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Safe technical systems. Everywhere.

Continuing Education: Electrical Field Safety Representative Restricted Classes Syllabus

Technical Training - Electrical

March 2022

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Disclaimer:

Please be advised that the decision to adopt or not to adopt the 2021 Canadian Electrical Code ("CEC"), with or without variations, is at the full discretion of the Attorney General and Ministry responsible for Housing.

By supplying you with this information, Technical Safety BC intends to strengthen the availability and readiness of training, in the event that the 2021 CEC is adopted. All information is provided "as-is" and without any warranty of accuracy or reliability. The adoption of the 2021 CEC may be delayed or may not occur at all, and any discussions of dates for the adoption are to be regarded as proposals only. There is no certainty or guarantee with regards to proposed dates, and we request that you do not publish or share any information that contains dates. Technical Safety BC is not responsible for any costs, expenditures, or loss that you or any other person may incur through the use of the information.

1.1 PURPOSE

The purpose of this syllabus is to set the standard for training providers who desire to develop courses for the renewal of certificates of qualification for restricted class Field Safety Representatives (FSRs).

In accordance with s. 15(j) of the *Safety Standards Act*, the provincial safety manager may recognize training for the purpose of qualifying or renewing the qualifications of individuals. Under s. 10.1(4) of the Electrical Safety Regulation, a restricted class FSR certificate of qualification may be renewed only if the certificate holder completes at least 4 hours of continuing education.

The provincial safety manager will accept the following continuing education training:

1. A course consisting of a minimum of 1 hour on the 2021 Canadian Electrical Code update as outlined in section 3.3 of this syllabus. The code update course will require evaluation and recognition by Technical Safety BC; and

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2. One or more additional courses that add to the 1-hour code update course listed above to make up the total 4-hour requirement for continuing education. Such courses shall be directly related to regulated activities certificate holders are required to perform within the scope of their certificate class. These courses will not require evaluation and recognition by Technical Safety BC. Acceptable training topics shall fall under one or a combination of the following categories:
    a. **Trade specific safety training**. Examples of such training may include Arc Flash & Shock, HAZLOC, Fall Protection, etc.
    b. **Technical training.** Examples of such training may include product specific training, employer provided procedural training on how to install or service various products, etc. Manufacturer product specific training, other than that intended for promotional, or sales use is also acceptable.

2.1 REQUIREMENTS

Before FSRs renew their certificates of qualification, they will need to complete a total of 4 hours of continuing education consisting of a minimum 1-hour code update course that has been evaluated and recognized by Technical Safety BC, and the remaining additional hours consisting of trade specific safety training and/or technical training acceptable to Technical Safety BC as defined in section 1.1 (2).

FSRs who choose to retake a certification code course on the 2021 Canadian Electrical Code, which covers all sections of the code relevant to their FSR class, not only the updates to the code from the previous version, may also be allowed to renew their certificate of qualification on that basis.

Evidence of course completion will be required for all training completed to demonstrate that the minimum 4 hours of continuing education has been met.

FSRs who hold multiple restricted classes of FSR are only required to provide evidence of having completed a minimum of 4 hours of continuing education as defined in section 1.1.

In other words, they are not required to complete a separate code update course for each certificate of qualification they hold.

If an FSR cannot demonstrate these requirements have been met prior to renewal, their certificate of qualification will become invalid, and they will need to apply to have their certificate of qualification re-issued. Depending on the amount of lapsed time, additional requirements may apply.

3.1 SCOPE OF SYLLABUS

- Updates to *Safety Standards Act,* Safety Standards General Regulation, Electrical Safety Regulation and Directives
- Updates to BC Electrical Code: based on the adoption of the Canadian Electrical Code, Part I, Twenty-fifth Edition, Safety Standard for Electrical Installations, Canadian Standards Association Standard C22.1:21
- Applicable to the following FSR classes:
    - Class A-R – Power Line Technician
    - Class B-R – Full Entertainment
    - Class B-R – Refrigeration
    - Class C-R – Water Well
    - Class C-R – Instrument Mechanic
    - Class C-R – Limited Entertainment
    - Class C-R – Low Energy
    - Class C-R – Security Alarm
    - Class C-R – Underground Raceway

3.2 COURSE RECOGNITION

Training providers shall apply to have their minimum 1-hour code update course evaluated and recognized by the provincial safety manager. The application process requires the submission of the following:

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- **List of instructors**, including their names, years of trade experience, and years of teaching experience.
- **Qualifications of instructors**, including copies of trade qualifications and teaching qualifications. The instructor shall hold a valid FSR A or B qualification in British Columbia. Instructors who hold comparable qualifications issued by authorities outside of British Columbia (e.g., Alberta Master Electrician) may apply to the provincial safety manager for equivalency consideration.
- **Course outline and lesson plan** shall:
    - include the learning objectives for the course
    - demonstrate how the content meets the learning objectives
    - demonstrate that content meets the one-hour time requirement
    - identify how students will be assessed on the learning objectives
- **Course delivery method**
- **Course material**, which may include presentations and handouts
- **Sample record of course completion** shall identify:
    - That it is based on the Canadian Electrical Code, Part I, Twenty-fifth Edition, Safety Standard for Electrical Installations, Canadian Standards Association Standard C22.1:21
    - The certificate holder's name
    - The course name
    - The training provider's name
    - The instructor's name
    - The date of issue or course completion
    - The course length.

