

OUR VISION

*To offer the finest trades training possible,
to support national standards and ensure
a strong electrical industry.*

ELECTRICAL JOINT TRAINING COMMITTEE

SPRING 2024

Journey person Upgrading Programs

Check us out @ www.ejtc.org

We are on:





ELECTRICAL CODE: 25th Ed. - 2021

Cost: \$78.75 non-refundable administration fee (includes GST)

Instructor: Mark Stevens

ONLINE VIA ZOOM

April 2 – June 6, 2024

Tuesdays & Thursdays

Time: 6:00-8:30pm

20 sessions/50 hours total

This 50 hour course is based on the New BC Electrical Code Regulation 2021 (25th Edition) and includes the changes to the 2021 BC Code. The course is designed for Electricians, Technologists, Technicians, Electrical Engineers and Electrical Contractors planning to upgrade their knowledge of the Code.

This course is also for those planning to write the Field Safety Representative A, B or C Exams. Instruction covers all sections of the Code, Amendments, Directives, Bulletins, Acts and Regulations.

***2021 Code Book is required. Please note that the EJTC does not sell code books at this time.**

CODE REFRESHER

Cost: \$78.75 non-refundable administration fee (includes GST)

Instructor: Mark Stevens

ONLINE VIA ZOOM

May 25, 2024

Saturday

Time: 8:00am – 4:30pm

1 session/8 hours total

British Columbia has adopted the 2021 version of the Canadian Electrical Code. The new version includes several changes to support electrical workers in the safe installation and maintenance of electrical equipment and systems. This course provides an in-depth overview of the 2021 Canadian Electrical Code and the changes to BC's Acts and Regulations. The course includes interpretations and applications of the code, as well as new definitions and tables. FSRs should renew their certification on or before the expiry date listed on their wallet cards. This course will provide Class A, B or C FSRs the 8 hours of continuing education required for certificate renewal.

This course will provide Class A, B or C FSRs the 8 hours of continuing education required for certificate renewal.

***2021 Code Book is recommended. Please note that the EJTC does not sell code books at this time.**

CONDUIT BENDING

Cost: \$163.75 (\$78.75 non-refundable administration fee + \$85.00 books – includes GST)

Instructor: James McKenna

June 22 - 23, 2024

Saturday & Sunday

Time: 8:30am – 4:30pm

2 sessions/16 hours total

Location: **ON-CAMPUS** at EJTC Training Center (1405 Broadway Street, Port Coquitlam)

This course is for those electricians who would like to increase their conduit fabrication skill level. You will learn how to fabricate Offsets, Kicks, Three Bend Saddles Four Bend Saddles, Goosenecks and Rolling Offsets. You will learn the Traditional method, Push Through method and the Multiplier method for bending conduit. We will be using ½" and ¾" emt conduit. Please note that this is not a 'power bender' course. **Note! Safety footwear and hand tools required.**

NEW! Must have basic computer skills and ability to access a computer with Windows 8 (or later) and internet for homework assignments as required.



ELECTRIC VEHICLE INFRASTRUCTURE TRAINING PROGRAM (EVITP)

Cost: \$142.50 (\$78.75 non-refundable administration fee + \$63.75 EVITP Certification Exam fee - includes GST)

ONLINE VIA ZOOM

Monday-Thursday (over two weeks)

Instructor: James McKenna

DATES:

Week 1:

May 27 – 5:30pm-8:30pm
May 28 – 5:30pm-8:30pm
May 29 – 5:30pm-8:30pm
May 30 – 5:30pm-8:30pm

Week 2:

June 3 – 5:30pm-8:30pm
June 4 – 5:30pm-8:30pm
June 5 – 5:30pm-8:30pm
June 6 – 5:30pm-8:30pm

EXAM: ON CAMPUS

Saturday, June 8, 2024
9:00am – 12:00pm

EJTC Training Center
1405 Broadway Street, Port Co.

