

Outcomes Based Learning Matrix

Course: ENGT 270 Eng Circuit Theory I

Department: ENGT

Course Outcomes	Outcome Activities	Assessment Tools
Students will be able to:		
Demonstrate an understanding Ohm's, Kirchoff's, and Watt's laws.	Be able to apply the three basic laws of electricity to solve for voltage, current, and power in resistive circuits.	Assignments, exams and lab reports.
Demonstrate an understanding of Voltage and Current Relationships in Capacitors and Inductors.	Be able to develop and solve for Ohm's, Kirchoff's and Watt's laws in first and second order circuits.	Assignments, exams and lab reports.
Successfully apply Node and Loop analysis techniques for first order circuits.	Apply both loop and node analysis techniques to calculate voltage and currents in circuit elements.	Assignments, exams and lab reports.
Be able to apply Thevenin, Norton and Max Power Transfer Theorems.	Apply Thevenin and Norton's theorems to model 1 st and 2 nd order circuits and use the Max Power Transfer Theorem to determine best circuit loading.	Assignments, exams and lab reports.
Demonstrate an understanding AC RMS voltage and current.	Be able to calculate RMS voltage and Currents and their respective peak and average values.	Assignments, exams and lab reports.
Be able to apply Impulse and Steady State analysis techniques to first and second order RC circuits.	Be able to analyze the circuit responses to various impulse power sources on 1 st and 2 nd order circuits. Demonstrate circuit response to steady state ac sources.	Assignments, exams and lab reports.
Demonstrate an understanding of Transformers and Balanced Three Phased Systems	Be able to calculate the power efficiency and reflective loads of transformer driven circuits. Be able to analyze and convert three phase systems from wye to delta and vice versa.	Assignments, exams and lab reports.

