

Biomedical Electronic Measurements

BME253L (Fall 2025)

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Module	Materials	Assessment	Lab Exercise
Voltage & Current Series & Parallel Resistance Ohm's & Kirchhof's Laws	Introduction to Circuits Ohm's Law, KCL & KVL, Resistive Loads, Meters Equivalent Resistance	Software Installation & Tutorials Problem Set 01	Introduction
Voltage & Current Dividers Node Voltage & Mesh Current Analysis Thevenin & Norton Equivalent Sources Source Superposition			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

Module	Materials	Assessment	Lab Exercise
AC RLC Circuit Analysis Passive Filters Transfer Functions & Bode Plots (Frequency Domain) Transient Response (Time Domain) Midterm II (Oct 08, 2025) Operational Amplifiers & Active Filters Transformers & Diodes Midterm III (Dec 03, 2025) Wheatstone Bridge			Filters Transient Response Opamps Transformers & Diodes Wheatstone Bridge: Temperature Measurement
Final Lab Practical (Dec 10, 2025)			