

Schneider Electric and Canadian Standards Association

Electrical Safety

Electrical Safety for Professionals

ESP21

Course Abstract:

Instructor Led Course:

Components of this course include seminar and workshops, a copy of NFPA 70E, and a written test.

Developed in collaboration with the Canadian Standards Association (CSA) this course identifies the two basic hazards associated with working on or near live electrical equipment: Electric shock and Arc Flash / Arc Blast.

Participants will gain knowledge of the risks involved and the safety regulations and procedures on how to control or eliminate these hazards. Methods to select appropriate personal protective equipment for shock and arc flash will be identified and practiced.

Related safety topics covered will include lockout of electrical equipment, grounding and grounding procedures and maintenance of personal protective equipment.

Industry approved procedures and techniques will be presented and discussed.

Audience:

Commercial and Industrial Electrical Maintenance and Construction workers and personnel. Plant Operations personnel required to perform electrical switching operations.

Prerequisites:

- Knowledge of electrical principles and concepts such as Ohm's Law and power calculations.
- Ability to read and interpret: One-Line diagrams, charts and tables.
- Skills in mathematical calculations and functions, especially algebra.

Course objectives

Upon successful completion participants will be able to:

- Explain the effect of electric current on the human body.
- Identify legislated requirements to protect against electrical shock and burns.
- Define the three NFPA 70E shock protection boundaries and their use.
- List the steps to perform a shock hazard analysis.
- List the personal protective equipment required for shock protection.
- List the steps to perform a lockout procedure.
- Explain what is meant by step potential and touch potential.
- List the steps to apply and remove temporary protective grounds.
- Sketch a single line diagram and identify lockout points on the diagram.
- Explain what an arc flash and blast are and the injuries that can result.
- Define the terms "flash protection boundary" and "incident energy".
- List the steps to perform a flash hazard analysis.
- Use the NFPA 70E Protective Equipment Tables to determine personal protective equipment requirements.
- List the testing and maintenance requirements for personal protective equipment.
- Perform a job safety analysis for electrical hazards using a job briefing form.

Schneider Electric and Canadian Standards Association

Electrical Safety

Electrical Safety for Professionals

ESP21

Course Length:

1 Day

Course Code:

ESP21

Course Tuition:

\$525.00

Minimum Class Size:

10 participants

Maximum Class Size:

25 participants

Course Agenda:

- Introduction and Overview
- Shock Protection
- Arc Flash Protection
- Job Planning
- Workshop Electrical Safety Basics Video

Schneider Canada Services

6675 Rexdale Road
Mississauga Ontario
L4V 1V1 CANADA
Tel: (905) 678-7000
Fax: (905) 678-8583

Head office/Siège social
19 Waterman Avenue
Toronto, Ontario M4B 1Y2
www.schneider-electric.ca
Tel.: (416) 752-8020
Fax: (416) 752-6230

S0180HO0601EP R1

February 2007