Instr: S. Cocca

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Off Hrs" MTWTH 5:30-6 pm

Electronics and Computer Hardware Technology 110
Introduction to Direct and Alternating Current Circuits

MW (F) 9 am -12:20, (S) 6-9:20 pm

3 units; 2 hours lecture, 4 hours lab Prerequisite: Electronics and Computer Hardware Technology 11 with a minimum grade of C
Credit, degree applicable
Transfer CSU

This course teaches the foundational principles of direct and alternating current electricity through the correlation of theory with laboratory experiments. Basic circuit analysis forms the core of the course. The use of calculators, computers and oscilloscopes to make electrical measurements is included.

Materials Required: **Electric Circuits Fundamentals (8th Edition)** Publication Date: July 3, 2009 | ISBN-10: 013507293X, Floyd, Delmar

ECHT 110 SLO #1 The student will make advanced "in- circuit" measurements : AC/DC Voltages and Currents, and Resistance, using both a Bench and Portable DMM

ECHT 110 SLO #2 The student will use a Electronic Simulation Software Package(similar to Multi-Sim or Spice) to supplement both the understanding and analysis of Direct and Alternating Current Circuits

ECHT 110 SLO #3 The students will be able to use various circuit analysis calculations to predict a basic circuits operation

Attendance Policy: Students who miss (3) class meetings will be dropped no matter how well their doing in class

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

ECHT 110 Basic AC/DC Electrical Circuits

Week	Lecture Topics	Quiz/ Test

1	Orientation, Energy and Power	
2	Voltage, Current, and Resistance, Significant Digits Digital Multi-meters, and Ohm's Law	
3	Series Circuits and Parallel Circuits	**Q1**
4	Parallel Circuits and Compound Circuits	
5	Multiplier and Shunts (Meters), and Superposition	**Q2**
6	Thevenin's and Norton's Theorem	
7	Bridge Circuits and Maximum Power Transfer	
8	Capacitors and Inductors Series and Parallel, RC and LR Time Constants	**T1**
9	Introduction to Alternating Current	
10-11	RC, RL, RCL Series Impedance	**Q3**
12	Parallel RC, RL, Impedance	
13-14	Parallel RCL Impedance , Compound RC, RL, RCL Impedance	**Q4**
15	Transformers, and Active Devices	
16	**Review and Final Exam**	**T2**

Evaluation Process:

A= 300-270

B= 269-240

C = 239-210

D = 209-180

F= 179-0

"4" Quizzes @ 25pts ea.	**100 pts**
"2" Tests (Mid Term & Final) 50pts ea	**100 pts**
Lab & Attendance	**100 pts**
(√ + = 5pts , √ = 3pts ,√- = 1pts)	**300 Total**