

Electrical & Electronics Technologists & Technicians

A guide for newcomers to British Columbia



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Contents

1. Working as an Electrical & Electronics Technologist & Technician	2
2. Skills, Education and Experience.....	6
3. Finding Jobs	8
4. Applying for a Job	11
5. Getting Help from Industry Sources	12

1. Working as an Electrical & Electronics Technologist & Technician

Job Description

These technologists and technicians can work independently or provide technical support and services in the design, development, testing, 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, computers, computer systems and networks, and computer software
- 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 (NOC 2241)** <https://www.workbc.ca/careers/2241>

Industry Overview

Job opportunities are expected to arise due to retirement and the creation of new jobs. Industry sources report that technically-skilled graduates are in very high demand.

Expanding networks for communications services such as cellular phones, wireless email and broadband Internet have increased the demand for workers in technical occupations. Electrical utility companies have also experienced growth as B.C.'s population increases, which has increased their demand for electrical and electronics engineering technologists and technicians.

Electrical and electronics engineering technologists and technicians tend to be employed by a wide variety of industries, including communications, electrical and electronics manufacturing, government, utilities, wholesale trade and computer services. This broad employment base helps to diversify the employment opportunities for these workers.

Industry sources also report that movement away from the use of fossil fuels towards alternate energy sources means that individuals with specialization in alternate energy and transportation fields will be in higher demand.

Source:

- WorkBC Career Profile for Electrical & Electronics Engineering Technologists & Technicians (NOC 2241) <https://www.workbc.ca/careers/2241>

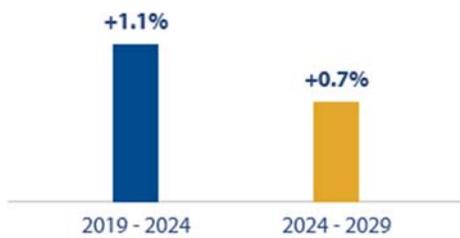
Job Outlook in BC

Electrical & Electronics Technologists & Technicians NOC 2241 Employment Outlook

B.C. Labour Market Outlook (2019-2029)

Provincial outlook

Forecasted average employment growth rate



Source: B.C. Labour Market Outlook

Job openings

10 year expected job openings: **1,770**



Source: B.C. Labour Market Outlook

Composition of job openings

Replacement of retiring workers:
71.3%
1,270 openings



New jobs due to economic growth:
28.7%
510 openings

Source: B.C. Labour Market Outlook

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WorkBC provides regional job openings projections for *Electrical and Electronics Engineering Technologists and Technicians* across BC:

Region	2019 Employment	Average Annual Employment Growth % 2019 to 2029	Expected Number of Job Openings 2019 to 2029
Vancouver Island	820	0.6%	240
Lower Mainland/Southwest	3450	0.9%	1180
S	520	1.1%	190
Kootenay	110	0.3%	130
Cariboo	200	1.0%	50
North Coast & Nechako	130	1.3%	40
Northeast	90	2.8%	50

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

- **WorkBC Career Profile for Electrical & Electronics Engineering Technologists & Technicians (NOC 2241)** <https://www.workbc.ca/careers/2241>

Types of Employers

The field of electrical and electronics is large, covering many industries including: mining, marine and forestry resource industries and manufacturing.

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 provincial median salary for Electrical and Electronics Engineering Technologists and Technicians in BC is \$69,992.

Job Bank Canada provides hourly wages for electrical and electronics technologists and technicians in BC regions:

**Hourly Wages
Electrical & Electronics Technologists & Technicians NOC 2241**

Community/Area	Wages (\$/hour)		
	Low	Median	High
British Columbia	21.00	36.00	52.00
Canada	18.00	32.00	50.00
Cariboo Region	N/A	N/A	N/A
Kootenay Region	N/A	N/A	N/A
Lower Mainland–Southwest Region	21.00	36.06	52.00
Nechako Region	N/A	N/A	N/A
North Coast Region	N/A	N/A	N/A
Northeast Region	N/A	N/A	N/A
Thompson–Okanagan Region	21.00	36.00	52.00
Vancouver Island and Coast Region	17.00	32.00	54.73

Source: Chart from Job Bank Canada <http://www.jobbank.gc.ca>

Working Hours

Technologists and technicians typically work a regular 37 to 40 hour week; however, overtime may be required in order to complete projects within time frames 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 British Columbia, professional certification is **not** mandatory for this occupation; however, having a certification designation greatly increases your employment opportunities.

