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# **Career Map for Internationally Trained Applied Science and Engineering Technicians and Technologists**

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## **Access to Engineering or Applied Science Technology Professions in Ontario**

*This document was updated in collaboration with the Ontario Ministry of Citizenship and Immigration in March 2011. Requirements may have changed by the time you apply. Please contact the Ontario Association of Certified Engineering Technicians and Technologists before completing your application.*

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Professions in the field of engineering/applied science technology are not regulated in Canada. Certification is voluntary and not required in order to work as a technician or technologist. However, certification for engineering/applied science technicians and technologists is offered in each province by provincial associations, and may be required by some employers.

In Ontario, certification for engineering/applied science technicians and technologists is available through the Ontario Association of Certified Engineering Technicians and Technologists (OACETT). OACETT is a non-profit, self-governing, professional association of approximately 24,000 members. OACETT functions under the Statutes of Ontario by the OACETT Act of 1984 (revised 1998). The Act recognizes OACETT as a professional body whose main objective is to establish and maintain high standards for the profession of engineering and applied science technology. The certifying arm of OACETT is the Institute of Engineering Technology of Ontario (IETO). IETO's panel of expert members evaluates applications and registers engineering/applied science technicians and technologists who meet recognized national standards in education and experience.

OACETT awards the following certified titles:

- Certified Technician (C.Tech.)
- Certified Engineering Technologist (C.E.T.)

Our members may also hold the protected titles of Applied Science Technologist (A.Sc.T.) or Certified Engineering Technician (C.E.T.) which are no longer awarded.

In Canada it is illegal to use these titles without being certified as a full member of a certifying association. In Ontario, only certified members of OACETT may use these titles. Technicians and technologists trained in engineering or applied science technology who are not certified may call themselves technician, engineering technician, technologist, or engineering technologist.

OACETT also awards the following three specific designations to members who have completed specific courses and experience requirements allowing them to work on Ministry of Transportation Road Construction Contract Administration assignments:

1. Road construction contract administrator (rcca)
2. Road construction senior inspector (rcsi); and
3. Road construction junior inspector (rcji).

Certified Engineering and Applied Science Technicians and Technologists specialize in the following engineering or applied science disciplines:

- Civil/Building/Geomatics
- Chemical/Instrumentation Materials/Bioscience
- Electrical/Electronics/Computer
- Mechanical/Industrial
- Resources/Mining/Geological
- Environmental

Certified Engineering/Applied Science Technicians and Technologists work for consulting firms, manufacturers, industries, utilities, educational institutions, and government in a variety of positions ranging from project manager, maintenance supervisor, and quality analyst to professor, president, and chief executive officer. They usually work as part of an engineering team, but may also work as consultants operating on their own or in partnerships.

### **Certification Requirements in Ontario**

To become a Certified Technician or Technologist in Ontario you must:

1. Have the appropriate education/academic training.
  - A Certified Technician must be a graduate from a recognized 2-year post secondary engineering technician or applied science diploma program or equivalent.
  - A Certified Engineering Technologist must be a graduate from a recognized 3-year post secondary engineering or applied science technology program or equivalent.
2. Write and pass OACETT's Professional Practice Exam.

3. Write a Technology Proposal and Report (for C.E.T. only).

The Technology Proposal and Report assesses a candidate's ability to effectively examine and describe in detail an engineering or applied science problem. Candidates will be able to select a topic that is related to their discipline of registration.

4. Have related work experience.

Certified Technologists or Technicians must have a minimum of two full years of appropriate-level experience in their engineering/applied science technology discipline. One of those years must be in Canada to ensure that they are familiar with the working language and Canadian standards, codes and practices of their engineering or applied science discipline. IETO will review candidates' resumes, job descriptions, and references to ensure that they can apply the principles of engineering or applied science technology to tasks required on-the-job. See the Profiles of a Technician and Technologist on the OACETT website.

