

Pre-Master Electrician Course

6-Day Course

- Identify trends in the Ontario Electrical Safety Report.
- Describe the importance and responsibilities of Licensed Electrical Contractors and Designated Master Electricians.
- Describe and identify various code rules, including Ontario Amendments, pertaining to residential commercial and industrial installations.
- Identify and apply rules pertaining to high-voltage installations.
- Explain the duties of owners, constructors and supervisors.
- Describe the incident investigation process.
- Describe the elements of a Health and Safety Program.
- Identify the basic steps involved in Job Safety Analysis.
- Discuss the basics of an Emergency Response Plan.
- Identify the limits of approach and lockout / tagout procedures.
- Understand the Human Rights Code, the Labour Relations Act, the Employment Standards Act, and the Construction Act.

Powerline Safety Awareness

Half-Day Course

- Identify powerlines and hazards.
- Identify safe practices for working around powerlines when operating high reach equipment and loading and unloading material.
- Describe what to do in the event that a worker or equipment comes into contact with powerlines.

Safety in a High Voltage Environment

Half-Day Course

- Discuss OESC requirements pertaining to high voltage installations.
- Describe the unique hazards associated with a high voltage environment.
- Discuss safety measures required when working in a high voltage environment.

Principles of Electrical Safety in the Workplace

Understanding assessment and planning for electrical safety in the workplace based on principles contained in CSA Z462, Workplace electrical safety

Half-Day Course

- Examine the principles of electrically safe work practices so they become understood when either of the following are true:
 - » Working in a facility that implements an electrical safety program based on the CSA Z462 standard (to comply with the safety-related work practices and procedures provided by the employer).
 - » Applying general safety principles when working in a facility that does not implement an electrical safety program based on the CSA Z462 standard.
- Describe the elements of an electrical safety program.
- Effectively identify electrical hazards.
- Understand how to assess, plan, and execute electrical work.
- Develop a task based work plan to eliminate hazards and reduce risk.
- Recognize how to prepare for the unexpected when undertaking electrical work.

Solar Photovoltaic Systems and OESC Requirements

Full-Day Course

- Discuss scope and special terminology.
- Provide a general systems overview.
- Identify and discuss rules regarding solar photovoltaic systems, inverters, grounding and bonding, supply authority disconnects, electricity meters, AC module and micro-inverters, and bipolar systems.

Register for an ESA Training Course Today!

For registration and schedule information, please visit www.esasafe.com

Training is a non-regulatory service offered by the Electrical Safety Authority (ESA). For more information visit www.esasafe.com/nonregulatory.



Electrical Safety and Technical TRAINING COURSES



LEARNING OBJECTIVES

Introduction to Conductors

Half-Day Course

- Review the Ontario Electrical Safety Code (OESC) rules relating to conductors.
- Identify the rules that apply to selection, rating and installation of conductors.
- Describe how to use various tables and diagrams in the OESC to correctly choose and configure conductors for various installation types.

Advanced Conductors

Half-Day Course

- Discuss the ampacity and deration of single conductors.
- Explain eddy currents.
- Explain sheath currents.
- Discuss the installation of single conductors.
- Discuss the requirements for shielded cables above 5kV.
- Discuss the requirements for conductors in cable tray.
- Discuss the sizing of conductors and overcurrent devices for dry type low voltage transformers.

Electrical Safety Awareness I

Half-Day Course

- Learn how to provide an electrically safe living and work environment for you, your family, friends and co-workers.
- Explain basic electrical terminology and definitions.
- Learn to identify and avoid common electrical hazards.
- Discuss how electrical shocks cause injuries and death.
- Learn the legal requirements for inspection and equipment approvals.

Electrical Safety for Maintenance Staff

Half-Day Course

- Establish an awareness of the fundamentals of electricity and basic electrical terms.
- Recognize the dangers of electricity.
- Discuss the physiological effects of electricity on the body.
- Explain the importance of working safely, including processes used to be safe in the workplace.
- Describe the consequences of not working safely.

Grounding and Bonding

Half-Day Course

- Discuss the requirements of Section 10 Grounding and Bonding of the OESC.
- Describe the principles of grounding and bonding.
- Describe specific grounding and bonding requirements.
- Review Supplemental and Amendatory Sections and Rules.

An Introduction to the Ontario Electrical Safety Code (OESC)

Half-Day Course

- Recognize the structure of the OESC.
- Navigate through the OESC and efficiently find information.
- Discuss the requirements of the OESC.

Maintenance of Electrical Systems – Introduction (Z463)

Full-Day Course

- Identify the principles for establishing an effective electrical maintenance program that contributes to workplace safety.
- Describe guidelines for general maintenance practices to reduce hazards and risk.

The Ontario Electrical Safety Code

Full-Day Course

- Identify OESC requirements.
- Recognize the structure of the OESC.
- Review specific electrical installations and locate applicable rules in the OESC.

The OESC for Design Engineers

3-Day Course

- Understand the structure of the OESC.
- Understand how to navigate and reference sections of the OESC.
- Review explanatory material in Appendix B.
- Understand the basic calculations required by Code.
- Consider the impact of general code requirements in design practice.
- Correctly identify, interpret and apply the rules for grounding and bonding in design practice.
- Gain awareness of wiring methods and how installation requirements can impact design considerations.
- Gain awareness of how electrical equipment requirements impact design considerations.

The OESC for Electrical Technicians and Technologists

2-Day Course

- Understand the structure of the OESC.
- Describe general rules and definitions.
- Develop the ability to apply, calculate, and interpret the requirements of the OESC in design considerations.
- Describe the relationships between various sections of the OESC.
- Develop the ability to anticipate issues within specific installations when designing for compliance with the OESC.

The OESC (27th Edition/2018) – New and Amended Requirements (General Level 1)

Half-Day Course | Also Available Online

- Describe the new and amended requirements of the General Sections of the 2018 OESC.
- Apply knowledge of new and amended requirements to the design and installation of electrical equipment to ensure compliance with the 2018 OESC.

The OESC (27th Edition/2018) – New and Amended Requirements (General Level 2)

Half-Day Course | Also Available Online

- Discuss the new and amended requirements of the Supplementary and Amendatory Sections of the 2018 OESC.
- Apply knowledge of new and amended requirements to the design and installation of electrical equipment to ensure compliance with the 2018 OESC.

The OESC (27th Edition/ 2018) – New and Amended Requirements (HVAC Installations)

Half-Day Course | Also Available Online

- Describe the importance of establishing safe work practices in a workplace.
- Describe the existing, new and amended rules in the OESC that are applicable to the installation and maintenance of HVAC equipment.