

Electrical & Electronics Technologists & Technicians

A guide for newcomers to British Columbia



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1. Working as an Electrical & Electronics Technologist & Technician [NOC 2021: 21310 / NOC 2016: 2241]

Job Description

You provide technical support in the design, development, production and operation of electrical and electronic equipment and systems.

Working as an ***Electrical & Electronics Technologist*** your duties may include:

- Design, develop and test power equipment and systems, industrial process control systems, telecommunication, broadcast, recording and audiovisual systems, micro-electronic systems and circuits, computer systems and networks, and computer software
- Design, analyze and install renewable and sustainable energy resource systems
- Supervise the building and testing of prototypes according to general instructions and established standards
- Conduct or supervise the installation, commissioning, and operation of electrical and electronic equipment and systems other than aircraft electronics or instruments
- Set up and operate specialized and standard test equipment to diagnose, test and analyze the performance of electrical and electronic components, assemblies and systems

Working as an **Electrical and Electronics Technician** your duties may include:

- Assist in the design, development and testing of electrical and electronic components, equipment, and systems
- Assist in inspection, testing, adjusting and evaluation of incoming electrical, electro-mechanical and electronic components and assemblies to ensure conformance with product specifications and tolerances
- Set up and operate specialized and standard test equipment to diagnose, test and analyze the performance of electrical and electronic components, assemblies and systems

Source: WorkBC Career Profile for Electrical & Electronics Engineering Technologists & Technicians <https://www.workbc.ca/career-profiles/electrical-and-electronics-engineering-technologists-and-technicians>

Industry Overview

4,700 people are currently employed in this occupation in BC. Electrical and electronics engineering technologists and technicians work for a variety of industries, including communications and biomedical engineering companies, utilities, electrical and electronics manufacturing, consulting firms, government, and in the manufacturing, processing and transportation industries. This broad employment base helps increase job opportunities.

Expanding networks for communications services such as cellular phones, wireless email and broadband Internet have increased the demand for workers in technical occupations.

The industry is moving away from using fossil fuels and moving towards alternate energy sources. Workers with specialization in alternate energy and transportation fields will be in higher demand.

Job Outlook in BC

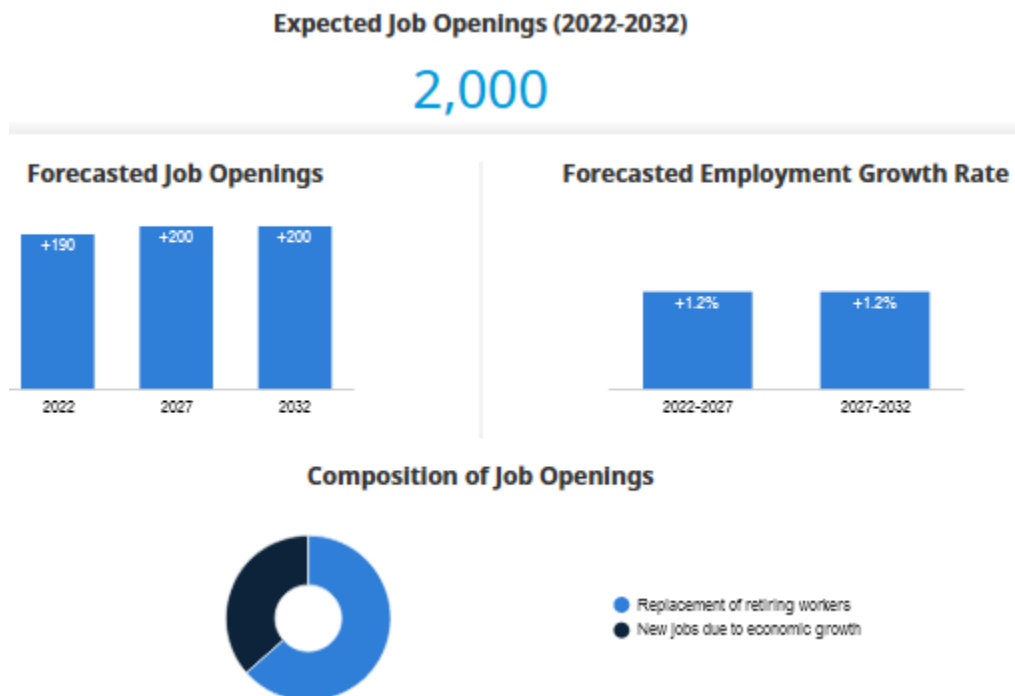


Chart from WorkBC

Work BC provides job openings in BC regions from 2022-2032:

| Region | 2022 Employment | Average Annual Employment Growth | Expected Number of Job Openings |
|--------------------------|------------------------|-----------------------------------------|----------------------------------------|
| Vancouver Island | 860 | 1.4% | 300 |
| Lower Mainland/Southwest | 3,630 | 1.2% | 1320 |
| Thompson Okanagan | 670 | 1.3% | 200 |
| Kootenay | 140 | 0% | 10 |
| Cariboo | 220 | 0% | 20 |
| North Coast & Nechako | 90 | 1.1% | 10 |
| Northeast | 100 | 1.0% | 10 |

