Engineering Applications I Course

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Objective

These 9 experiments are part of a complete Basic Circuits I course. Students will be introduced to fundamental electrical engineering theory and tools, as well as gain familiarity with basic state-of-the-art test and measurement instruments.

Equipment

- Agilent 34401A Digital Multimeter
- Agilent E3631A DC Power Supply
- An analog multimeter
- A protoboard
- Various resistors and transistors

Experiments

- Recommended Course Sequence
- The Art of Electrical Measurements
- Voltage and Current Division
- Proportionality and Superposition
- Thevenin's Theorem and Interface Circuit Design
- Introduction to the Transistor
- Introduction to the Operational Amplifier
- Circuit Loading and the OP AMP
- Applications of the OP AMP
- Interface Circuit Design with OP AMPs