduction to electronics for students preparing to enter the field and for students interested in consumer electronics; it provides the basis for further studies in electronics and computer hardware technology. Topics include safety, employment opportunities, the basic theory and applications of electricity, analysis of circuit values using a standard scientific calculator, component identification and schematic diagrams, and the techniques of electrical measurement. Also introduced are alternating current measurements and the use of the oscilloscope. Common devices employed in automotive and air conditioning systems are also covered.

Materials Required: 1. ECHT Lab Manual , El Camino Press
2. Graymark Practice Soldering Kit

Optional: **Understanding Basic Electronics**

Walter Banzhaf, WB1ANE, • **ISBN:** 978-0-87259-082-3, ARRL

SLO and Objectives:

ECHT 11 SLO #1 The student will make basic "in –circuit" measurements: AC/DC Voltages and Currents, and Resistance, using both a Bench and Portable DMM

ECHT 11 SLO #2 The students will be able to incorporate data and analysis reporting protocols, using either "paper" and "paperless" environments, similar to data reporting and analysis used by many Electronics Manufacturers and Service Organizations

ECHT 11 SLO #3 The students will be able to use various circuit analysis calculations to predict a basic circuits operation

Board Policy 5500
Academic Honesty & Standards of Conduct
ACADEMIC HONESTY

El Camino College is dedicated to maintaining an optimal learning environment and insists upon academic honesty. To uphold the academic integrity of the institution, all members of the academic community, faculty, staff and students alike, must assume responsibility for providing an educational environment of the highest standards characterized by a spirit of academic honesty. It is the responsibility of all members of the academic community to behave in a manner which encourages learning and promotes honesty and to act with fairness toward others.
Students should not seek an unfair advantage over other students when completing an assignment, taking an examination, or engaging in any other kind of academic activity

DISCIPLINARY ACTION
Disciplinary action appropriate to the misconduct as defined in BP 5500 may be taken by an instructor (see items C- 1 and 5 below), the Director of Student Development or his or her designee (see items C - 1, 2, 3, 4, 6, and 7 below), and the Board of Trustees (see item C8 below).

A. Consequences for Academic Dishonesty
When an instructor has determined that there is evidence of dishonesty in any academic work, the student may receive a failing grade for that piece of work and disciplinary action may be pursued. Any or all of the following actions may be imposed:

1.The instructor may assign a failing grade (no credit) to an examination or assignment in which academic dishonesty occurred.

2. The instructor may remove the student from the class or activity for the day of the incident and one additional class day as stipulated in C.5 of this procedure.

3. The instructor may complete the appropriate reporting forms (Disciplinary Form C – Academic Dishonesty Report Form and/or Disciplinary Form B –Notice of Suspension from Class/Lab/Library) and submit them along with a copy of the evidence to the Director of Student Development or his or her designee. This information will be placed in the student file.

4. If there is evidence of serious or repeated violations of academic honesty, the college may pursue additional disciplinary action in accordance with the disciplinary measures outlined in this procedure

Disability Statement Students with disabilities are an integral part of the El Camino Community. Our goal is to provide accommodations necessary to assist students in achieving their educational goals

Week	Lecture Topics and Assigned Labs	Quiz/Test
1-2	Orientation to Basic Electrical Quantities: Electronic Symbols Scientific Notation, DMM and Power Supply use, Resistor Color Code	
3-4	Basic Ohm's Law, Series Circuits, Intro to Parallel Circuits	**Q1 9/10**
5-6	Intro to Series/Parallel Circuits , Meter Design, Batteries , and Relays	**Q2 10/01**
7-8	Intro to AC, Oscilloscope Fundamentals, Basic Capacitors and Inductors RC and RL Timer Circuits	
9-10	Basic Magnetism, Basic Electrical Motors	**MT Assembly Proj. 1** **10/22**
11-13	Introduction to Series Reactance (RC, RL, and RLC) Series RLC Circuits , Series Resonance	**Q3 11/12**
14-15	Rectifier Circuits, Zener Regulation , Basic Transformers, Transistors and Amplifying Circuits	**Q4 Assembly Proj. 2 12/03**
16	Basic Digital Circuits (Gates, Counters)	**Final 12/10**

Evaluation Process:	**"4" Quizzes @ 25pts ea.**	**100 pts**	**A= 300-270**
	"2" Tests (Mid Term & Final) 50pts ea	**100 pts**	**B= 269-240**
	Lab & Attendance **(√ + = 5pts , √ = 3pts ,√- = 1pts)**	**100 pts**	**C = 239-210**
			D = 209-180
			F= 179-0