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You can learn more about working as an electrical and electronics technologist or technician in BC from:

- **WorkBC Career Profile - Electrical & Electronics Engineering Technologists & Technicians**

<https://www.workbc.ca/career-profiles/electrical-and-electronics-engineering-technologists-and-technicians>

- **Career Cruising – Profile for Electrical Engineering Tech**

<https://www.vpl.ca/digital-library/career-cruising>

Available from the VPL Digital Library

Types of Employers

Technologists and technicians are employed by a variety of industries including: electrical utilities, communications companies, manufacturers of electrical and electronic equipment, consulting firms, governments and a wide range of manufacturing, processing and transportation industries.

Salary

The annual median salary for Electrical and Electronics Engineering Technologists and Technicians in BC is \$80,202.

In BC regions, you can expect to earn:

| Community/Area | Low (\$/hour) | Median (\$/hour) | High (\$/hour) |
|---------------------------------------------------|---------------|------------------|----------------|
| British Columbia | 25.00 | 38.46 | 53.00 |
| Lower Mainland–Southwest Region | 25.00 | 37.00 | 57.69 |
| Thompson–Okanagan Region | 25.00 | 38.46 | 53.00 |
| Vancouver Island and Coast Region | 25.00 | 38.46 | 53.00 |

Source: Job Bank Wage Report <https://www.jobbank.gc.ca/trend-analysis/search-wages>

Working Hours

Technologists and technicians typically work a regular 37 to 40 hour week; however, overtime may be required in order to complete projects on time or repair critical machinery.

2. Skills, Education and Experience

Skills

- Strong aptitude for science, mathematics and programming
- Practical, hands-on approach to system design and assembly
- Excellent attention to detail / precision
- Excellent problem-solving ability
- Ability to communicate technical information clearly
- Teamwork

Education and Experience

- Completion of a college Diploma or Certificate of Technology (or the equivalent) is generally required to work as an electrical or electronics engineering technologist or technician.
- **Technologists** need a two to three-year college program in electrical/electronics engineering technology, computer engineering technology, or an equivalent area of study.
- **Technicians** need a one- to two-year college program in electrical/electronics engineering technology.
- Continuing technical education throughout your career is also necessary to remain current in the field

Qualifications

This profession is **not regulated** in British Columbia.

In B.C. professional certification or registration is not mandatory for this occupation; however, it increases employment opportunities and professional recognition.

Certification is available through the **Applied Science Technologists and Technicians of British Columbia (ASTTBC)**. Minimum requirements for certification include:

Education:

- Applied Science Technologist: – a Diploma of Technology or equivalent
- Certified Technician – a Certificate of Technology or equivalent

Work experience:

- minimum of two (2) years progressive, relevant experience with a minimum of one year at the level of registration

For more information on Certification see:

- **ASTTBC Basic Requirements and How to Apply**
<https://asttbc.org/applicants/application-process/>

Internationally Trained Professionals

Internationally trained professionals require an assessment of your academic and work experience credentials in order to be certified with ASTTBC. Additional competency requirements including English language proficiency and proof of good character must also be completed.

If you have not completed the required work experience (24 of progressive, relevant work experience of which a minimum of 12 months must be at the appropriate profile of practice), you may be eligible for the **trainee category** of registration while you work to obtain the required work experience.

For information see:

- **Internationally Trained Professionals**

<https://asttbc.org/applicants/internationally-trained-professionals/>

3. Finding Jobs

You'll find job advertisements in local newspapers, and electronic sources, as well as through professional associations' publications.

Local Newspapers

You can look at the *Vancouver Sun* and *The Province* at Vancouver Public Library for free. Check the job postings daily, the careers section in the *Vancouver Sun* on Wednesdays and Saturdays and in *The Province* on Sundays.