IMPORTANT: Technical Safety BC assumes all training providers have permission to use CSA Group materials – in whole or in part. This includes use of clauses, figures, tables, and definitions from standards and related documents.

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3.3 SUBJECT AREAS OF STUDY

The code update course shall consist of a minimum of 1 hour of training to meet the requirement outlined in section 1.1 (1).

A training provider may choose to offer a course that combines two or more classes of FSR in one curriculum, however, all updates listed in section 3.3.1 for each certification class shall be covered. It is the responsibility of the training provider to tailor the curriculum to the needs of each FSR classification that the course will cover. The course shall include:

1. Key updates to the 2021 Canadian Electrical Code outlined in section 3.3.1; and
2. Other relevant topics as outlined in section 3.3.2.

3.3.1 Key Updates to the 2021 Canadian Electrical Code

The continuing education training shall include the following key updates to the 2021 Canadian Electrical Code:

	Class B-R Full Entertainment	Class C-R Instrument Mechanic	Class C-R Limited Entertainment	Class A-R Power Line Technician	Class C-R Low Energy	Class B-R Refrigeration	Class C-R Security Alarm	Class C-R Underground Raceway	Class C-R Water Well
Section 0 definition for 'flood elevation' and 'flood hazard zone' & Appendix B notes				X				X	X
Section 0 definition for 'voltage' & Appendix B note	X	X	X	X	X	X	X	X	X
2-032 3) & Appendix B note	X	X	X		X	X	X		X
2-134 & Appendix B note						X			
2-136	X	X	X	X	X	X	X		X

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	Class B-R Full Entertainment	Class C-R Instrument Mechanic	Class C-R Limited Entertainment	Class A-R Power Line Technician	Class C-R Low Energy	Class B-R Refrigeration	Class C-R Security Alarm	Class C-R Underground Raceway	Class C-R Water Well
4-024	X		X			X			
10-612	X	X	X		X	X	X		X
10-614	X	X	X	X	X	X	X		X
10-616 3) a)	X	X	X	X	X	X	X		X
12-022 & Appendix B notes					X		X		
12-106	X	X	X	X		X			X
12-308; 12-318; 12-320				X					
12-616 1)					X		X		
12-904		X			X	X			X
12-910 4) 5) & Appendix B note; Tables 6A to 6K; Tables 9A to 9H; C22.1-18 Tables 9A to 9P deleted		X			X	X	X	X	X
16-330		X			X	X	X		
18-002; J18-002						X			
18-050 7)						X			
18-054 2) 4)						X			
18-092						X			
18-104 and Appendix B note						X			
18-150 2) 4); J18-150 2) 4)						X			
18-152 1) e); 18-152 2); J18-152 1) e) and 2) notes						X			
18-154 and 18-154 Appendix B note; J18-154 6)						X			
Table 18						X			
22-102						X			
22-108						X			
22-800 to 22-808 & Appendix B notes; C22.1-18 22-204 deleted						X			
26-652 & Appendix B note					X		X		X
26-712 & Appendix B notes							X		X

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	Class B-R Full Entertainment	Class C-R Instrument Mechanic	Class C-R Limited Entertainment	Class A-R Power Line Technician	Class C-R Low Energy	Class B-R Refrigeration	Class C-R Security Alarm	Class C-R Underground Raceway	Class C-R Water Well
36-208 & Appendix B note; 36-214 3) Appendix B note				X					
62-102						X			
62-104						X			
62-108						X			
62-116 1) & Appendix B note; 62-208 & Appendix B note						X			
62-118						X			
62-128; C22.1-18 62-128 Appendix B note deleted						X			
62-208						X			
Table 19	X	X	X	X	X	X	X		X

3.3.2 Other Relevant Topics

To ensure that the code update course meets the minimum 1-hour continuing education requirement, training providers may supplement the training content with any or a combination from the following:

1. Training providers may choose to include other codes from the BC Electrical Code in their training that are specific to the scope of work for the restricted class.
2. Training providers may choose to include education on the *Safety Standards Act*, Safety Standards General Regulations, Electrical Safety Regulation and Directives.
3. Technical Safety BC has compiled a list of frequent non-compliances that present a moderate, major, or severe risk to public safety. Training providers may include education on the following codes and regulations as a part of the submission:

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1) 2-024
2) 2-100
3) 2-200
4) 2-300
5) 12-012
6) 12-506
7) 12-510
8) 12-618
9) 12-3000
10) 12-3010