

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

**Electronics and Computer Hardware Technology 22 (Section # 7464)
Basic Electronic Fabrication**

Course Offering: MW 6-9:20 pm,

**3 units; 2 hours lecture, 4 hours lab
Credit, degree applicable
Transfer CSU**

This course focuses on the materials and the processes used for fabricating electronic systems. The process includes designing, assembling, testing, and documenting a basic electronic fabrication project. Topics covered will include safety, component identification, schematic diagrams, assembly pictorials, soldering (both printed wire boards and terminals), inspection, sheet metal fabrication, hand-tool use, cabling, wire wrapping, printed circuit board construction and repair, Continuous Improvement Techniques, and ESD (Electrostatic Discharge) awareness. Mass production will be stressed for practical experience in all areas.

Materials : Electronic Project Design and Fabrication / Edition 6, ISBN-13: 9780131130548

Pub. Date: May 2004, Ronald Reis, Prentice Hall (Optional)

ECHT 22 SLO #1 Upon successful completion of this course, students will be able to identify and safely operate/manipulate various types of electronic hand tools and test equipment

ECHT 22 SLO #2 Upon successful completion of this course, 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 22 SLO #3 Upon successful completion of this course, students will be able to produce a functional Low Voltage, (DC), direct Current Power Supply project sample, that meets predetermined specifications, which could be potentially "mass" produced

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

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

ECHT 22, Basic Electronic Fabrication

Week	Lecture Topics and Assigned Labs	Assignment
1-2	Orientation , Safety, Basic Schematic Symbols	
3-4	PCB Design, Reverse Engineering, and Basic Soldering Techniques	Assign 1 9/30
5-6	Circuit Board Fabrication Techniques, Etching, and Chemical use	Assign 2 10/15
7-8	Basic Mechanical Package Design,(Orthographic, Isometrics, and Pictorials)	Assign 3 11/5
9-10	Basic Sheet metal Fab (Chassis Construction and Modifications Protocols in Developing a ‘Planner’s Guide	
10-14	Student Build of Final Project	
15-16	Submission of Final Project and Documentation Package	Evaluation of Deliverables 12/3

Evaluation Process:	Chassis Fab	20 pts	A= 270 - 243
	Wiring Techniques	20 pts	
	Soldering Techniques	20 pts	B= 242- 216
	Documentation	40 pts	
	Attendance	20 pts	C = 215- 189
	Accuracy of Documentation	10 pts	
	Practicum Final Exam	135 pts	D = 188- 162
			F= 161 -0