



Content
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Canadian Electrical Code Training - 2024 Edition Code Changes and Fundamentals

Course details: <https://electricityforum.com/electrical-training/cec-training>

COURSE DATES AND TIMES

September 12-19 , 2025

10:00 am - 4:30 pm ET

November 7-14 , 2025

10:00 am - 4:30 pm ET

Canadian Electrical Code Training is intended to do much more than instruct on the changes that have taken place since the last time Canada issued a national Electrical Code. This 12-hour live online, instructor-led course covers major sections of the 2024 CE Code and recent changes.

Our 2-day Code Changes and Fundamentals and Code Calculations course is taught by one of Canada's leading experts on the 2024 Edition of the Canadian Electrical Code, to help electrical professionals apply the rules effectively through an improved understanding of the rules' intent. Additionally, our course will instruct electrical professionals on how to access and navigate the Canadian Electrical Code Part 1 in a cost-effective manner.

Course #1 -

2024 CE Code - Changes and Fundamentals

- **July 11, 2025**
- **September 12, 2025**
- **November 7, 2025**

Course Description: Our 6-hour, one-day 2024 CE Code Changes and Fundamentals course is a comprehensive, instructor-led, training course designed to provide electrical professionals with a detailed understanding of the critical updates in the 2024 Canadian Electrical Code (CE Code). The course focuses on significant changes that impact safety, compliance, and installation practices in both residential, commercial and industrial settings.

Participants will explore updates in wiring and cable applications, conduit and box fill, grounding and bonding, hazardous locations, and protection systems. This course emphasizes practical application through real-world scenarios, and code search exercises, making it ideal for those looking to apply theoretical knowledge in their daily work.

The course is tailored to help professionals stay up to date with industry standards. By mastering the new CEC requirements, participants can ensure their electrical installations are safe, compliant, and efficient. Whether you are a seasoned electrical professional or a newcomer to the field, this course equips you with the tools and knowledge needed to navigate the latest changes effectively.

In addition to reviewing the technical changes in the Code, the course covers jurisdictional variations and the integration of new technologies. The curriculum is designed to be 70% experiential, enabling participants to engage in problem-solving exercises, hands-on applications, and real-world simulations, ensuring a deep and lasting understanding of the material.

Course #2 -

2024 CE Code Calculations: Practical Applications and Advanced Techniques

- **July 18, 2025**
- **September 19, 2025**
- **November 14, 2025**

Course Description: This comprehensive 6-Hour, one-day, CE Code Calculations course focuses on critical electrical calculations essential for compliance with the 2024 Canadian Electrical Code (CEC). The course is designed for professionals who work with complex electrical installations, including electricians, engineers, and maintenance personnel. By attending, participants will gain expert knowledge in calculating conductor sizes, overcurrent protection, conduit and box fill, and motor applications—all while ensuring adherence to the latest CEC standards.

The Canadian Electrical Code Book is the basis for all provincial and territorial electrical codes across Canada. Most provinces adopt and comply with the rules set out in the Code, without making any changes, while other provinces add their own amendments. You need to be aware of both the national and specific provincial code differences. This course covers a wide range of important subjects, including energy management systems, electric vehicle charging stations, heating devices and controls, and shower stalls.

We can create a unique customized course, designed for all levels of electrical professionals, by one of Canada's leading experts in industrial, commercial, institutional and residential electrical installations, as well as the business of conducting electrical inspections.

Our 2024 Canadian Electrical Code Training classes not only offer updates on the latest code changes but also provide a clear understanding of the rules and a straightforward approach to navigating each area of the code. Some people spend endless time searching for the rules that they need. This education program will provide you with the necessary knowledge in a concise and accurate manner. Our instructor will demonstrate how to find the answers you need in a few easy steps. You will find the answers easily and correctly with our training system.

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 Electrical Code standards 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 the electrical inspection

This interactive 2-Day Canadian Electrical Code Training Course will instruct industrial, commercial and institutional electrical professionals and electrical professionals on:

1. Understanding the most recent changes to the 2024 Canadian Electrical Code and individual provincial amendments.
2. Code Interpretation: How to most effectively interpret the Canadian Electrical Code to comply properly.
3. How to navigate and access the Code Rules accurately and time-effectively.

This course is designed to be an interactive and problem-solving learning environment for delegates from all disciplines. Instructor-led calculations will determine minimum conductor sizes and maximum overcurrent ampacities for various loads, as well as maximum overload settings for AC motors. Participants are encouraged to bring a calculator to the seminar to participate actively in the exercises.