8 sessions total
(24 hours + 3 hour exam)

► **Prerequisite: Must be a Journeyman Electrician (a copy of your Red Seal Certification of Qualification will be required!)**

► **Note! Full attendance is required to write the EVITP certification exam.**

This course is an Industry driven collaborative effort. The Electric Vehicle Infrastructure Training Program (EVITP) delivers the highest standard in training and certification for the installation of Electrical Vehicle Supply Equipment (EVSE). To be included in the course:

- Automobile Manufacturer’s charging specifications
- EV battery types, charging characteristics
- Customer service/relations
- Utility interconnect policies and requirements
- Utility grid stress precautions
- Installing, commission and maintaining electrical storage devices
- Charging station fundamentals
- Service level assessments and upgrade implementation
- Canadian Electrical Code requirements
- First Responder safety and fire hazard measures
- Site Surveys

You will require a 2021 Code Book and non-programmable calculator.* →Please note: the EJTC does not sell Code Books at this time

HEATING, VENTILATION AND AIR CONDITIONING (HVAC) SEMINAR

Cost: FREE

Instructor: Farzan Poursoltani

ONLINE VIA ZOOM

June 26, 2024

Wednesday

Time: 5:00pm – 8:00pm

1 session/3 hours total

As electricians, we are required to provide power for HVAC equipment, and as a Controls electrician, we need to be able to wire and troubleshoot HVAC equipment in order to make it work effectively. This course will educate electricians about the function of HVAC equipment in relation to air, temperature, pressurization, humidity, etc.

In this three-hour seminar, we will go through slides and review the functionality of:

- Air-Handling units
- Variable-Air-Volume terminal boxes
- Hydronic HVAC Systems
- Heat Exchangers

FIRE ALARM INSTALLATION

Cost: \$78.75 non-refundable administration fee (includes GST)

Instructor: Frank Kurz

ON-CAMPUS

April 20 – 21, 2024

Saturdays & Sundays

Time: 8:00am – 4:30pm

6 sessions/48 hours total

April 27-28, 2024

May 4-5, 2024

Location: EJTC Training Center

This course offering will familiarize the journey person with fire alarm system field components and their proper installation. You will gain an in-depth understanding of circuit wiring, specifications, and the design/layout process in order to successfully install and troubleshoot data communication link circuits, indicating appliance circuits (bells, horns, strobes, egress path marker systems), and conventional fire alarm initiating circuits. Successful course graduates will be able to participate in the Commissioning and Verification processes, and assist in preparing the documentation required by the Standard for Installation of Fire Alarm Systems and the British Columbia Building Code (including the Vancouver Building By-Law).

- Building Code and Standards Requirements
- Manufacturer's installation requirements
- Conventional Fire Alarm Control Panels
- Addressable Fire Alarm Control Panels
- Field device installation and wiring requirements
- Class "A" and Class "B" Wiring Circuits
- Duct detectors
- Air aspirating systems
- Isolators:
 - Data Communication Link
 - Power Buss
 - In-suite Sounders
- Emergency Voice Communication Systems
- Networked systems
- Introduction to programming
- Terminating a fire alarm control panel
- Ancillary device circuits (door holders, smoke control systems, interconnection to the fire signal receiving centre transmitter)
- Elevator control
- Extinguishment system interconnection
- Remote annunciators (Code requirements, wiring)
- The Verification
- Fire alarm system design fundamentals
- Troubleshooting:
 - Ground faults
 - Open circuits
 - Class A Wiring
- Smoke detectors in lieu of smoke alarms
- Integrated Life Safety Systems Testing (CAN/ULC-S1001) fundamentals
- Installation do's and don'ts



CONTINUED ON NEXT PAGE

BLUEBEAM ELECTRICAL ESSENTIALS

Cost: \$78.75 non-refundable administration fee (includes GST)

Instructor: Electricity Forum

ONLINE VIA ZOOM

May 27 – 30, 2024

Monday – Thursday

Time: 5:00pm-8:30pm

4 sessions/ 12 hours total

OPTIONAL, FOR ENROLLED PARTICIPANTS ONLY

INTRODUCTION SESSION

May 25, 2024

Saturday

Time: 11:00am-1:00pm

1 session/2 hours total

This 12-hour live online instructor-led course introduces students to Bluebeam Revu software and teaches them how to rapidly solve electrical construction problems by finding and comparing information across multiple drawings and specifications. With that information, students will learn how to add value to those documents through updating completion visually and adding as-builts details at site. Our course focuses students on how to use the data imbedded in these document annotations to better manage resources such as time and budget.

