

# Electrical and Controls Fundamentals

Introductory electricity fundamentals course for nonelectrical professionals

## COURSE TOPICS

- Electricity and magnetism
- Electrical safety
- Basic electric circuits (AC/DC)
- Circuit protection
- Circuit measurements
- Practical control circuits
- Transformer, generator, and motor basics



The electrical and controls fundamentals course provides professionals with the skills, tools, and information necessary to increase their electrical experience in the field. It introduces the basic concepts of electricity and control in industrial applications to nonelectrical participants who work alongside qualified industrial electrical technicians. The instructor places an emphasis on integrating theoretical concepts with practical laboratory exercises. Participants will build simple control circuits and use test equipment to diagnose electrical problems and reinforce their learning.

## LEARNING OBJECTIVES

- Understand electrical terminology and components
- Discover the concepts of electricity and magnetism and how they are related
- Increase awareness of electrical hazards and how to work more safely around electricity
- Employ Ohm's Law in calculating current, voltage, and resistance in simple AC and DC circuits
- Distinguish between types of circuit protection devices and understand their functions
- Conduct basic circuit measurements to check for power in a circuit and diagnose basic circuit problems
- Examine practical control circuits to identify the components and their general applications
- Compare the similarities in the operation of transformers, generators, and motors

## WHO SHOULD ATTEND

This course is for nonelectrical professionals that want to learn or refresh their electrical fundamental skills.

## REGISTRATION

Contact us by email at [rpctraining@slb.com](mailto:rpctraining@slb.com) or by telephone +1-713-849-1700.

Cancellations within three working days prior to the start of the class will be charged the full tuition fee. Substitutions are allowed.

## DURATION

Two training days  
(8:00 a.m. to 4:00 p.m. daily)  
Contact Schlumberger for available dates.

## LOCATION

Schlumberger  
5353 West Sam Houston Pkwy North, Suite 150  
Houston, TX 77041

Participants are responsible for their own accommodations and transportation.  
Contact us to schedule on-site or in-office training at your location.