Biomedical Electronic Measurements

BME253L (Fall 2025)

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Module	Materials	Assessment	Lab Exercise
Voltage & Current Series & Parallel Resistance Kirchhof's Laws	Introduction to Circuit		Introduction
Ohm's Law & Power Voltage & Current Dividers Node Voltage & Mesh Current Analysis Thevenin & Norton Equivalent Sources Source Superposition Midterm I			Ohm's Law & Power
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

Module	Materials	Assessment	Lab Exercise
Transient Response (Time Domain)			Transient Response
Midterm II			
Operational Amplifiers & Active Filters			Opamps
Transformers & Diodes			Transformers & Diodes
Midterm III			
Wheatstone Bridge			Wheatstone Bridge: Temperature Measurement
Final Lab Practical			