ELEC 71AL Course Outline as of Spring 2010

CATALOG INFORMATION

Dept and Nbr: ELEC 71AL Title: ELECTRONIC DEVICES LAB
Full Title: Electronic Devices Lab
Last Reviewed: 5/12/2008

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	1.00	17.5	Lecture Scheduled	17.50
Minimum	2.00	Lab Scheduled	2.00	17.5	Lab Scheduled	35.00
		Contact DHR	1.00		Contact DHR	17.50
		Contact Total	4.00		Contact Total	70.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 35.00 Total Student Learning Hours: 105.00

Title 5 Category:	AA Degree Applicable
Grading:	Grade Only
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
Basic electronic device testing, circuit construction and testing, and laboratory report writing. Not open to students who have completed ELEC 61L.

Prerequisites/Corequisites:
Completion of ELEC 70BL.

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Basic electronic device testing, circuit construction and testing, and laboratory report writing. Not open to students who have completed ELEC 61L. (Grade Only)
Prerequisites/Corequisites: Completion of ELEC 70BL.
Recommended:
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer: Effective: Inactive:

UC Transfer: Effective: Inactive:

CID:

Certificate/Major Applicable:
Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:
1. Assemble basic transistor circuits and make alternating current (AC) and direct current (DC) measurements with an oscilloscope, a vacuum tube voltmeter (VTVM) or digital voltmeter (DVM).
2. Analyze the performance of basic transistor circuits and present the findings in the form of a standardized laboratory report.
3. Prepare graphs from measurement data to illustrate the performance of specific circuits.

Topics and Scope:

1. Semiconductor diode operation
2. Rectification
   A. Half wave
   B. Full wave
   C. Bridge
3. Filter action (L, T, and pi types)
4. Transistor junction measurements
5. Transistor characteristics
6. Direct Current (DC) biasing of transistors
7. Common emitter amplifiers
8. DC and alternating current (AC) analysis of base biased C-E amp
9. C-E amp with voltage divider bias divider
10. Basic field effect transistor (FET) operation

Assignment:

1. Lab assignments and reports (approximately 12 per semester)
2. Hands-on lab test

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Lab assignments and reports	Writing 55 - 70%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

None	Problem solving 0 - 0%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Hands-on lab test	Skill Demonstrations 15 - 25%

Exams: All forms of formal testing, other than skill performance exams.

None	Exams 0 - 0%

Other: Includes any assessment tools that do not logically fit into the above categories.

Class participation	Other Category 10 - 20%

Representative Textbooks and Materials:
Lab assignments provided by Electronics Department.
Instructor prepared materials