The primary objective of this training is to enhance the quality of installations and reduce the number of deficiencies during electrical inspections. It means working more efficiently and productively, saving time, energy, and money, which is a great credit to everyone working in the industry.

Specific changes to the 2024 edition of Canada's National Electrical Code include:

- Section 64, Renewable Energy Systems, Energy Production Systems, and Energy Storage Systems, features a new subsection governing the installation of energy storage systems and rules for functionally grounded renewable energy systems.
- Section 26, Installation of Electrical Equipment, includes a new requirement for ground fault circuit interrupter (GFCI) protection for all 15 A and 20 A receptacles located outdoors within 2.5 m of grade, among other changes.
- Section 22, Locations in which corrosive liquids, vapours, or excessive moisture are likely to be present, now contains a new Subsection for farm buildings housing livestock, as well as revised Rules for equipment in Category 1 and 2 locations.
- The definition for “Voltage — Low voltage” was revised.

- Clarification was provided on the operation of impedance-grounded systems under fault conditions in Section 10, Grounding and Bonding.
- New requirements were added for electrical equipment installed near roof decking systems to Section 12, Wiring methods.
- Load calculations and equipment layouts for recreational vehicle lots were updated in Section 72, Mobile Home and Recreational Vehicle Parks.
- Table 19, Conditions of Use for Insulated Conductors and Cables Other Than Flexible Cords, Portable Power Cables, and Equipment Wires, was completely reorganized, simplified, and condensed.
- Annexes A.1, CSA Canadian Electrical Code, Part II, safety standards for electrical equipment and A.2, Other Canadian safety standards for electrical equipment, of Appendix A.

WHO SHOULD ATTEND

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

STUDENTS RECEIVE

- Certificate of Course Completion
- 1.2 CEU credits issued by the Engineering Institute of Canada. (12 Professional Development Hours)
- An **Electricity Forum Coupon (Value \$100)** to be used against any future Electricity Forum event (restrictions apply)
- 100+Page Digital Electrical Safety Handbook (Value \$20)
- Course Materials in PDF Format

COURSE OUTLINE

CE Code Compliance Training

DAY ONE

Welcome and introduction to the CE Code

- Electrical code overview
- Organization of the Code
- Critical related standards
- Equipment approval requirements

Objectives and Scope

- Objectives of the Code
- Exemptions

Conductors

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

Circuit Loading and Demand Factors

- Intermittent loads
- Continuous loads
- 80% and 100% rated circuit breakers
- Car-plug panel feeder calculations

Residential Calculations

- Single dwelling service calculations
- Apartment feeder calculations
- Branch circuit calculations

Grounding and Bonding

- What is Grounding and bonding?
- Electrical system grounding
- Service equipment grounding
- Electrical equipment bonding
- Bonding other systems
- Grounding and bonding methods
- High voltage grounding, ground potential rise, step and touch voltages

Protection and Control

- Interrupting rating (IR) of overcurrent devices
- Tap conductor requirements
- Ground fault protection
- Series rated electrical equipment
- Fuse and circuit-breaker applications
- Switching and disconnection

Fire Alarm Systems and Fire Pumps

- Conductors
- Overcurrent protection

DAY TWO

Hazardous Locations

- Overview of major revisions to Section 18
- Area classifications, zones, divisions and groups
- Hazardous locations – wiring and equipment
- Sealing
- Intrinsically safe and non-incendive circuits
- Purged electrical systems

Installation of Electrical Equipment

- Capacitors and capacitor banks
- Transformers
- Panelboards

Electric Motors

- Service factor
- Overcurrent and overload protection

- Conductor ratings, service, feeders and branch circuits
- Grouped motor protection
- Motor disconnection
- Motor controls
- Power factor correction capacitors

Fire Alarm Systems and Fire Pumps

- Fire alarm systems
- Smoke and CO alarms in dwellings
- Fire pumps

High Voltage Substations and Lines

- Electrical system fault levels
- Lightning protection
- Transformer and switchgear rooms
- Sprinklered equipment
- Overcurrent protection
- Lightning protection
- Clearance – substations and lines
- Liquid-filled equipment

Emergency Power Supply

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

Questions and Answers

COURSE SCHEDULE:

Both days:

Start: 10 a.m. Eastern Time

Finish: 4:30 p.m. Eastern Time

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

<https://electricityforum.com/onsite-requestforquote>