

## CANADIAN ELECTRICAL SAFETY CODE (CEC) – ADVANCED

Hands-on training for engineers to gain experience, enhance skills, and solve engineering challenges.



PRACTICAL KNOWLEDGE



REAL-WORLD APPLICATIONS



IMPROVED EFFICIENCY AND PERFORMANCE



### WHO SHOULD ATTEND

- Licensed electrical engineers (P.Eng) and Engineers-in-Training (EITs)
- Industrial electricians and maintenance technicians
- Automation, controls, and power system engineers
- Field service engineers working with motors, drives, and industrial equipment
- Professionals in manufacturing, utilities, oil & gas, and energy sectors
- Engineers working with renewable energy and electrification systems

This course is designed for professionals dealing with complex electrical systems and high-risk environments.



### COURSE BENEFITS

Participants will develop advanced, real-world skills beyond basic knowledge:

- Apply CEC requirements to complex industrial installations
- Understand hazardous location classifications and equipment selection
- Design and evaluate motor protection and control systems
- Analyze fault conditions and improve protection coordination
- Reduce risk of equipment damage, downtime, and safety incidents
- Interpret real industrial case studies and failures
- Gain practical insight from field-based engineering experience

By the end of the course, participants will be able to evaluate industrial systems, identify risks, and implement safer, code-compliant solutions.



### INDUSTRY RELEVANCE

This course targets high-risk industrial applications in manufacturing, energy, and hazardous environments. It supports safe operation of motors, drives, solar PV systems and EV charging systems. It requires advanced engineering judgment, making it ideal for experienced professionals.



#### DURATION

8 Hours (1 day)  
Lunch Included



#### DELIVERY

In-Person or  
Online



#### CERTIFICATE

Certificate of  
Completion Provided

SOLATRONIX | Engineering Services and Technology Training | CANADA



### COURSE OUTLINE

- 1 Module 1: Advanced Protection Systems (Section 14)**
  - Protection coordination in industrial systems, Time-current curves and device selection, Arc flash awareness and risk reduction, Case studies of protection failures
- 2 Module 2: Hazardous Locations (Section 18)**
  - Classification of hazardous areas, Equipment requirements, Safety precautions, Real industrial examples
- 3 Module 3: Wiring Methods and Equipment (Section 26)**
  - Installation rules of electrical equipment, Wiring methods and enclosures, Practical compliance considerations
- 4 Module 4: Motors and Control (Section 28)**
  - Motor installation requirements, Overload protection, Control circuits, Common failures
- 5 Module 5: Renewable Energy Systems (Section 64)**
  - Grid-connected solar systems safety considerations, Inverter-based systems and protection issues
- 6 Module 6: EV Charger Installation (Section 86)**
  - EV charger installation and safety requirements, Load calculations, Circuits Protection, Location and mounting requirements



### WHAT YOU WILL GAIN

Ability to evaluate industrial electrical systems, identify risks, and implement safe, code-compliant solutions in complex industrial environments.



### ABOUT THE INSTRUCTOR



#### HUSSIN HASSEN, P.Eng



**Degree:** Master of Applied Science in Electrical Engineering from University of Waterloo



**Certificates:** Professional Engineering Certificate from PEO in Ontario



**Practical Experience:** Over 20 years of experience in testing and commissioning of UPS systems, excitation systems for hydroelectric plants and Smart battery storage systems.



**Teaching Experience:** Experienced educator with more than a decade of teaching in electrical engineering, specializing in power electronics and electric machines.



### COURSE DELIVERY

This course can be delivered online or in-person at our location or at the customer's location.



### ADDITIONAL INFORMATION

- ✓ Course materials and practical examples included
- ✓ Certificate of completion provided
- ✓ Hands-on training where applicable
- ✓ Customized delivery available for corporate clients



#### VENUE & STARTING DATE

TBA  
Please contact us for details on upcoming sessions.



#### COST

Please contact us for group pricing and corporate training packages



#### COURSE SCHEDULE

- Duration: 8 hours (1 day)
- Delivery: In-person / Online
- Next Session: TBA



#### CERTIFICATE

Certificate of attendance will be provided upon successful completion.