

## Electrical Engineering Technology, Diploma

Electrical Engineering Technologists and Technicians design, plan, research, evaluate and test electrical and electronic equipment and systems. They design, develop and test power equipment, supervise the testing of prototypes and conduct the installation and operation of electrical equipment. Their field is also involved in the applied research in electrical engineering and physics and they operate and are involved in the development of specialized standardized testing for electrical components. A portion of the industry works writing specifications, schedules and technical reports and control schedules and cost analysis.

### What you can be with your Electrical Engineering Technology, Diploma:

|                                       |  |  |   |
|---------------------------------------|--|--|---|
| Communications Technologist #7246     | Computer Network Technician/Technologist #2242 | Electrical Technician/Technologist #2133 | Electronics Communication Technician      |
| Satellite Technician                  | Test Technician                                | Electronics Design Technologist          | Electronic Motor Systems Technician #7333 |
| Project Management Professional #0711 | Purchasing Agent #1225                         | Technical Sales Representative #6221     | Technical Writer #5121.2                  |

### With additional training I could be a:

|                           |                              |                          |                     |
|---------------------------|------------------------------|--------------------------|---------------------|
| Sustainability Specialist | Energy Conservation Engineer | Robotics Engineer #2232  | Acoustical Engineer |
| Design Engineer #2132     | Maintenance Engineer         | College Instructor #4131 |                     |

### Potential employers:

Access membership rosters for Electrical Engineering Industry through:

- The Association of Science and Engineering Technology Professionals of Alberta  
<http://www.aset.ab.ca/pages/home/default.aspx>
- Red Deer Construction Association <http://www.reddeerconstructionassociation.com/>
- Red Deer College – [www.rdc.ab.ca/employment](http://www.rdc.ab.ca/employment)
- City of Red Deer – [www.reddeer.ca](http://www.reddeer.ca)
- Provincial Government of Alberta – [www.jobs.alberta.ca](http://www.jobs.alberta.ca)

This career/job listing is only a sample of the possible career options; these are certainly not the only career/job options accessible with this degree/diploma. Some of the careers listed require further education.

For career information, enter the four digit number listed below in the Alberta Learning Information Services Website ([www.alis.alberta.ca](http://www.alis.alberta.ca)) or the National Occupational Classification Website (<http://www5.hrsdc.gc.ca/NOC/>).

RDC Career Services can help you explore your interests, identify your goals, discuss your career options and job search strategies and discover how to make the most of your education. Email or give us a call to connect with a career counsellor.

**RDC Department Information:** Electrical Engineering Technology Diploma [rdc.ab.ca/programs/trades](http://rdc.ab.ca/programs/trades)

## Major Skills Obtained from an Electrical Engineering Technology Diploma Program

- **Reading** –Review the installation instructions and warnings on electrical and electronic product labels. Read operating and repair information for electrical and electronic components in technical manuals. Select relevant information from various legislation and codes such as the Canadian Electrical Code, provincial building codes and city bylaws when developing and evaluating electrical specifications and plans. Read lengthy technical reports on topics such as reliability, usability, protection, coordination and power demand studies.
- **Document Use** –Consult organizational, professional and business directories for contact information appropriate to industry. Check all electrical equipment is labelled with certification agencies. Consult flowcharts and schematics to gather conceptual information about industrial and manufacturing processes. Review and approve the scale drawings of proposed power, communication, electrical and manufacturing systems before sending them for approval or implementation. Scan electrical and electronic schematics to identify devices in circuits, understand how circuits operate and locate information such as voltages, polarities and component values.
- **Numeracy** –Calculate the dimensions of buildings, equipment and components from scale drawings. Set up, configure, calibrate and use specialized measuring equipment. Use advanced mathematics such as trigonometry and calculus to plot or describe waveforms as part of circuit design processes. Estimate life spans, maintenance periods and the reliability of equipment and systems.
- **Writing** –Write persuasive proposals providing detailed technical information about products and services offered. Write longer reports to provide expert analyses and recommendations to clients.
- **Oral Communication** – Interact with co-workers, colleagues and suppliers to gather information, brainstorm solutions and coordinate work. Participate in group discussions and deliver proposal presentations. Interact with clients to identify needs and to sell services, products or engineering solutions.
- **Thinking** –Significant memory recall of conversion factors between the SI and the Imperial system to facilitate calculations. Remember key parts of the Electrical Code and regulatory policies. Judge the suitability of equipment and systems. Evaluate the adequacy of intricate architectural plans which specify the planned interfaces between their respective systems.
- **Computer Use** – Use communications software. Use word processing software. Use graphics software. Use databases, spreadsheets and financial application software. Use computer-assisted design, manufacturing and machining software such as AutoCAD. Do programming and systems and software design.
- **Continuous Learning** – Remain competent and competitive mechanical engineering technologists are encouraged to read technical reports, textbooks, books, manuals and magazines specific to the industry. Attending short courses, seminars, workshops and conferences are a mainstay of the occupation.

## Professional Associations and Sites of Interest

The Association of Science and Engineering  
Technology Professionals of Alberta  
<http://www.aset.ab.ca/pages/home/default.aspx>  
Canadian Council of Technicians and  
Technologists  
<http://www.cctt.ca/home.asp?lang=1>

Red Deer Construction Association  
<http://www.reddeerconstructionassociation.com/>  
Canadian Council of Technicians and  
Technologists  
<http://www.cctt.ca/home.asp?lang=1>

Information adapted from [www.alis.gov.ab.ca](http://www.alis.gov.ab.ca), [http://www.welcomebc.ca/welcome\\_bc/media/Media-Gallery/docs/occupationalguides/engineering\\_technicians.pdf](http://www.welcomebc.ca/welcome_bc/media/Media-Gallery/docs/occupationalguides/engineering_technicians.pdf), and <http://rdc.ab.ca/programs/electrical-engineering-technology-diploma>.