What is Bluebeam?

Bluebeam Revu, a PDF editing markup and collaboration software tool that is used by architects, electrical engineers, electrical project managers and electrical estimators and journeymen electricians throughout the lifecycle of a building project. Bluebeam Revu software allows teams to compare documents, do estimations, and submit RFIs and plans for approval, and many other important software functions that allow for document control.

Who Uses It?

Lots of electrical industry experts in the electrical engineering and construction industries use Bluebeam. More than 90 per cent of the top construction organizations and more than 80 per cent of the top North American electrical design firms use Bluebeam because it saves time, boosts efficiency and allows team members to simultaneously work together. Essentially, Bluebeam is a powerful collaboration tool, allowing teams of electrical professionals in different locations and across various time zones to view and mark up a document at the same time, as if they were sitting in one room.

There will be an optional introductory session the weekend prior only for those enrolled in the course. This introduction comes highly recommended by the instructor. Further information will be sent to participants upon enrollment.

IMPORTANT: Bluebeam works within a MS Windows environment. At this time, Bluebeam does not have a version of review coded to run strictly on the Mac.



CONTINUED ON NEXT PAGE

THE CONSTRUCTION ELECTRICIAN (NOC 7241) SOLAR PHOTOVOLTAIC (PV) SYSTEMS PERSONNEL CERTIFICATION

Cost: \$78.75 non-refundable administration fee (includes GST)

Instructor: SASKATCHEWAN POLYTECHNIC VIA NETCO

ONLINE – SELF PACED/SELF LED

This course is offered through our partnership with NETCO.

The Construction Electrician (NOC 7241) Solar Photovoltaic (PV) Systems Personnel Certification has been developed by CSA Group in conjunction with the National Electrical Trade Council (NETCO) and industry stakeholders to provide assurance that an individual possesses the competencies deemed necessary to perform the job function of a Construction Electrician (NOC 7241) Solar Photovoltaic (PV) Systems Certified Electrician. The certification is designed to complement accreditation programs for verification bodies.

This certification has been developed in compliance with the ISO 17024 standard. ISO 17024 is the global benchmark for organizations operating personnel certification programs and outlines the methods and procedures required to ensure the objective and unbiased assessment of a candidate's knowledge, skills, and abilities. Passing the PVSC examination will indicate that the candidate possesses the knowledge, skills, and decision-making abilities necessary to practice the proper techniques to pre-plan, implement, configure, install, commission, troubleshoot and maintain solar PV systems.

FAQ:

Q: How long does the course take, and what are the approximate number of hours it takes to complete?

A: This is a completely asynchronous course, so there are no time restrictions. The course takes approximately 8 hours to do. Typically, it will take participants 1-2 months to complete if signing in after work. This course will allow members to do it at their own pace, whenever they would like.

Q: Is there a deadline for completing the course?

A: There is no timeline for how long this course should take. At most, this course should take 3 months.

Q: Is there a timeline for course material and the exam even though it is self-led?

A: This course is completely self-paced, and no timelines are enforced. Participants will have 3 tries for a 70% passing grade, if not, they are required to retake the course. There is a practice test provided prior to writing the final exam.

Q: Is the exam also online?

A: The exam is 100% online, self-proctored and accessible through the SaskPoly LMS. Participants just follow along their content tab and once they get to their exam, they write.



CONTINUED ON NEXT PAGE

ELECTRICAL SAFETY ARC FLASH & SHOCK BASED ON Z-462

Cost: \$78.75 non-refundable administration fee (includes GST)

Instructor: SASKATCHEWAN POLYTECHNIC VIA NETCO

ONLINE – SELF PACED/SELF LED

This course is offered through our partnership with NETCO.

Arc flash and Shock Safety is designed to educate electricians on proper safety measures and procedures to prevent accidents or injury caused by arc flash and electrical shock. Participants will learn about the dangers and causes of arc flash and electrical shock, the types of personal protective equipment (PPE) required, and how to properly use and maintain PPE.

This course will cover Canadian regulations and standards related to arc flash and shock safety, as well as best practices for working safely on electrical equipment. Following course completion, participants will have the knowledge to keep themselves and their colleagues safe, while working with electrical equipment.

