

Call 1-877-978-7246



# BASIC ELECTRICITY FOR THE NON-ELECTRICIAN™

Day 1 - Understanding Industrial Electricity

Day 2 - Working with Industrial Electricity

Specifically Designed for Maintenance Technicians and Other Non-Electrical Personnel Working in Industrial Plants and Commercial Buildings



- Reserve your space now either online or by calling us at 1-877-978-7246!
- Check us out online at [live.tpctraining.com](http://live.tpctraining.com) for a complete list of all virtual and in-person seminars.
- This seminar is also available for Virtual or In-Person Private Group Training

“

I recommend anyone who is not an electrician take this course.

— David A.

#### Learning Objectives:

- Electrical Fundamentals
- Electrical Test Equipment for Everyday Use
- Understanding Your Building Electrical System
- Working Safely with Industrial Electricity
- The National Electrical Code® (NEC)
- Wire Selection
- Installing Wire (Conductors)
- Installing and Wiring Equipment
- Basic Troubleshooting Techniques



## SEMINAR OVERVIEW

This essential two-day Basic Electricity training course – the most popular in our catalog – provides a foundational understanding of how electricity works in commercial and industrial settings. It includes hands-on electrical skills improvement and is designed to train maintenance technicians and other non-electrical personnel working in industrial plants and commercial buildings. It is also a great refresher course for experienced electricians and engineers.

In this course, students are immersed in practical, real world examples that illustrate how electricity is distributed and used in their plants and facilities. They'll learn how to use electrical test equipment in their everyday jobs before moving on to an in-depth discussion about major electrical components, where and how these electrical components work, and their purposes within electrical systems. The goal of this basic electrical training course is to teach students how to reduce electrical equipment downtime, improve overall efficiency and safety, and fix problems they've been unable to solve on their own. This course can also be adopted as part of a company's regular Qualified Electrical Worker program.

## WHAT YOU WILL TAKE HOME

- A laminated, full-color TPC Training Reference Guide detailing all the "mustknow" information covered in the class. Keep this with you while on the job for immediate knowledge recall.
- Comprehensive classroom materials
- A Personalized Training Certificate with 0.8 TPC Training Continuing Education Units for each day attended, 1.6 for both days.
- All the information you need from asking our instructors specific questions about your own unique equipment or facility.

## CONTINUING EDUCATION

Upon completion of this seminar, the student will receive a Certification of Completion and .8 TPC Training CEUs per day attended. Most employers and many government agencies accept TPC Training CEUs to fulfill their continuing education requirements. If the student needs CEUs to renew a state license, please contact us at 303-867-5039 to ensure the state licensing board has approved the seminar. If we are currently not approved by your state licensing board, we are happy to begin the process as long as we receive your request at least one month before the training date.

## DISCUSSION TOPICS

### Electrical Fundamentals

- Production & Distribution of Electricity
- DC and AC in Plants and Facilities
- Voltage, Current and Resistance; Ohm's Law
- Basic Electric, Series, and Parallel Circuits
- Power: Types & Control
- Single-phase and Three-phase Systems
- Workplace Electrical Safety

### Electrical Test Equipment for Everyday Use

- Multimeters, Voltage Testers, and Ammeters
- De-energized Circuits
- Modes of Failure
- Megohmmeters
- Meters for Special Circumstances

### Understanding Your Building Electrical System

- Reading Electrical Single-Line Diagrams
- Major Components
- The Electrical Service
- Main Distribution Centers
- Transformers, Feeders, Disconnects, & motors
- Switchgear and Circuit Breakers
- Overcurrent Protective Devices
- Panelboards, Branch and Lighting Circuits
- Electrical Floor Plans & Facility Wiring

### Working Safely with Industrial Electricity

- Hazards & Dangers of Electricity
- Personal Protective Equipment (PPE)
- Lockout/Tagout (LOTO)
- Developing Safe Work Practices

### The National Electrical Code® (NEC)

- Purpose and Overview
- Important Definitions and Terminology
- Overview of Installation Requirements
- "Qualified Persons"

### Wire Selection

- Conductor Types & Materials
- Selection of Wire Insulation
- Sizing the Wire for the Job

### Installing Wire (Conductors)

- Raceways, Cable Trays, Conduits, Fittings and Boxes

### Installing and Wiring Equipment

- Wire Nuts, Terminals and Crimpers
- Switches and Receptacles
- Fluorescent Ballasts
- Motors
- Temporary Wiring

### Basic Troubleshooting Techniques

- Branch and Control Circuit Problems
- Isolation of Components
- Checking & Replacing Fuses

### Electrical Maintenance Activities

- Assured Equipment Grounding Program
- Use and Operation of GFCI's
- Types of Electrical Maintenance
- Special Precautions

## JOIN OUR CLASSROOM SEMINARS FROM VIRTUALLY ANYWHERE

Our virtual instructor-led training option allows students to connect to a live classroom seminar via a web link, with the ability to participate full in the classroom dialogue, exercises, and Q&A. Online participants get all the benefits of the full classroom experience, plus the convenience of remote access.

### Features include

- Two full days of live, interactive instruction from a TPC Training instructor
- All classroom materials in PDF format
- Certificate of completion for 16 hours of live training
- Full technical support to ensure your online experience is a rewarding one

## SEMINAR FEE & AGENDA

This 2-day course is just \$1195 (Earn 1.6 CEUs)

7:30 am	Registration
8:00 am	Class Begins
12:00 - 1:00 pm	Lunch (on your own)
4:30 pm	Class Ends

## NO RISK REGISTRATION & MONEY-BACK GUARANTEE

You can reserve your space in the class at any time and cancel without penalty. Cancellations made more than 14 days prior to the seminar may be refunded or rescheduled. Cancellations made within 14 days may be rescheduled for any future topic and/or date. If you're not satisfied with the course, we'll promptly refund your payment.

## BRING THE TRAINING TO YOUR FACILITY VIRTUALLY OR IN-PERSON

Every public seminar class in our Course Catalog can be conducted virtually or on-site at your facility, with the same expert instructors. To arrange an in-person private group training, call or email us at [virtual@tpctraining.com](mailto:virtual@tpctraining.com).

### Some Advantages of In-Person Private Group Training

- Cost Savings — Save time and travel costs by keeping workers on-site
- Customized Content — Tailor the seminar to your facility and equipment
- Flexibility — Accommodate multiple shifts and different start and end times



Instructor was AWESOME!!!! Loved it!!  
— Grant R, Vice President