

CATALOG INFORMATION

Dept and Nbr: ELEC 63

Title: ELEC CIRCUIT THEORY

Full Title: Electronic Circuit Theory

Last Reviewed: 11/5/1997

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	4.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	4.00	Lab Scheduled	2.00	10	Lab Scheduled	35.00
		Contact DHR	1.00		Contact DHR	17.50
		Contact Total	6.00		Contact Total	105.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00

Total Student Learning Hours: 210.00

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:**  
Review of Elec 62 subject matter, AM, FM, SSB and power supplies. Introduce operational amplifiers and all of their configurations, advanced devices and their circuits and large scale linear integrated systems.

**Prerequisites/Corequisites:**  
Course Completion of ELEC 62

**Recommended Preparation:**

**Limits on Enrollment:**

**Schedule of Classes Information:**  
Description: Continuation of Elec 62. Systems approach to current state-of-the-art applications. (Grade Only)  
Prerequisites/Corequisites: Course Completion of ELEC 62  
Recommended:  
Limits on Enrollment:  
Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

**AS Degree:**      **Area**  
**CSU GE:**        **Transfer Area**

Effective:        Inactive:  
Effective:        Inactive:

**IGETC:**        **Transfer Area**

Effective:        Inactive:

**CSU Transfer:** Transferable      Effective:      Fall 1981      Inactive:      Fall 2009

**UC Transfer:**                      Effective:                      Inactive:

**CID:**

**Certificate/Major Applicable:**  
Certificate Applicable Course

## **COURSE CONTENT**

### **Outcomes and Objectives:**

The student will be able to:

1. apply discrete components into large systems.
2. build, measure, and analyze basic op-amp configurations.
3. identify op-amp circuits.
4. measure and analyze op-amp parameters.

### **Topics and Scope:**

1. Fundamental concepts of:
  - a. amplitude modulation
  - b. frequency modulation
  - c. single side bands and power
2. Operational amplifier fundamentals as applied to systems
  - a. theory of operation
  - b. how applied to systems

### **Assignment:**

Hands-on experiments and problem solving.

### **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.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments are more appropriate for this course.

Writing  
0 - 0%

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

Homework problems, Lab reports, Quizzes, Exams

Problem solving  
15 - 25%

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

Class performances, Performance exams

Skill Demonstrations  
15 - 40%

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

Multiple choice, True/false, Matching items, Completion

Exams  
40 - 60%

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

None

Other Category  
0 - 0%

**Representative Textbooks and Materials:**

LINEAR INTEGRATED CIRCUITS by D.J. Dailey.