

AC- DC Power Systems

Course Length: Two Days with labs, one day without labs

Prerequisites: NONE

This class teaches telecom technicians how to handle DC and AC electricity in the workplace. It covers the fundamentals of electricity, Ohm's Law, bridging and open circuits, how to create and measure electrical loads on equipment, and great emphasis on electrical safety. With hands-on labs the course is two days in length, without labs it is one day in length. *This course can be customized or combined to meet specific system requirements.*

COURSE OUTLINE

Introduction and Review of Grounding

- Introduction - Objectives
- History of electricity
- What makes a Circuit
- Insulators & conductors
- Systems overview

DC Power Systems

- Ohms Law
- Series circuits
- Parallel Circuits
- Voltage/current relationships
- Power Distribution
- Rectifiers
- Floating vs. Grounded
- Load Calculations
- Breaker Panels

AC Power Systems

- AC system layouts
- Building circuits
- Safety for AC circuits
- Noise Sources in DC Power
- AC Power Noise
- RF Noise
- Rectifier Noise

Standby Generators

- System Configurations
- Motors and Generators
- Capacity and Sizing
- Transfer Switches

Battery Banks

- Battery Types
- Lead Acid
- Sealed
- Cell Amp Hour ratings – Capacity
- Connecting Battery Banks Together
- Battery Racks

Site Safety – NEC & OSHA

- NEC & NFPA
- Safety Practices 1926.416
- Personal Protective Equipment 1926.Sub-part E
- Battery Rooms 1926.441
- Lock-out Tag-out 1926.417

Load Testing

- Why Load Test
- Load Test Methods
- Cell Measurements
- Battery Bank Measurements
- Load Boxes
- Student Exercises

For more information or a custom quote