

Qualified Electrical Worker Course

2 Day - 16 Contact Hours ~ \$1,195, includes copy of CSA Z462-18

Who Should Attend?

All technicians, field-service personnel, electricians, supervisors and engineers who perform operation or maintenance work on electric devices and equipment with voltage ratings of 208V and higher (low voltage and high voltage systems).

Course Description

This course teaches you to assess the hazards, control exposure and reduce risks associated with working on or near electrical equipment.

This two-day course adheres to CSA Z462-18 and exceeds our Occupational Health and Safety Regulations. In addition, we provide hands-on training, which includes the operation and safety of power systems equipment in our 53' mobile training trailer.

Lab Time and Prerequisites

Hands-on training program augmented with video and round-table discussions. Attendees should have basic electrical training. Some field experience is also recommended, but not mandatory.

Course Outline

Electricity's Effect on the Human Body

- Effect of shock on the human body
- Ventricular fibrillation
- Effect of arc flash and arc blast
- Arc flash incident review

Understanding Electrical Power Systems

- Basic electrical theory & formula
- Electrical definitions, terminology and acronyms
- Drawing symbols & IEEE device numbers
- Single lines & 3-line drawings
- AC/DC trip & control schematics
- Ground fault systems
- Step, touch, mesh potentials
- Time-Current characteristics
- Power system studies & design considerations
- Electrical arc characteristics & dangers

Operation / Safety of Power Systems Equipment

- HV & MV disconnect switches
- Power circuit breakers and switchgear
- Relay protection, transformers & MV capacitors
- MV power fuses

Lockout & Grounding Techniques

- Establishing and electrically safe working condition (ESWC)

Safety Equipment Overview

- Personal protective equipment
- FR clothing, high voltage flash suit, face shields
- Personal safety grounds
- Voltage rated gloves, switching Sticks
- Voltage detection equipment

Working on or Near Energized Electrical Systems

- Standard for electrical safety in workplace
- General categories of electrical hazards
- Statistics on workplace incidents

- Qualified electrical personnel
- Working on or near live parts
- Arc flash Considerations
- Incident energy calculations
- Limits of approach & flash boundary
- Hazard risk categories
- Hazard labels

Pre-Job Task Analysis

- Switching plans
- Risk assessments
- Energized electrical work permits
- Lockout exercise utilizing single line diagram

Solutions to Limit Your Exposure

- Keeping accurate electrical drawings
- Flash hazard analysis and implementation
- Relaying upgrades and current technology
- Arc resistant switchgear
- Importance of regular maintenance
- Recommended power system testing intervals

2020 QEW Schedule

Regina	Feb 25-26
	Jun 23-24
	Sept 9-10
	Dec 1-2
Saskatoon	Feb 5-6
	June 9-10
	Nov 3-4
Calgary	Mar 11-12
Edmonton	Oct 21-22
Winnipeg	April 22-23
Burnaby	TBD



To register for this course or for more information, please contact canadatraining@shermco.com or 306-949-8131.