5. Be of good character, as verified by professional references.

6. Be 18 years of age or older.

## **Certification Process**

### **Before You Immigrate to Canada**

In order to complete an Application for Certification, you will need supporting documents such as a detailed job description that must be signed by your supervisor, the names, addresses and email addresses of persons who can act as professional references and attest to your work experience, a resume of all your past experience, and official school transcripts of subjects taken, marks achieved and diploma/degree attained. If possible, prepare these documents before you leave your country of origin. See Step 1 for more details.

### **How to Apply**

#### **Step 1 – OACETT Application for Certification**

To begin the application process, send a completed OACETT Application for Certification (available on the OACETT website) and the following documents and fees to OACETT:

- a photocopy of your birth certificate, Canadian citizenship or landed status such as permanent resident card or other identifying information.

If the name on your application is different from the name on your documents, include a copy of the change of name certificate, or marriage certificate.

- official transcripts of your post-secondary education showing the subjects you studied, the marks you obtained and the degree/diploma achieved.

Graduates from Canada and the U.S.: You must contact your educational institute(s) and arrange for an official transcript to be sent directly to OACETT. Make sure that they send a transcript that includes subjects, marks and degree/diploma obtained for all post-secondary education relating to your application.

Graduates from other countries: If you cannot arrange for your institute, college or university to provide an official transcript of subjects and marks, send a photocopy. Photocopies must be notarized as a true copy before a lawyer, notary or a commissioner of oaths. Do not submit your only original as the documents become part of your official file.

If your academic documents are not in English, you must provide a notarized English translation prepared by a service that is certified by the Association of Translators and Interpreters of Ontario (ATIO).

- a detailed job description of your current position, stating your duties and responsibilities and the length of time you worked at the job—each page must be verified and signed by your supervisor;
- a resume stating the dates of employment, names and addresses of employers, and a detailed description of your technical experience, responsibilities, and/or achievements;
- a non-refundable application fee. (Upon acceptance as an Associate member, you will receive your first invoice for annual membership dues. The annual dues must be paid for your application to move to the admissions committee for the complete file assessment.) See the OACETT website for the current list of fees including application fees and membership dues.

In addition to your post-secondary training, you may submit copies of any industry-related courses or other courses related to engineering or applied science technology. Memberships in or courses taken through related associations should also be documented.

Once we receive your application, if your academic background meets our requirements, OACETT will initially register you as an Associate Member so that you will be able to access the benefits of membership as soon as you apply. You will be able to participate in CTEN, OACETT's job database online, and benefit from other services offered by OACETT. Once you are registered as an

Associate Member you are eligible to write the Professional Practice Exam. You will also be able to track your progress to certification on the OACETT website.

### **Equivalency Assessment Process**

The certifying arm of OACETT is the Institute of Engineering Technology of Ontario (IETO). IETO's Admissions Committee is a panel of expert members that evaluates applications and registers engineering/applied science technicians and technologists who meet recognized standards in education and experience.

Once your application and the required documents are all complete, your file moves forward to the Admissions Committee which will formally assess both your academic qualifications and work experience to determine if your training and experience are equivalent to Ontario's standards.

It takes approximately three to four months from the time OACETT receives your application, documents and professional reference questionnaires for you to be notified of the Admissions Committee's decision, and of any additional requirements for certification. Once IETO has approved your registration, you will be notified by mail or e-mail.

### **Step 2 – Assessment of Academic Qualifications**

The Admissions Committee will review and evaluate your official school transcripts of subjects and marks and any other relevant academic/training documents. The committee will compare your academic achievements to the requirements for certification in Ontario. The Committee will then determine if there are any additional requirements that you must complete before certification.

If your academic training does not meet the requirements for certification, you will be advised of what further training is needed. You may be asked to complete technician or technologist-level subjects relevant to your discipline of registration, or to write technical exams set by OACETT. Prior Learning Assessment Recognition (PLAR) may be another option for those who have greater than 10 years experience in their discipline and who can prove they have acquired the missing academic subject(s) through non-traditional means. You will be notified if you are a suitable candidate for PLAR.

You will also be able to track your academic progress to certification on the OACETT website.