Certification is available through the *Applied Science Technologists and Technicians of British Columbia (ASTTBC)* (<http://www.asttbc.com>) and is transferable between provinces. 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**
http://www.asttbc.com/registration/technologists/how_to_apply.php

Internationally Trained Professionals

International applicants who meet all of the academic and experience requirements, but lack the one year of Canadian experience may apply for “*Provisional Membership*”, [*AScT (Provisional) and CTech (Provisional)*]. ‘Provisional’ members have up to three years after their Provisional certification is granted to complete the one year Canadian experience requirement.

For information about provisional membership see:

- **Provisional Membership for Internationally Trained Professionals**
<https://asttbc.org/itplogbook/>
- **Internationally Trained Technology Professionals BC**
<http://www.ittpbc.com/>

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.

Job White Pages

JOB Freeway.com

Available in print at the Central Library or online at

JOB Freeway.com

<http://www.vpl.ca/digital-library/jobfreewaycom>

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

NOTE: Access at VPL locations only

Online Job Postings

- **BCtechjobs**
<https://www.bctechjobs.ca/>
- **Indeed.ca**
<http://www.indeed.ca/>
- **BC Hydro (provincial electrical utility)**
<http://www.bchydro.com/careers/>
- **ElectroFederation Canada**
<https://electrofed.talentnest.com/en/jobs>
- **Neuvoo.ca**
<http://neuvoo.ca>
- **BC JobConnect**
<https://www.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

- Applied Science Technologists & Technicians of British Columbia **ASTTBC**
TechJobs
<https://asttbc.org/jobpostings/>
- **Canadian Technical Employment Network (CTEN)**
<http://www.cten.ca/>
You must be a member of a provincial technologists and technicians society to access the job postings.

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: <https://www.jobbank.gc.ca/marketreport/occupation/18069/BC>

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 Technology Industry Association Member Directory**
<https://wearebctech.com/membership/member-directory/>
- **BC Tech, (Business in Vancouver)**
<https://biv.com/magazine/bc-tech-2019>
- **Reference Canada**
<http://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, <http://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 pathfinders which are available in print at the Central Library or online at <http://skilledimmigrants.vpl.ca/>.

- **Writing Resumes and Cover Letters**
Go to <http://skilledimmigrants.vpl.ca>
[Search Writing Resumes and Cover Letters]
- **Getting Canadian Work Experience**
Go to <http://skilledimmigrants.vpl.ca>
[Search Getting Canadian Work Experience]
- **Networking for Employment**
Go to <http://skilledimmigrants.vpl.ca>
[Search Networking for Employment]
- **Learn More About Working in BC and Canada**
Go to <http://skilledimmigrants.vpl.ca>
[Search 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 assistance to individuals. Some require paying a fee for membership.

- **Applied Science Technologists & Technicians of British Columbia (ASTTBC)**
<http://www.asttbc.com/>
- **BC Tech**
<https://wearebctech.com/>
- **Canadian Council of Technicians and Technologists (CCTT)**
<http://www.cctt.ca/>
- **Society of Punjabi Engineers and Technologists of British Columbia**
<http://www.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 at the Central Library:

- **Electronics Products & Technology**
<https://www.ept.ca/>
- **Electrical Business**
Available at Central Library 338.47 E3831 E and online at
<http://www.ebmag.com/>
- **Electrical Line**
Available at Central Library 621.305 E3831 and online at
<http://www.electricalline.com/>

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**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 <http://skilledimmigrants.vpl.ca>

