

Engineers: Alternative Careers

A guide for newcomers to British Columbia



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1. Engineer: Alternative Careers

You may find that your international training and experience as an engineer are not immediately accepted in B.C. The analytical and math skills you have already acquired along with your problem-solving and communication skills and hands-on experience can be used in alternative careers.

You may wish to investigate certification as either an Applied Science Technologist (AScT) or Certified Technician (CTech), or Provisional Member in these designations. You can also consider alternative careers in other technical fields.

Alternative Careers

Engineering Technologist / Technician

Technologist: If your education included college-level physics, chemistry or biology, and calculus, statistics or other math specialties beyond Grade 12, and you are able to research and write comprehensive reports and to exercise the essentials of Project Management, you may be eligible for professional recognition as an Applied Science Technologist with ASTTBC (Applied Science Technologists & Technicians of British Columbia ASTTBC).

Technician: If you have at least a year of post-secondary technology based education, and you can install, commission and maintain complex technical equipment, and can assist with the planning and design of technical systems, you may consider applying to ASTTBC for registration as a Certified Technician, CTech.

See: www.itpbc.com/

Disciplines include:

- Civil engineering technologists and technicians (NOC 2231)
- Drafting technologists and technicians (NOC 2253)

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- Electrical and electronics engineering technologists and technicians (NOC 2241)
- Industrial engineering and manufacturing technologists and technicians (NOC 2233)
- Mechanical engineering technologists and technicians (NOC 2232)

For complete list, see: www.asttbc.org/registration/technologists/disciplines.php

Requirements: two to three year diploma program for technologists, one to two year program for technicians, PLUS two years of related work experience

Skills:

- aptitude for science, math and computers
- ability to draw conclusions from data and communicate technical information clearly
- precise and detailed work habits
- practical, hands-on approach
- good interpersonal and problem solving skills
- skills in organization and teamwork

Wages: median hourly wage \$28.00

Certification: see Applied Science Technologists & Technicians of British Columbia (ASTTBC)

Internationally Trained Professionals: www.itpbc.com/

- Provisional Membership for Internationally Trained Professionals:
www.asttbc.org/registration/itp/
- Registration Requirements:
www.asttbc.org/registration/technologists/how_to_apply.php
- Free online self-assessment of your academic qualifications and working experience provided by Technology Registrations Canada (TRC)
<https://www.technologyregistrationscanada.ca/content/application-about>

Source:

<https://www.workbc.ca/Job-Seekers/Career-Profiles/2231> [civil engineering technologist]

<https://www.workbc.ca/Job-Seekers/Career-Profiles/2253> [drafting tech]

<https://www.workbc.ca/Job-Seekers/Career-Profiles/2241> [electrical & electronics eng. tech]

<https://www.workbc.ca/Job-Seekers/Career-Profiles/2233> [industrial engineering tech]

<https://www.workbc.ca/Job-Seekers/Career-Profiles/2232> [mechanical engineering tech]

Engineering Inspectors and Regulatory Officers (NOC 2262)

You inspect transportation vehicles such as aircraft, watercraft, automobiles and trucks, and weighing and measuring devices such as scales and meters, as well as industrial instruments, processes and equipment for conformity to government and industry standards and regulations.

Requirements:

University degree or college diploma in an appropriate engineering field

Skills:

- aptitude for science, math and computers
- ability to solve problems quickly and efficiently
- thorough, detail-oriented, highly organized
- good oral and written communication skills

Wages: median hourly wage \$38.46

Production Logistics Co-ordinators (NOC 1523)

Also referred to as logistics specialist, logistics assistant, logistics clerk, production clerk, scheduler. You co-ordinate and monitor logistics of the movement of parts, supplies and materials, ensuring that they are shipped and received on schedule, prepare work and production schedules and monitor the progress of production and construction projects.

Requirements: secondary school plus relevant experience

Skills:

- ability to solve problems quickly and efficiently
- thorough, detail-oriented, highly organized
- good oral and written communication skills needed to effectively communicate with engineers, architects, trades people, clients, and suppliers.

Wages: median hourly wage: \$20.00

Technical Sales Specialist (NOC 6221)

Technical sales specialists sell a range of technical goods and services (scientific and industrial products, electricity, telecommunications and computer services) to government, commercial and industrial establishments. You provide product information, prepare cost estimates and negotiate sales.

Requirements: university degree or college diploma in a program related to the product or service, or experience in sales or in a technical occupation related to the product or service or a combination of business and technical training

Skills:

- ability to solve problems quickly and efficiently
- thorough, detail-oriented, highly organized
- good oral and written communication skills needed to effectively communicate
- sales and customer service

Wages: median hourly wage \$23.20

Other Job Titles to Investigate

- Engineering Aid(e) / Assistant
- Field Services Technician
- Materials Expediter / Handler
- Project Controls Technician
- Project Expediter
- Project Management Technician
- Quality Controller
- Quantity Estimator

2. Employment Outlook

Engineering Technologists & Technicians:

Civil, Mechanical and Industrial Engineering Technologists & Technicians

Expansion in construction and municipal and resource based infrastructure drives the demand for engineering technologists and technicians. Areas of urban growth or industrial activity will likely see the most demand for these occupations in upcoming years. Industry sources expect the demand from the energy and environmental fields will drive job growth in regions outside the Lower Mainland. Industry sources expect there will be a significant shortage of skilled trades people to meet the demand in the HVAC (heating, ventilating, and air conditioning) mechanical systems industry. Upcoming retirements will increase demand for new technologists and technicians in both private industry and government.

