Biomedical Electronic Measurements

BME253L (Fall 2025)

Table of contents

Module	Materials	Assessment	Lab Exercise
Resistive Circuit Analysis	-> Introduction to Circuits -> Ohm's Law, KCL & KVL, Resistive Loads, Meters -> Equivalent Resistance -> Circuit Analysis Approaches -> Source Equivalents	-> Software Installation & Tutorials -> Problem Set 01 -> Problem Set 02	-> Introduction -> Ohm's Law & Power
Midterm I (Sep 22, 2025)			
Capacitors & Inductors DC RC/RL Circuit Analysis			Capacitors, Inductors & Oscilloscopes
Complex Impedance, AC Signals, Phasors			Impedance
AC RLC Circuit Analysis Passive Filters Transfer Functions & Bode Plots (Frequency Domain)			Filters
Transient Response (Time Domain)			Transient Response

Module	Materials	Assessment	Lab Exercise
Midterm II (Oct 08, 2025)			
Operational Amplifiers & Active Filters			Opamps
Transformers & Diodes			Transformers & Diodes
Midterm III (Dec 03, 2025)			
Wheatstone Bridge			Wheatstone Bridge: Temperature Measurement
Final Lab Practical (Dec 10, 2025)			