ECEn 212. Circuit Analysis and Laboratory

Catalog Description:	**ECEn 212. Circuit Analysis and Laboratory.** (5:4:3) F, W, Sp Analysis of electric circuits; sinusoidal-steady state, resonance, Bode plots, and balanced three-phase circuits. Includes labs.	
Course Type:	Engineering Topics	
Prerequisites:	Phscs 220, Math 113	
Textbooks and/or other required materials	*Introductory Circuits for Electrical and Computer Engineering*, James W. Nilsson and Susan A Riedel.	
Topics Covered:	This course develops the fundamental principles of electric circuit analysis. Emphasis is placed on analysis of linear systems including voltage and current sources, resistors, capacitors and inductors.	
Course Competencies:	Application of complex variables to AC steady state circuit analysis	Outcome 1
	Application of algebra, linear algebra, and circuit equivalencies to DC circuit analysis	Outcome 1
	Application of differential equations to transient analysis of RC, RL, and RLC circuits.	Outcome 1
	Application of algebra, linear algebra, and circuit equivalencies to AC circuit analysis.	Outcome 1
	Ability to design, analyze, and demonstrate a working integrated stereo audio amplifier system.	Outcome 3
	Ability to use oscilloscopes, function generators, and DC power supplies in an applied design/debug environment	Outcome 11
Schedule:	Lectures: One hour MTThF Laboratory: Three hours W TA Recitations: Two hours MW or TTh	
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