### **Step 3 – Assessment of Work Experience**

To become a Certified Engineering/Applied Science Technician or Technologist, you must have two years of work experience in your chosen discipline. One of those years must be in Canada to ensure that you are familiar with local codes,

practices and standards. Those who have taken a “code course” such as the Ontario Building Code or Ontario Electrical Code may have their experience requirement reduced.

When you apply for certification you must provide a resume, a detailed job description with each page signed by your supervisor and three professional references to whom IETO will send questionnaires. These documents will serve as proof of your work experience and will be used to assess if your work experience meets OACETT’s requirements.

Voluntary work may be recognized. Co-op experience may be credited at 50% of the time worked up to a maximum of six months. For example, if you have one year of acceptable co-op experience, it would count as six months toward the two-year requirement. If the applicant attended a Canadian co-op program that was nationally accredited or was supervised by a recognized professional such as a C.E.T., P.Eng., P.Geo. or Architect during the co-op placement, the applicant could be credited up to a full year toward the two-year requirement and if the applicant had acceptable previous work experience outside of Canada, no further Canadian experience would be required.

If you do not have Canadian experience, but meet the academic requirements, you will remain an Associate Member until you have attained the requisite work experience. As an Associate Member you can use CTEN, OACETT’s job database online (<http://www.cten.ca>), to help you find a job.

At the completion of the file assessment you will be sent an email advising you of the results of both the academic and experience reviews and if you require any further academics or experience for the level of certification you are seeking. You will also be assigned the certification requirements of the Professional Practice Exam and the Technology Proposal and Report for those working towards Certified Engineering Technologist, C.E.T.

### **Second File Review**

OACETT members may request a 2<sup>nd</sup> File Review if they disagree with the results of the academic or experience review or if they have new information to share. The 2<sup>nd</sup> File Review takes a minimum of 8 weeks.

### **Certification Appeal**

The appeal of a decision to refuse registration of an applicant must be submitted in writing to the Registrar within 30 days of the notice of the decision being appealed, and must detail the grounds for the appeal. The appeal will then be heard within 90 days by three members of the IETO Board. The Registrar will advise the candidate thereafter of the final decision in writing. There is a fee for the appeal which is refunded if the appeal is successful.

## **Step 4 – Professional Practice Examination**

The Professional Practice Examination (PPE) is a 3½-hour invigilated, online, multiple-choice exam. It tests your knowledge of Canadian civil law, the OACETT Act, ethics and the practice of engineering technology in Ontario. The exam contains questions about the legal and ethical responsibilities Certified Technicians and Technologists have to the public, to employers, and to themselves.

Once your Application for Certification has been reviewed and you have been registered as an Associate Member, you are eligible to write the PPE. Successful completion of this exam is a mandatory requirement for certification.

The PPE is usually held four times each year, normally in February, May, September, and November. Exam centres are set up throughout Ontario. You should apply for the exam at least two months prior to the exam date to ensure that you have sufficient time to study.

You register for the exam online through the OACETT website where detailed information can be found including available exam dates and choice of exam centres. When you apply for the exam, OACETT will send you the necessary study materials: study outline and manual, OACETT Act, By-Law 19, IETO Terms of Reference, Code of Ethics and Rules of Professional Conduct. The cost of the exam including the study materials is \$250 plus HST plus shipping. The fee is non-refundable. You can download duplicate copies of the OACETT Act, By-Law, IETO Terms of Reference, Code and Rules from the OACETT website. The Code of Ethics and Rules of Professional Conduct are permitted in the exam room.

The exam is self-study using the above-mentioned study materials but OACETT also offers two optional seminars to help members prepare for the exam: an online course and a two-day classroom session. Detailed information and online registration for both seminars is available on the OACETT website.

## **Step 5 – C.E.T. Technology Proposal and Report**

Applicants for certification as a C.E.T. with OACETT must submit a Technology Proposal and Report (TR). The TR assesses your ability to effectively describe and examine an engineering problem in detail. The TR should provide appropriate discussion and well-structured recommendations and conclusions.

