

## Outcomes Based Learning Matrix:

Course: ENGT 271 Eng Circuit Theory II

Department: ENGT

Course Outcomes	Outcome Activities	Assessment Tools
<b>Students will be able to:</b>		
Demonstrate an understanding of using Laplace Transforms use in Circuit Analysis	Be able to convert from calculus based circuit equations to Laplace format and perform appropriate analysis.	Assignments, exams and lab reports.
Demonstrate an understanding of Circuit and System transfer functions	Be able to develop the Transfer Functions of Systems and Circuits and use these functions to calculate system response.	Assignments, exams and lab reports.
Successfully demonstrate an understanding of Circuit Stability and Phase Analysis	Using Transfer Functions determine the pole/zero relationships and their relationship to circuit stability.	Assignments, exams and lab reports.
Be able to develop Frequency Response Analysis and Bode Plots	Using zero and pole analysis determine the frequency response of the circuit and create Bode plots to illustrate this response.	Assignments, exams and lab reports.
Demonstrate an understanding of Waveform Analysis	Be able to analyze a waveform and construct equations representing its characteristics to be applied to circuit transfer functions.	Assignments, exams and lab reports.
Be able to apply Fourier Analysis and Applications	Demonstrate the ability to determine the fundamental and harmonic frequencies of a periodic waveform using Fourier analysis.	Assignments, exams and lab reports.