

<u>4/24/17</u>	DATE	<u>Technology</u>	DIVISION
<u>X</u>	REQUIRED COURSE		NEW COURSE
	ELECTIVE COURSE	<u>X</u>	REVISION

LAKE LAND COLLEGE

Course Information Form

COURSE NUMBER EET050 TITLE Applied A.C. Circuits

SEM CR HRS 2.5 LT HRS 1.5 LAB HRS 2 SOE HRS _____ ECH _____

COURSE PCS# _____ (Assigned by Administration)

Prerequisites: C or better in EET040 – Basic Electronics.

Catalog Description (40 Word Limit):

Introduces the student to the sin wave and the relative parameters such as frequency, period, rms and ave values. Capacitance and inductance are introduced and their effect in sin wave circuits are studied. Lab work includes familiarization with the oscilloscope.

List the Major Course Segments (Units)	Lt Hrs	Lab Hrs
Sin Wave Analysis	3	
Use of Oscilloscope	4	
Capacitance and Capacitive Reactance	2	
Combination of R and C Impedance	3	
Inductance and Inductive Reactance	2	
Combination of R and L Impedance	2	
Transient Analysis	2	
Combination R L C Circuits	3	
Exams		

EVALUATION: Quizzes X Exams X Oral Pres _____ Papers _____
 Lab Work X Projects _____ Comp Final _____ Other _____

Textbook: Title: *Foundations of Electronics*
 Author: Mead
 Publisher: Delmar
 Volume/Edition: 5th Edition
 Copyright Date: 2007

Major Course Segment	Hours	Learning Outcomes The student will be able to . . .
Introduction of the Sin Wave	3 (l Lt/Lab)	Understand frequency, period, rms, aves, and peak values
Introduction of the Oscilloscope	4	Understand basic scope operation and function of some controls
Using the Oscilloscope	4 (Lab)	Use the oscilloscope
Capacitance	1	Basically understand capacitance
Capacitive Reactance	1	Calculate effect of capacitance in sin wave circuit
Reactance of a Capacitor	4 (Lab)	Verify reactance of a capacitor in AC circuit
Impedance of a RC Circuit	4 (Lab)	Verify impedance I, Vs in an RC AC circuit
Inductance	1	Have basic understanding of inductance
Inductive Reactance	1	Calculate effect of inductance in AC circuit
Inductive Reactance	4 (Lab)	Verify effect of inductance in AC circuit
Combination of R & L	2	Calculate Is, Vs, O in R-L AC circuits
Impedance of RL Circuit	4 (Lab)	Verify Is, Vs, O in R-L AC circuits
Transient Analysis	3	Understand and use time constant to calculate, times, Vs, Is
RC Time Constants	4 (Lab)	Verify time constants
RLC Circuits	3	Calculate Is, Vs, Z, Q in RLC circuits
Quizzes & Exams	3	
Lab Tests	4	

Course Outcomes: At the successful completion of this course, students will be able to:

- Utilize meters to measuring voltage, current, and resistance.
- Analyze several types of waveforms and explain their characteristics.
- Define inductance, and explain its uses.
- Define capacitance, and explain its uses.
- Calculate and measure transformer values.