The first step in completing the TR is to submit a proposal for the report. You may submit your proposal for the TR at any time after you have been registered as an Associate Member and have been notified of your specific certification requirements. If you have been assigned technologist-level academic subjects, these must be completed prior to the TR being submitted.

When OACETT examiners approve the proposal, you must submit the report within one year and earn a grade of “satisfactory.”

The report must:

- relate directly to the discipline in which certification is sought
- describe a comprehensive study of an engineering or applied science topic
- reflect engineering technology fundamentals appropriate to the subject matter including the appropriate mathematics (if applicable)
- deal with the identification of a problem, or the improvement or proposed improvement of existing processes, equipment, or procedures.

An optional, two-day Technology Report Writing Seminar is available to assist OACETT members to write and submit a successful proposal and Technology Report to attain certification as a Certified Engineering Technologist (C.E.T.).

You may download the requirements and guidelines for preparing the TR and find out further information about the seminar from the OACETT Website.

### **Step 6 – Registration**

Associate Members who have their training and experience approved and pass the PPE and C.E.T. applicants who have also successfully completed their Technology Report will be certified and registered. Membership dues must be paid annually.

As a Certified Member, you have the full range of rights and privileges of OACETT membership, and are legally entitled to use the designation for which you have approval, either Certified Technician (C.Tech.), or Certified Engineering Technologist (C.E.T.) and formerly Applied Science Technologist (A.Sc.T.).

### **Fees and Related Costs**

For more information about fees and related costs, please visit the OACETT website: [www.oacett.org/downloads/become\\_a\\_member/fee\\_schedule.pdf](http://www.oacett.org/downloads/become_a_member/fee_schedule.pdf).

### **Working in Ontario**

#### **English Language Proficiency**

Engineering/applied science technicians or technologists are not required to pass an English language test when applying for certification with OACETT. However, the Professional Practice Exam requires knowledge and understanding of English terms for law, contracts, ethics and professional practice and the ability to interpret written texts. Generally this would be equivalent to achieving a “7” on

a standard English language assessment scale such as the Canadian Language Benchmarks Assessment.

The job of an engineering technician or technologist requires highly developed language skills that go beyond reading and interpreting technical literature and safety regulations and writing technical reports. Technicians and technologists usually work in engineering/applied science teams, so they must be able to communicate with others and work well in a team. In a recent survey, OACETT members reported that written and verbal communication skills were very important for effectiveness in their positions.

English upgrading courses are available at community colleges and schools in Ontario. For more information on continuing education courses offered at community colleges, visit the Website for the college in your community or look for their course calendars at your local library. You can also get information about courses offered through local Boards of Education in course calendars available on their Websites or at public libraries. A Website for newcomers, <http://www.settlement.org> has information on English classes available in Ontario and a database to help you search for a school in your community.

### **Occupational Training and Upgrading**

Engineering/applied science technology is a dynamic field. Technological innovation means that engineering technicians and technologists in all disciplines need knowledge of computer applications, both technical and non-technical. Most engineering technicians and technologists use computer-assisted design (CAD) on a regular basis. The use of non-technical software such as word processing, spreadsheet, database, and project management is common.

Chances for promotion will increase with the amount of training and upgrading you do, either through work or on your own. Besides being certified with OACETT, additional certificates obtained in your discipline may also be helpful. OACETT's journal *The Ontario Technologist* contains articles that will help you keep informed. The OACETT Code of Ethics requires that members "keep informed to maintain proficiency and competence, to advance the body of knowledge with their discipline and further opportunities for the professional development of their associates." It is about making progress in the profession and increasing your skills, knowledge and understanding.

In order to assist OACETT members to document important continuous learning activities, the Institute of Engineering Technology of Ontario (IETO) has developed an electronic professional development tracker entitled "Record of Continuous Learning" (RCL). The RCL allows you to: keep track of your achievements and professional development experiences; build and maintain a professional electronic portfolio for each year to present to your current employer and/or prospective employer; reflect on and plan your learning and professional

development; take ownership of your career progression; and set professional objectives at the start of each year.

