

Innovative Technology Learning Software to provide Theoretical and Experimental Training

- Lecture
- Activity
- Multiple Choice Questions (MCQ)
- Question Bank
- Notes



Basic Electrical and Electronics

Simtel Basic Electrical and Electronics possess all the fundamental topics of electrical and electronics. It is a very useful software designed to study the fundamentals and applications of electricity, electronics: analog and digital, circuit analysis, network analysis, electromagnetism and electronic instruments. This software is useful for education of anyone that possesses an interest in the intriguing fields of electricity and electronics including professor, engineer, electrician, technician or a student.

100+ Activities **500+** Learning Objects

Topics

Basic Concepts

- Atom
- Charge
- Introduction to Electricity
- DC and AC Sources of Electricity
- Electronic Components

Voltage and Current

- Series and Parallel Circuits
- Voltage Divider and Current Divider Circuit

Circuit Analysis

- Ohm's Law
- Kirchoff's Law
- Loop and Mesh Analysis
- Star and Delta Network

Network Theorems

- Thevenin's Theorem
- Norton's Theorem
- Super Position Theorem
- Maximum Power Transfer Theorem
- Millman's Theorem
- Reciprocity Theorem

Magnetism

- Electromagnetism
- Alternating Current Circuits
- Transformer
- Rectifier

Filter

Three Phase Circuits

Electrical Machines

- DC Machine
- AC Machine

Semiconductor Devices

- Diode
- BJT
- FET
- Operational Amplifier
- Power Amplifier
- Thyristor Family

Measuring Instruments

- Oscilloscope
- Multimeter

Digital Electronic

- Number Systems
- Codes
- Complements
- Boolean Algebra
- Logic Gates
- Arithmetic Circuits
- Adder
- Subtractor
- Combinational Circuits
- Multiplexer
- Demultiplexer
- Encoder
- Decoder
- Sequential Circuits (Flip-Flops)
- S-R Flip-Flop
- D Flip-Flop
- J-K Flip-Flop
- T Flip-Flop
- Registers and Counters
- Register
- Counter

