

CATALOG INFORMATION

Dept and Nbr: ELEC 68A Title: PULSE & DIGIT CIRCT
Full Title: Pulse and Digital Circuits
Last Reviewed: 11/3/2008

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	6	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

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:
Introduction to BASIC language and how to use it to analyze electronic circuits. Programs will be developed on IBM-compatible computers that parallel theory presented in Elec 60 & 61. Course begins with covering statements, commands, and functions of BASIC and progresses to applications used in the electronic industry. No previous programming experience is required.

Prerequisites/Corequisites:
ELEC 60, ELEC 60L and ELEC 90A or equivalents with a grade of "C" or better; ELEC 61 completed or in progress.

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Intro to basic language, commands, statements & functions most frequently used in DC-AC circuits. (Grade Only)
Prerequisites/Corequisites: ELEC 60, ELEC 60L and ELEC 90A or equivalents with a grade of "C" or better; ELEC 61 completed or in progress.

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	Effective:	Inactive:
CSU GE:	Transfer Area	Effective:	Inactive:
IGETC:	Transfer Area	Effective:	Inactive:
CSU Transfer:	Transferable	Effective: Fall 1981	Inactive: Spring 2010
UC Transfer:		Effective:	Inactive:

CID:

Certificate/Major Applicable:

Certificate Applicable Course

COURSE CONTENT

Outcomes and Objectives:

The student will be able to:

1. identify hardware components of a computer system.
2. format floppy diskette and copy files.
3. use computer as a calculator to solve arithmetic problems.
4. develop software programs for electronic applications.
5. debug software programs.
6. edit programs for corrections and or extensions.
7. organize programs/files to conserve space.
8. produce a hard copy of the programs.
9. change the input data to see the result on the output and draw conclusion as to circuit operation.

Topics and Scope:

1. Introduction to BASIC.
2. Arithmetic operations.
3. Writing Basic programs.
4. Disk operating instructions.
5. Program testing and looping.
6. DC electric circuit analysis.
7. AC electric circuit analysis.
8. Resonance, Power, & NonSinusoidal systems.
9. Electronic devices and DC biasing.
10. Small signal analysis.
11. Multistage systems and large signal amplifiers.
12. Feedback, OP-AMPS, and Oscillator circuits.
13. Frequency response and communications systems.

14. Transients, LaPlace, and filters.
15. Digital fundamentals and codes.
16. Digital applications.
17. Mathematical techniques and numerical methods.

Assignment:

1. Textbook readings.
2. Textbook homework problems.
3. Handout homework problems.

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, Exams

Problem solving
30 - 70%

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

Class performances

Skill Demonstrations
0 - 0%

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

Completion

Exams
30 - 70%

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

None

Other Category
0 - 0%

Representative Textbooks and Materials:

BASIC FOR ELECTRONICS AND COMPUTER TECHNOLOGY by Louis Nashelsky and Robert Boylestad.