### **Labour Market Information**

There are many opportunities for employment in engineering/applied science technology in Ontario. One of the reasons for this is that technicians and technologists now do the work that used to be done by engineers and tradespeople. Automation and robotics have decreased the need for some skilled trades, but increased the need for technicians who are able to set up, diagnose and repair these complex systems. The growing use of engineering software has made it possible for technologists to do many calculations, design and process control, and tasks that used to be done by engineers. This trend is seen in consulting, engineering, construction, mining, and oil and gas among others.

Engineering/applied science technicians and technologists work for small, medium and large firms, and in all levels of government. Some work as consultants in engineering consulting firms, or as independent consultants. Major employers are found in the manufacturing, construction and service industries.

Working conditions vary according to each discipline. Some technicians and technologists work outdoors as site supervisors or field service support; others work indoor in a design office, research laboratory, or manufacturing facility. Most technicians and technologists work full-time.

Most technicians and technologists work in non-unionized workplaces, although most of those employed by government are part of a public service union. Salary ranges depend on the discipline, company and industry that you work in.

A recent OACETT salary survey shows the average income of certified OACETT members to be \$77,000 while that of Associate members to be \$61,000.

For more information on labour market conditions see Ontario Job Futures at the following link: <http://www.tcu.gov.on.ca/eng/ojf/findoccupation.asp>

In Ontario, this information is also available at public libraries or HRDC Employment Centres in your community.

### **For More Information**

For more information on certification requirements in Ontario, contact:

Ontario Association of Certified Engineering Technicians and Technologists  
(OACETT)  
10 Four Seasons Place, Suite 404  
Toronto Ontario M9B 6H7

Telephone: (416) 621-9621  
Fax: (416) 621-8694  
E-mail: [info@oacett.org](mailto:info@oacett.org)  
Website: <http://www.oacett.org>  
Job Database: <http://www.cten.ca>

For information on English language training, contact:

Skills for Change  
791 St. Clair Avenue West  
Toronto Ontario M6C 1B7  
Telephone: (416) 658-3101  
Fax: (416) 658-6292  
Information Line: (416) 658-7090  
Website: <http://www.skillsforchange.org>

Municipal Boards of Education:

Look in the telephone directory for your community under “schools”  
Local Board of Education listed on the Internet,

<http://www.edu.gov.on.ca/eng/sbinfo/>

Ontario Community Colleges Course calendars are available at local libraries or  
look in the telephone directory under “college”

Ministry of Training, Colleges and Universities Website:

<http://www.ontario.ca/tcu>

For information on finding a certified translation service, contact:

Association of Translators and Interpreters of Ontario (ATIO)

1 Nicholas Street, Suite 1202

Ottawa Ontario K1N 7B7

Telephone: (613) 241-2846

Fax: (613) 241-4098

Toll-free: 1 (800) 234-5030

Email: [info@atio.on.ca](mailto:info@atio.on.ca)

Website: <http://www.atio.on.ca>

For information on where and how to get help with settlement in Ontario, contact:

Ontario Council of Agencies Serving Immigrants (OCASI)

110 Eglinton Avenue West, Suite 200

Toronto Ontario M4R 1A3

Telephone: (416) 322-4950

Fax: (416) 322-8084  
E-mail: [generalmail@ocasi.org](mailto:generalmail@ocasi.org)  
Website: <http://www.settlement.org>

For a government contact about accessing professions and trades in Ontario,  
contact:

Government of Ontario  
Ministry of Citizenship and Immigration  
Global Experience Ontario (GEO)  
Tel: 416-327-9694 or 1-866-670-4094  
TTY: 416-327-9710 or 1-866-388-2262  
Fax 416-327-9711  
E-mail: [geo@ontario.ca](mailto:geo@ontario.ca)

**Address:**

163 Queen Street East, 2nd Floor  
Toronto ON M5A 1S1  
Website: [www.ontarioimmigration.ca/en/geo/index.htm](http://www.ontarioimmigration.ca/en/geo/index.htm)

# Certification for International Applicants

