

Electrical & Electronics Technologists & Technicians

A guide for newcomers to British Columbia



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1. Working as an Electrical & Electronics Technologist & Technician

Job Description

Working as an **Electrical Engineering Technologist** your duties may include:

- design, develop and test power equipment and systems, including industrial process control systems
- conduct or supervise the installation, commission and operation of electrical equipment (other than aircraft electronics or instruments) and diagnose, test and analyze the performance of electrical assemblies and systems

Working as an **Electronics Engineering Technologist** your duties may include:

- design, build and test electronics systems
- conduct or supervise the planning, specification, installation, management and maintenance of electronics components and systems, and are also involved in the programming of microelectronic devices

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

- assist in the design, development and testing of electrical and electronic components, equipment, and systems
- troubleshoot and repair equipment and systems

Source: WorkBC Career Profile for Electrical and Electronics Engineering Technologists and Technicians <http://www.workbc.ca/Careers> [search NOC 2241]

Industry Overview

Industry sources report that Electrical and Electronics technologists and technicians graduates who are technically-skilled are currently in very high demand.

Demand is strong in the following sectors: computer and communications services; electrical utilities; individuals with specialization in alternate energy and transportation fields.

Workers who continually upgrade their skills have an advantage over others seeking employment in these occupations.

Source: WorkBC

Job Outlook in BC

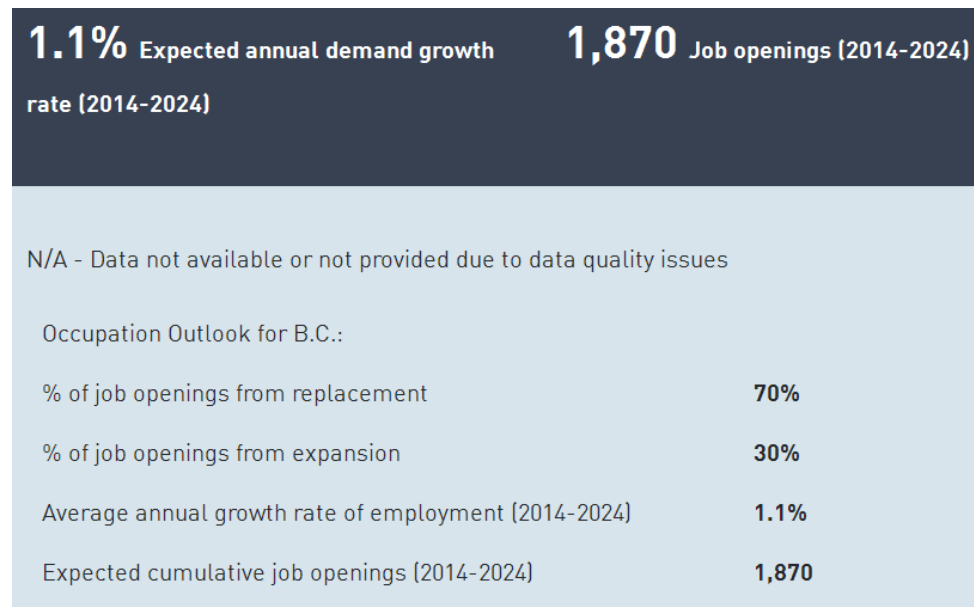


Chart from WorkBC

Electrical & Electronics Technologists & Technicians *A guide for newcomers to British Columbia*

The **Employment Outlook for BC** provides job openings projections for *Electrical and Electronics Engineering Technologists and Technicians* in BC regions:

Region	2010 Estimated Employment	2015 Estimated Employment	Avg Annual % Change, 5 Years, 2010 to 2015
Vancouver Island	370	410	1.9%
Lower Mainland / Southwest	1,990	2,170	1.8%
Thompson-Okanagan	270	280	0.9%
Kootenay	80	90	2.2%
Cariboo	70	70	-0.7%
North Coast & Nechako	40	40	1.9%
Northeast	50	50	1.5%

Source: Regional Employment Projections, BC Stats. Projections for development regions.
<http://www.bcstats.gov.bc.ca/StatisticsBySubject/LabourIncome/EmploymentUnemployment/RegionalEmploymentProjections.aspx> [accessed October 2014]

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

- **WorkBC Career Profiles**

<http://www.workbc.ca/Careers> [search NOC 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.

Source: WorkBC

Salary

Those just starting in the field may earn from \$25,000 to \$45,000 a year, depending on employer and location. Experienced Electrical and Electronics Engineering Technologists and Technicians in BC earn somewhere between \$53,000 and \$66,000 a year.

Sources:

- *Career Cruising* database (Profiles for Electrical and Electronics Engineering Techs). Available from the VPL Digital Library | Explore our Digital Library page <http://www.vpl.ca/digital-library/career-cruising>
- WorkBC Career Profiles

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

Location	Wage (\$/hr)		
	Low	Median	High
British Columbia	15.00	28.00	40.00
Lower Mainland - Southwest Region	14.29	28.00	40.00
Thompson--Okanagan Region	15.00	28.00	40.00
Vancouver Island and Coast Region	15.00	28.00	40.00

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 would greatly increase 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.

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”*.

Qualified applicants are given full certification at the appropriate level (AScT or CTech). Their membership, however, is ‘Provisional’.

Provisional members have a maximum period of three years to complete the one year Canadian experience requirement.

For information about provisional membership see:

- **Provisional Membership for Internationally Trained Professionals**
<http://www.asttbc.org/registration/itp/>

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

- Available in print at the Central Library or online at <http://www.vpl.ca/digital-library/jobfreewaycom>

NOTE: *You can only access this database from the Central Library or VPL branch libraries. Access is NOT available from home or outside the Library.*

Online Job Postings

- **T-Net British Columbia**
<http://www.bctia.org/Resources/BC-Tech-Jobs>
- **Indeed.ca**
<http://www.indeed.ca/>
- **Skilled Workers.com**
http://www.skilledworkers.com/search_job/search.php

Professional Associations' Career Resources

- **Applied Science Technologists & Technicians of British Columbia (ASTTBC)**

<http://www.asttbc.org/services/jobpostings.php>

- **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.

- **Electro-Federation Canada**

<http://www.electrofed.com/industry-careers/>

- **path2work**

<http://bc.cme-mec.ca/british-columbia/programs/path2work.html>

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. Electrical and Electronics Engineering Technologists and Technicians

<http://www5.hrsdc.gc.ca/NOC/English/NOC/2011/QuickSearch.aspx?val65=2241>

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**

<http://www.bctia.org/Member-Network/Member-Network-Directory>

- **BC Tech, Technology Guide** (special issue of BC Tech magazine)

Available at the Central Library, 380 EL3CBh

- **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 keywords, for example "engineering technologist" 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.

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 Technology Industry Association (BCTIA)**
<http://www.bctia.org>
- **Canadian Council of Technicians and Technologists (CCTT)**
<http://www.cctt.ca/>
- **Society of Punjabi Engineers and Technologists of British Columbia**
<http://www.speatbc.org/>

Industry Journals

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

- **Canadian Electronics**

Available at Central Library 621.381 C212 and online at
<http://www.canadianelectronics.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/>

***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>*