

Practical Electricity for Technicians

Course Length:	2 Days
Course Code:	1100
Prerequisites	None, however a basic understanding of electrical principles will be useful for students taking this course.
Course Overview:	The course is designed to teach technicians basic electrical concepts and procedures when working in the communications industry. All aspects of this course can be customized to specific equipment or power systems.
Required Equipment:	Attendees are encouraged to bring available test equipment. This will enable the student to learn on the actual equipment they will be using on a daily basis.



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Course Outline

Electricity Primer

- Electrons defined
- Atoms
- What orbits a Nucleus
- What is a charged atom
- Friction and movement of electrons

Magnetism

- Poles
- Fields

Common Terms and Rules Defined

- Ohm's Law
- Amps
- Watts
- Volts

Practical Electricity for Technicians

Electric Current

- Resistance
- Current Flow
- Current Flow Measurement
- Ohms and meters

Power

- AC Power
- Return Loss
- Principles of Power Generation
- Distribution Systems
- Single Phase Systems
- Three Phase Systems
- Measurement of Voltage and Current
- Peak Power
- Peak to Peak Power

Hardware

- Switches
- Relays
- Battery
- Amplifiers
- Cells and Batteries

Safety

- Electrical Hazards – shock
- Grounding
- Shut-off Systems
- Fuses

Measuring Devices

- Meter Sensitivity – Accuracy
- DVOM – Digital Volt Ohm Meter
- Ammeter
- Ohmmeter
- Multimeter
- Megger (Meg-Ohmmeter)
- Watt Meter