Job Openings Outlook in BC

Civil (NOC 2231)

% of job openings from replacement	59%
% of job openings from expansion	41%
Average annual growth rate of employment (2014-2024)	1.5%
Expected cumulative job openings (2014-2024)	1,100

Source: <http://www.workbc.ca/>

Mechanical (NOC 2232)

% of job openings from replacement	56%
% of job openings from expansion	44%
Average annual growth rate of employment (2014-2024)	1.4%
Expected cumulative job openings (2014-2024)	590

Source: <http://www.workbc.ca/>

Industrial (NOC 2233)

% of job openings from replacement	71%
% of job openings from expansion	29%
Average annual growth rate of employment (2014-2024)	0.9%
Expected cumulative job openings (2014-2024)	470

Source: <http://www.workbc.ca/>

Drafting Technologists & Technicians:

Drafting technologists and technicians work mainly for architects, engineers, and related services firms. Others work in the construction sector and a small number work in specialized design services. There are many job opportunities in this field.

Job Openings Outlook in BC (NOC 2253)

% of job openings from replacement	62%
% of job openings from expansion	38%
Average annual growth rate of employment (2014-2024)	1.6%
Expected cumulative job openings (2014-2024)	1,910

Source: <http://www.workbc.ca/>

Electrical & Electronics technologist & technicians:

There is presently a shortage of graduates available to fill the jobs available. Industry sources report that technically-skilled graduates are in very high demand.

Job Openings Outlook in BC (NOC 2241)

% of job openings from replacement	70%
% of job openings from expansion	30%
Average annual growth rate of employment (2014-2024)	1.1%
Expected cumulative job openings (2014-2024)	1,870

Source: <http://www.workbc.ca/>

Engineering Inspectors and Regulatory officers

Job Openings Outlook in BC (NOC 2262)

% of job openings from replacement	69%
% of job openings from expansion	31%
Average annual growth rate of employment (2014-2024)	1.6%
Expected cumulative job openings (2014-2024)	270

Source: <http://www.workbc.ca/>

Production Logistics Co-ordinator

Job Openings Outlook in BC (NOC 1523)

% of job openings from replacement	68%
% of job openings from expansion	32%
Average annual growth rate of employment (2014-2024)	1.1%
Expected cumulative job openings (2014-2024)	730

Source: <http://www.workbc.ca/>

Technical Sales Specialists

Job Openings Outlook in BC (NOC 6221)

% of job openings from replacement	72%
% of job openings from expansion	28%
Average annual growth rate of employment (2014-2024)	1.3%
Expected cumulative job openings (2014-2024)	4,180

Source: <http://www.workbc.ca/>

3. Retraining

You may want to consider upgrading your skills to increase your employment options in this field. The following courses may improve your current skill set:

Engineers Canada has extensive information for internationally trained engineers at **Roadmap to Engineering in Canada** <http://newcomers.engineerscanada.ca/>

Engineering in BC - Langara

Introduction to Engineering in BC at Langara College. Courses are designed to prepare internationally trained engineers, technicians and technologists with industry specific skills to gain employment in an engineering environment as well as promote strong awareness of Canadian workplace culture.

<http://www.langara.bc.ca/continuing-studies/programs-and-courses/programs/introduction-to-engineering-in-bc/index.html>

Also, see the following resources developed by **Engineers & Geoscientists British Columbia**:

- **Self assessment tool:** <https://www.egbc.ca/News/Articles/APEGBC-Makes-Self-Assessment-Tool-Available-for-In>
- **Mentoring Program:** <https://www.egbc.ca/For-Members/Mentoring-Program>

The **Canadian Information Centre for International Credentials** has information on accreditation for internationally trained industrial engineers at <http://www.cicic.ca/934/Search-the-Directory-of-Occupational-Profiles.canada>

International agreements between professional engineering associations <http://www.engineerscanada.ca/mobility-international>

4. Searching for Jobs

BC Construction Job Store

www.bcconstructionjobstores.com/

Construction Job Centre

www.constructionjobcentre.ca/

Eluta.ca

www.eluta.ca

Indeed.ca

www.indeed.ca

MyJobSite.ca

www.myjobsite.ca/

Neuvoo

<http://neuvoo.ca/en>

Skilled Workers.com

www.skilledworkers.com/

T-Net British Columbia: BC Technology Job Search

www.bctechnology.com/

TechJobs.ca

www.techjobs.ca/

5. Volunteering in the Field

Volunteering can help you to explore a new career and learn more about engineering and technical work in B.C. You will meet new people and build a network of contacts that may lead to information on job openings and an inside connection at a potential employer.

Go Volunteer

<http://govolunteer.ca/>

Volunteer BC

www.volunteerbc.bc.ca/

Society of Internationally Trained Engineers of BC Volunteering

<http://www.sitebc.ca/index.php/jobs-volunteering/volunteering>

Engineers & Geoscientists British Columbia Volunteer Opportunities

<https://www.egbc.ca/Member-Programs/Volunteer>

6. Helpful Resources

Applied Science Technologists & Technicians of BC (ASTTBC)

www.asttbc.org/

Society of Internationally Trained Engineers of BC

<http://www.sitebc.ca/>

Society of Punjabi Engineers and Technologists of BC (SPEAT)

www.speatbc.org/

Fastest Growing Industries: Construction

Industry Profile: Mining

Go to <http://pwp.vpl.ca/siic/career-advice/>

Click on 'Job Search Resources' at <http://skilledimmigrants.vpl.ca> for help on:

- resumes & cover letters
- getting Canadian work experience
- networking for employment
- online social networks
- Canadian workplace culture

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/>

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