COURSE FAQ:

Q: How long does the course take, and what are the approximate number of hours it takes to complete?

A: This is a completely asynchronous course, so there are no time restrictions. The course takes approximately 8 hours to do. Typically, it will take participants 1-2 months to complete if signing in after work. This course will allow members to do it at their own pace, whenever they would like.

Q: Is there a deadline for completing the course?

A: There is no timeline for how long this course should take. At most, this course should take 3 months.

Q: Is there a timeline for course material and the exam even though it is self-led?

A: This course is completely self-paced, and no timelines are enforced. Participants will have 3 tries for a 70% passing grade, if not, they are required to retake the course. There is a practice test provided prior to writing the final exam.

Q: Is the exam also online?

A: The exam is 100% online, self-proctored and accessible through the SaskPoly LMS. Participants just follow along their content tab and once they get to their exam, they write.



CONTINUED ON NEXT PAGE

RESPECTFUL AND INCLUSIVE WORKPLACE

Cost: \$78.75 non-refundable administration fee (includes GST)

Instructor: SASKATCHEWAN POLYTECHNIC VIA NETCO

ONLINE – SELF PACED/SELF LED

This course is offered through our partnership with NETCO.

The Canadian construction and maintenance industry is committed to building respectful and inclusive workplaces. Our goal is to enhance your toolkit of career enhancing skills and equip you with the success required to create a respectful and inclusive workplace. This workplace environment will benefit all parties based on the elimination of discrimination and harassment, constructive communication, teamwork, and mentorship. This course uses interactive elements, scenarios, videos, and quizzes to reinforce learning.

Successful completion of course requirements will provide:

- Knowledge of industry wide expectations
- Leading by example
- Effective communication amongst team members with varying lifestyles and experiences
- Inclusive and respectful workplaces for all team members
- Inclusive decision making and problem-solving techniques.
- Mentorlike relationships amongst team members with varying lifestyles and experiences

Structure and Workload:

This course consists of 8 lessons, with an estimated total duration of 3 hours of self-paced instruction.

COURSE FAQ:

Q: How long does the course take, and what are the approximate number of hours it takes to complete?

A: This is a completely asynchronous course, so there are no time restrictions. The course takes approximately 3 hours to do. course will allow members to do it at their own pace, whenever they would like.

Q: Is there a deadline for completing the course?

A: There is no timeline for how long this course should take.

Q: Is there a timeline for course material even though it is self-led?

A: This course is completely self-paced, and no timelines are enforced.



CONTINUED ON NEXT PAGE

TELC 0130: MOTOR CONTROL

Cost: \$78.75 non-refundable administration fee (includes GST)

IN-PERSON

April 20 – May 11, 2024

Saturdays

Time: 8:00am-4:00pm

4 sessions/32 hours total

Location: BCIT (3700 Willingdon Avenue, Burnaby, Building SE-1)

No prerequisites are required for this course.

Covers the basic principles of conventional motor control for those working in an industrial setting.

Please note the following message posted on the BCIT website:

- Textbooks are not required.
- In the case of course cancellation, students will be notified. Ensure your contact information (e.g. personal email address) is current.

ACIM 5010: PROGRAMMABLE LOGIC CONTROLLERS

Cost: \$78.75 non-refundable administration fee (includes GST)

IN-PERSON

April 20 – June 1, 2024

Saturdays

Time: 7:30am – 3:00pm

6 sessions/45 hours total

No class on May 18, 2024 (Victoria Day weekend).

Location: BCIT (3700 Willingdon Avenue, Burnaby, Building SE-1)

Prerequisites: TELC 0130 Basic Motor Control and/or successful completion of Electrical Apprenticeship Level 2 or 3 or 4 program within the last 5 years. Electrical Journeyman Certificate are also acceptable.

Two essential parts of automated control systems installations are measurement and control. This course will introduce various transducers that are encountered in automated control systems as this foundation is necessary for the installation, maintenance, and troubleshooting of analogue devices and programmable devices. Students will make power, signal, and communication connections for the programmable relay and interpret and write programs. Numerous troubleshooting exercises will be completed. Topics covered include installation, interfacing, closed loop control, trouble-shooting and testing, safety, and an introduction to monitoring.

