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## Ontario Electrical Safety Code Training

Contact us Today for a FREE quotation to deliver this course at your company's location.

<https://www.electricityforum.com/onsite-training-rfq>

The 2018 edition of the Ontario Electrical Safety Code – which includes the Canadian Electrical Code Part 1 plus several Ontario-specific amendments – reflects changes in technology and the marketplace, and incorporates feedback from stakeholders, technical reviews and new safety insights. The new edition includes changes designed to enhance electrical safety and protect workers and the public including:

- Re-write of Section 10 requirements for bonding and grounding have been reorganized and reduced in size with some changes that will improve safety and simplify the installations;
- Expanding the use of Tamper-resistant receptacles in educational facilities and hotels/motels;
- Requirements for installing an identified (neutral) conductor at each control (switch) location of permanently installed luminaire;
- Alignment with the Ontario Building Code to prevent the installation of high-voltage conductors over buildings;
- Providing of adequate working space for electrical workers to undertake necessary repairs, maintenance and installation of transformers greater than 50kVA;
- Prohibiting of installation of cables in concealed locations in corrugated roof decking
- Adding requirements for Energy Storage systems; and

- Facilitating the use of Power over Ethernet to provide a pathway for sources of electricity.

This course, conducted by one of Canada's leading experts on the Ontario Electrical Safety Code, will help electrical professionals on the effective application through an improved understanding of the intent of the rules. Also, our course will instruct electrical professionals on how to access and navigate through the Ontario Electrical Safety Code in a cost-efficient manner. The Canadian Electrical Code is the basis for all provincial and territorial electrical codes in Canada, including the 2018 Ontario Electrical Safety Code. Most provinces adopt the code, without changes, while other provinces, like Ontario, add their own amendments. In the specific case of Ontario, there are many amendments that you need to know.

Designed and delivered by Larry Cantelo, one of Canada's leading experts on Ontario Electrical Safety Code and Canadian Electrical Code interpretation, the course will instruct not only on the latest code changes, but how to understand what the rules are and how to access the code with ease. Some people spend endless time searching for the rules that they need. This course will teach what you need to know, quickly and accurately. Our instructor will demonstrate how to find the answers you need in a few easy steps.

You won't want to miss this learning opportunity!!

**It's a Proven Fact:**

Electrical Engineering, Design, Maintenance and Construction professionals who understand the most current Canadian Electrical Code requirements will:

- Work more safely and provide a greater degree of electrical protection for electrical systems
- Work more productively. Make more money, save their clients' money
- Prevent system incompatibilities from holding up a job
- Experience a higher rate of passing electrical inspection

This interactive 2-Day Ontario Electrical Safety Code training course will instruct industrial, commercial and institutional electrical professionals and electrical professionals on:

1. Understanding the most recent changes to the Ontario Electrical Safety Code and

individual provincial amendments.

2. Code Interpretation: How to most effectively interpret the Ontario Electrical Safety Code in order to properly comply.

3. How to navigate and access the Ontario Electrical Safety Code Rules accurately and time-effectively.

This course is designed to be an interactive, problem-solving, learning environment for delegates of all disciplines.

The positive outcome of this training is to improve the quality of installations and to pass electrical inspection with fewer deficiencies. It means working more efficiently and productively, saving time, energy, and money.

#### WHO SHOULD ATTEND

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- Electrical Engineers, Technicians And Technologists
- Mechanical Engineers And Technologists
- Design Consultants
- Industrial Maintenance Contractors
- Electrical Project Managers
- Electrical Inspectors
- Educators

#### STUDENTS RECEIVE

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- 100+Page Digital Electrical Safety Handbook (Value \$20)
- An **Electricity Forum Coupon (Value \$100)** To Be Used Against Any Future Electricity Forum Event (Restrictions Apply)
- 1.4 CEU Credits Issued By The Engineering Institute Of Canada.
- Course Materials In Paper Format

## **COURSE OUTLINE**

### **Ontario Electrical Code Training**

*Instructor: Larry Cantelo, BAAE*

#### **DAY ONE**

**8:00 am**

##### **Welcome and introduction to the code**

- Electrical code overview
- Organization of the Ontario Electrical Safety Code
- Related standards
- Equipment approval requirements
- How code changes are proposed

##### **Definitions**

- Revised definitions
- OESC definitions

##### **General Rules**

- Administrative Requirements
- Technical Requirements
- Maintenance
- Marking of Equipment

## **Conductors**

- Wire and cable – specifications and conditions of use
- Conductor sizes, ampacities and temperature ratings
- Flame spread ratings
- Parallel conductors
- Underground conductors
- Sheath currents
- High voltage conductors

## **Services and Service Equipment**

- Consumers Service
- Supply Service

## **Circuit Loading**

- Current Calculations
- Voltage Drop
- Continuous and Non-continuous Loads
- Single Dwelling Calculations
- Apartment Calculations
- Other Occupancies

## **Grounding and Bonding**

- Section Completely Re-written
- Definitions
- Solidly-grounded Systems

- Impedance-grounded Systems
- Ungrounded Systems
- Bonding

### **Wiring Methods**

- Overview of Different Wiring Methods

### **Protection and Control**

- Fuses
- Circuit Breakers
- Overload and overcurrent protection
- Ground fault protection
- Series rated electrical equipment
- Fuse and circuit-breaker applications
- Switching and disconnection

### **Hazardous Locations**

- Zones 0, 1 & 2 – flammable and explosive gases and vapours
- Zones 20, 21 & 22– combustible and conductive dusts and ignitable fibres and flyings
- Area classifications, divisions and groups
- Hazardous locations – wiring and equipment
- Sealing methods
- Intrinsically safe and non-incendive circuits

### **DAY TWO**

## **Installation of Electrical Equipment**

- Overcurrent Protection
- Power factor correction capacitors
- Transformers
- Panelboards
- Storage Batteries
- Receptacles
- Branch Circuits in Dwellings

## **Electric Motors**

- Service factor
- Overcurrent and overload protection
- Conductor ratings, service, feeders and branch circuits
- Grouped motor protection
- Motor disconnection
- Motor controls

## **Fire Alarm Systems, Smoke & CO Alarms and Fire Pumps**

- Conductors
- Smoke and CO Alarms
- Overcurrent protection

## **High Voltage Substations and Lines**

- Definitions
- Guarding

- Warning notices
- Service equipment location
- Overcurrent protection
- Grounding

### **Emergency Power Supply**

- Emergency power supply, unit equipment, exit signs and unit equipment
- Wiring and overcurrent protection
- Emergency power supplies
- Emergency lighting
- Exit signs

### **Fixed Electric Heating Systems**

- Review Changes to Rules

### **Renewable Energy Systems**

- Review Changes to Rules

### **Pools, Tubs and Spas**

- Review Changes to Rules

### **Temporary Wiring**

- Conductors



- Grounding and Bonding
- Branch Circuits
- Receptacles

### **Marine Wharves, Docking Facilities, Fixed & Floating Piers and Boathouses**

- Review Changes to Rules

### **Electric Vehicle Charging Systems**

- Definitions
- Branch Circuits
- Disconnecting Means
- Receptacles
- EV as a Power Source

### **Questions and answers**

#### **TUTORIAL TIMETABLE:**

Start: 8:00 a.m.

Coffee Break: 10:00 a.m.

Lunch: 12:00 noon (included with course)

Restart: 1:15 p.m.

Coffee Break: 2:15

p.m

Finish: 4:30 p.m.

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