Online Job Postings

- **BCtechjobs**

<https://www.bctechjobs.ca/>

- **Indeed.ca**

<https://ca.indeed.com/>

- **BC Hydro (provincial electrical utility)**

<https://www.bchydro.com/careers.html>

- **ElectroFederation Canada**

<https://electrofed.talentnest.com/en/jobs>

- **Talent.com**

<https://ca.talent.com/>

- **BC JobConnect**

<https://bcjobconnect.ca> **must have permanent resident number**

newcomers can post their skills, education and work experience to BC employers looking for workers

Professional Associations' Career Resources

- **BC Tech Association Job Board**
<https://careers.wearebctech.com/jobs>
- **ASTTBC TechJobs**
<https://asttbc.org/public/tech-jobs/>

Identifying the Right Position

When you browse job advertisements, you'll find a range of different job titles that are relevant. For electrical and electronics engineering technologists and technicians, look for these related job titles (from NOC):

- communications technologist
- electricity distribution network technologist
- electronics design technologist
- electronics manufacturing technician/technologist
- lighting technologist
- metering technologist
- microwave maintenance technician
- production support technician – electronics manufacturing

Source: National Occupational Classification <https://noc.esdc.gc.ca/>

Creating a List of Potential Employers

You can use directories to produce lists of employers who work in the electrical and electronics sector in Vancouver or the Lower Mainland. Contact them directly to find out if they're hiring.

- **BC Tech Association Member Directory**
<https://wearebctech.com/members/member-directory/>
- **BC Tech, (Business in Vancouver)**
<https://biv.com/magazine/bc-tech-2022>

- **Reference Canada**

<https://www.vpl.ca/digital-library/reference-canada>

Click on "Start Search" beside Canadian Businesses, then select the "Advanced Search" button. Select both "Keyword/SIC/NAICS" under Business Type and "City" under Geography. In the top search box enter "engineering technologists" and click SEARCH. Select the appropriate headings. Lower down, select the Province, choose the cities, and click the "View Results" button.

Available from the VPL Digital Library | Explore our Digital Library page

NOTE: *You can access this database from a Library computer. If you are using a computer from outside the Library, you will need a Vancouver Public Library card to login to this database. After clicking on the database name, you will be asked to enter your library card number and PIN (usually last four digits of your telephone number).*

4. Applying for a Job

In Canada, employers usually expect to receive a resume or curriculum vitae and a cover letter that identifies the position you are applying for and summarizes your relevant experience.

Use the library catalogue, <https://vpl.bibliocommons.com/> to find books on writing resumes and cover letters specific to your industry.

To learn about applying for jobs in Canada, use the following guides which are available in print at the Central Library or online at <https://www.vpl.ca/siic/>.

- **Writing Resumes and Cover Letters**

<https://www.vpl.ca/siic/guide/job-search-resources/writing-resumes-and-cover-letters>

- **Getting Canadian Work Experience**

<https://www.vpl.ca/siic/guide/job-search-resources/getting-canadian-work-experience>

- **Networking for Employment**
<https://www.vpl.ca/siic/guide/job-search-resources/networking-for-employment>
- **Learn More About Working in BC and Canada**
<https://www.vpl.ca/siic/guide/job-search-resources/learn-more-about-working-in-bc-and-canada>

5. Getting Help from Industry Sources

Industry Associations

Associations and organizations for electrical and electronics technologists and technicians in BC and Canada provide information and assistance. Some require paying a fee for membership.

- **Applied Science Technologists & Technicians of British Columbia (ASTTBC)**
<https://asttbc.org/>
- **BC Tech Association**
<https://wearebctech.com/>
- **Technology Professionals Canada**
<http://www.technologyprofessionals.ca/>
- **Tech Bootcamp, Immigrant Employment Council of BC**
<https://bcjobconnect.ca/techbootcamps/>
- **Society of Punjabi Engineers and Technologists of British Columbia**
<https://speatbc.org/>
- **Association of Chinese Canadian Engineering Professionals and Technologists**
<https://www.acceptbc.ca/>

Industry Journals

Search the Vancouver Public Library catalogue for journals related to your profession. Examples include:

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- **Electronic Products & Technology**

Available online at: <https://www.ept.ca/>

- **Electrical Business**

Available at VPL Central Library, 338.47 E3831E and online at:

<https://www.ebmag.com/digital-edition/>

- **Electrical Line**

Available at VPL Central Library, 621.305 E3831 and online at:

<https://electricalline.com/>

***Questions? Please ask the Information Staff in the Central Library,
Vancouver Public Library or telephone 604-331-3603.***

*Please note that the information in this guide is also available online through the
Skilled Immigrant InfoCentre website at <https://www.vpl.ca/siic>*