Please note the following message posted on the BCIT website:

- BCIT reserves the right to cancel courses. In the event of cancellation, student will be notified five business days prior to the course start date. Ensure your contact information (e.g. personal email address) is current.



CONTINUED ON NEXT PAGE



ACIM 5040: VARIABLE FREQUENCY DRIVES AND SERVOS

Cost: \$78.75 non-refundable administration fee (includes GST)

IN-PERSON

April 16 – May 30, 2024

Tuesdays & Thursdays

Time: 5:00pm – 8:15pm

14 sessions/45 hours total

Location: BCIT (3700 Willingdon Avenue, Burnaby, Building SE-1)

Prerequisites: TELC 0130 Basic Motor Control and/or successful completion of Electrical Apprenticeship Level 2 or 3 or 4 program within the last 5 years. Electrical Journeyman Certificate are also acceptable.

This course will familiarize students with installation and operational requirements for electrical machines with variable-frequency drives. Students will be introduced to applications of variable-frequency drives (VFDs), including their installation needs, classifications and harmonic considerations. The drives will be utilized on standalone and micro-processor-based systems programmable logic controllers (PLCs)/programmable automation controllers (PACs). A significant part of the course is dedicated to application activities that reinforce the theory.

Please note the following message posted on the BCIT website:

- BCIT reserves the right to cancel courses. Ensure your contact information (e.g. personal email address) is current. In the event of cancellation, student will be notified three business days prior to the course start date.

ACIM 6010: INTRODUCTION TO ROBOTICS

Cost: \$78.75 non-refundable administration fee (includes GST)

IN-PERSON

April 20 – June 1, 2024

Saturdays

Time: 7:30am– 3:00pm

6 sessions/45 hours total

No class on May 18, 2024 (Victoria Day weekend).

Location: BCIT (3700 Willingdon Avenue, Burnaby, Building SE-1)

Prerequisites: Successful completion of ACIM 5010

This course is designed for maintenance personnel who are responsible for installing and maintaining a robot and controller. This course introduces the principals of tooling and maintenance as it applies to a 6 axis robot. The student will be able to safely power up the robot from a complete shutdown, manipulate the robot using the teach pendant, recognize and describe major robot components along with recognize and troubleshoot various fault conditions. Lab work will be performed on a 6 axis Fanuc robot. The course consists of lectures, demonstrations, and a series of lab exercises along with an on-line component designed to reinforce what the student has learned.

Please note the following message posted on the BCIT website:

- BCIT reserves the right to cancel courses. In the event of cancellation, student will be notified five business days prior to the course start date. Ensure your contact information (e.g. personal email address) is current.



CONTINUED ON NEXT PAGE

ACIM 6030: PROCESS AND DISTRIBUTED CONTROL SYSTEMS

Cost: \$78.75 non-refundable administration fee (includes GST)

IN-PERSON

April 20 – June 1, 2024

Saturdays

Time: 7:30am– 3:00pm

6 sessions/45 hours total

No class on May 18, 2024 (Victoria Day weekend).

Location: BCIT (3700 Willingdon Avenue, Burnaby, Building SE-1)

Prerequisites: Successful completion of ACIM 5030 & ACIM 5040

Graduates of the Automated Controls Installation and Maintenance program will often be sharing responsibilities for automated system maintenance with highly specialized co-workers or require the support of offsite experts. In many process control environments, classical distributed control systems (DCSs) are giving way to programmable logic controllers (rebranded as programmable automation controllers [PACs]). For contributors from diverse technical disciplines to be effective in maintaining complex systems, a common vocabulary and complementary skills are required. To achieve the course objectives, a Siemens distributed control system platform is implemented and tested. A graphical user interface designed for the control system is studied in theory, observed in operation, and modified to meet specified requirements. Also, the BCIT AFRESH house system will be studied and changes made to a portion of the controls for a simulated geothermal heat exchange process.

Please note the following message posted on the BCIT website:

- BCIT reserves the right to cancel courses. In the event of cancellation, student will be notified five business days prior to the course start date. Ensure your contact information (e.g. personal email address) is current.