THE OESC (26TH EDITION/2015) – 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 2015 Ontario Electrical Safety Code effective May 5, 2016.
- Apply knowledge of new and amended requirements to the design and installation of electrical equipment to ensure compliance with the 2015 OESC.

THE OESC (26TH EDITION/ 2015) – 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 Ontario Electrical Safety Code that are applicable to the installation and maintenance of HVAC equipment.

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 the requirements of the Occupational Health and Safety Act and Regulations.
- Describe what to do in the event that a worker or equipment comes into contact with powerlines.

PROTECTION AGAINST AVAILABLE FAULT CURRENT

HALF-DAY COURSE

- Describe the requirements in Section 154 of the current OESC.
- Identify the hazards presented by electrical equipment that is not rated for the available fault current.
- Perform basic fault current calculations.
- Review actual installation examples.

SAFETY IN A HIGH VOLTAGE ENVIRONMENT

HALF-DAY COURSE

- Discuss the current 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.

SOLAR PHOTOVOLTAIC SYSTEMS AND ONTARIO ELECTRICAL SAFETY CODE 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.

AN INTRODUCTION TO CSA Z462-15 WORKPLACE ELECTRICAL SAFETY (ARC FLASH AND SHOCK)

FULL-DAY COURSE

- Understand the purpose and structure of the CSA Z462-15 Standard.
- Review electrically safe work practices including:
  - General requirements for electrically safe work practices.
  - Establishing an electrically safe work condition.
  - Work involving electrical hazards.
- Understand risk assessment related to the CSA Z462-15 Standard.
- Learn selection methods for Personal Protective Equipment.
- Review a basic safe work procedure.
- Review equipment specific practices.

AN OVERVIEW OF CSA Z462-15 WORKPLACE ELECTRICAL SAFETY (ARC FLASH AND SHOCK)

HALF-DAY COURSE *(This half-day overview course is designed as a "refresher" of the full-day course)*

- Review the scope and application of the CSA Z462-15 Standard.
- Consider electrically safe work practices.
- Review risk assessment related to the CSA Z462-15 Standard.
- Assess selection methods for Personal Protective Equipment.
- Review basic criteria for implementing CSA Z462-15.

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/about-esa/non-regulatory.

Electrical Safety Authority

FORM 1579 (11/17)

Electrical Safety Authority

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.

CONTROL OF HAZARDOUS ENERGY (LOCK-OUT AND TAG-OUT)

HALF-DAY COURSE

- Recognize why proper lock-out and tag-out is critical to saving lives and the consequences of improper lock-out and tag-out procedures.
- Describe the legal requirements of the Occupational Health & Safety Act and Regulations for disabling hazardous energy.
- Describe the requirements of the Ontario Electrical Safety Code (OESC) for disabling hazardous energy.
- Identify the basics required in a proper lock-out and tag-out procedure.

ELECTRICAL SAFETY AWARENESS I

HALF-DAY COURSE | ALSO AVAILABLE ONLINE

- Learn how you can 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 an dd death.
- Learn the legal requirements for inspection and equipment approvals.

ELECTRICAL SAFETY FOR EMERGENCY RESPONDERS (OFFERED IN COLLABORATION WITH PSHSA)

HALF-DAY COURSE

- When arriving on scene, recognize potential hazards involving underground or overhead powerlines, substations, solar photovoltaic technology, electric and hybrid vehicles, etc.
- Learn best practices and procedures to protect both emergency responders and victims when responding to emergency situations involving electrical hazards.

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.
- Discuss grounding requirements of Section 36 High Voltage Installations.
- Review Supplemental and Amendatory Sections and Rules.

AN INTRODUCTION TO THE ONTARIO ELECTRICAL SAFETY CODE

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 | ALSO AVAILABLE ONLINE

- Describe how an electrical maintenance program contributes to workplace safety.
- Describe various strategies and their appropriate use.
- Describe guidelines for general maintenance practices to reduce hazards and risk.
- Identify the principles for establishing an effective electrical maintenance program.

THE ONTARIO ELECTRICAL SAFETY CODE (OESC)

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.
- Comprehend the meaning of rules.
- Reference and use Tables.
- Benefit from explanatory material in Appendix B.
- Understand the basic calculations required by Code.
- Consider the impact of general code requirements in designs practice.
- Correctly identify, interpret and apply the rules for grounding and bonding in design practice.
- Understand the OESC requirements for protection and control.
- Gain awareness of wiring methods and how installation requirements can impact design considerations.
- Understand installation requirements for electrical equipment such as capacitors, transformers, motors and lighting.
- Gain awareness of how electrical equipment requirements impact design considerations.
- Have knowledge of motor calculations.
- Understand OESC requirements for the installation of lighting.
- Comprehend rules prescribing methods for high voltage installations.

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 (26TH EDITION/2015) – 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 2015 Ontario Electrical Safety Code effective May 5, 2016.
- Apply knowledge of new and amended requirements to the design and installation of electrical equipment to ensure compliance with the 2015 OESC.