

A Resource Guide for Internationally- Educated Engineers:

Information to help you plan
an engineering or
engineering-related career
in Manitoba

Manitoba 

**A Resource Guide for
Internationally-Educated Engineers:**

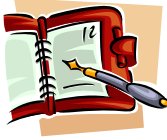
*Information to help you plan an
engineering or engineering-related career in Manitoba*

April 2006

Written and compiled by M.R. Friesen, P.Eng. for Manitoba Labour & Immigration
April, 2006

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Introduction



This **Resource Guide** is written for immigrants to Manitoba who hold foreign engineering qualifications, such as an engineering degree and engineering work experience from outside of Canada. Statistics from Manitoba Labour & Immigration indicate that every year over 100 people immigrate to Manitoba who identify themselves as engineers, and this number is increasing. This resource guide has been developed to:

- Improve immigrant professionals' understanding of the engineering licensing process in Manitoba;
- In one document, provide complete and clear information on the engineering profession and the engineering licensing process in Manitoba, information on other engineering-related career options, information on the support services, as well as the cost and timelines associated with various career choices;
- Enable immigrant professionals to use this information to set personal goals and create personal career plans for engineering or a related career in Manitoba; and,
- Enable immigrant professionals to use this information to find the appropriate services that support professional integration, such as English language training and employment support.

This resource guide also provides The Association of Professional Engineers & Geoscientists of Manitoba (APEGM) and the Government of Manitoba with better tools to work with immigrants with foreign engineering qualifications. Additionally, it allows APEGM and the Government of Manitoba to identify immigrant professionals' needs over time and develop additional support services or programs in the future.

Please take note!

Unless otherwise noted, the information in this document is directed to Canadian Citizens and Permanent Residents/Landed Immigrants. Available services and fees may be different for refugees or visa holders. For up-to-date information, please contact the agencies and organizations described in this Resource Guide directly.

The information in this document is relevant to the engineering profession in Manitoba only. The engineering profession is regulated by individual Canadian provinces or territories. Therefore, the process for internationally-educated engineers to obtain a P.Eng. license will vary from province to province.

Since immigration statistics indicate that the large majority of immigrant professionals settle in Winnipeg, the references to support services in this document are not intended to be comprehensive for Manitoba, but are limited to the area in and around Winnipeg only.



The Internet is an excellent tool to find more detailed information on many of the programs and organizations discussed in this document. You can use **computers with Internet access** for no cost at:

- City of Winnipeg Public Libraries throughout the city (20 locations in Winnipeg)
- Province of Manitoba Employment Centres (1122 Henderson Hwy, 3338 Portage Ave., 1031 Autumnwood Drive, 391 York Ave.)
- University of Manitoba libraries (Fort Garry area of Winnipeg)
- University of Winnipeg library (515 Portage Avenue, Winnipeg)
- Success Skills Centre (440-500 Portage Ave.), Employment Projects of Winnipeg (990-167 Lombard Ave.), and International Centre of Winnipeg (406 Edmonton St.). Career and employment counselling services at these three agencies are available once you register as a client. See section 5.2 for full contact information for these agencies.



Unless otherwise noted, all **telephone numbers** in this document are in Manitoba, with area code 204 for long distance calling.



Basic Settlement Services: A good starting point to learn about services and programs for immigrants to Manitoba is the Province of Manitoba, Department of Labour & Immigration. You can use services and programs of this provincial government department, even if you came to Canada through the federal immigration process.

Manitoba Labour & Immigration

5th Floor, 213 Notre Dame Avenue

Winnipeg, MB R3B 1N3

Phone: 945-6300 Fax: 948-2148

Phone toll-free: 1-800-665-8332

E-mail: immigratemanitoba@gov.mb.ca

Website: www.immigratemanitoba.com

The International Centre is a non-profit agency and the broadest settlement agency in Winnipeg and an excellent starting point for newcomers to Canada. The International Centre provides services in the areas of basic settlement (housing, banking, schooling, transportation, health services, childcare, etc.) to immigrants, as well as services in the areas of employment, Language Bank, nutrition, career mentorship, adult education, assessments and referrals to immigrants, refugees, and naturalized citizens.

International Centre

2nd floor, 406 Edmonton Street

Winnipeg, MB R3B 2M2

Phone: 943-9158 Fax: 949-0734

E-mail: info@international-centre.ca

Website: www.international-centre.ca

Depending on your specific situation, you may also wish to contact the following non-profit organizations for information and assistance in basic settlement areas:

Welcome Place

Manitoba Interfaith Immigration Council

397 Carleton Street, Winnipeg, MB R3B 2K9

Phone: 977-1000 Fax: 956-7548

E-mail: sysadmin@miic.ca

Website: www.miic.ca

Offers services for refugees.

Needs Centre for War-Affected Families

251A Notre Dame Avenue, Winnipeg, MB R3B 1N8

Phone: 940-1260 Fax: 940-1272

E-mail: mvonlau@needsinc.ca

Website: www.needsinc.ca

Offers services for those previously affected by war.

Jewish Child & Family Services

C200-123 Doncaster Street, Winnipeg, MB R3N 2B2

Phone: 477-7430 Fax: 477-7450

E-mail: jcfs@aspercampus.mb.ca

Website: www.jewishwinnipeg.org/

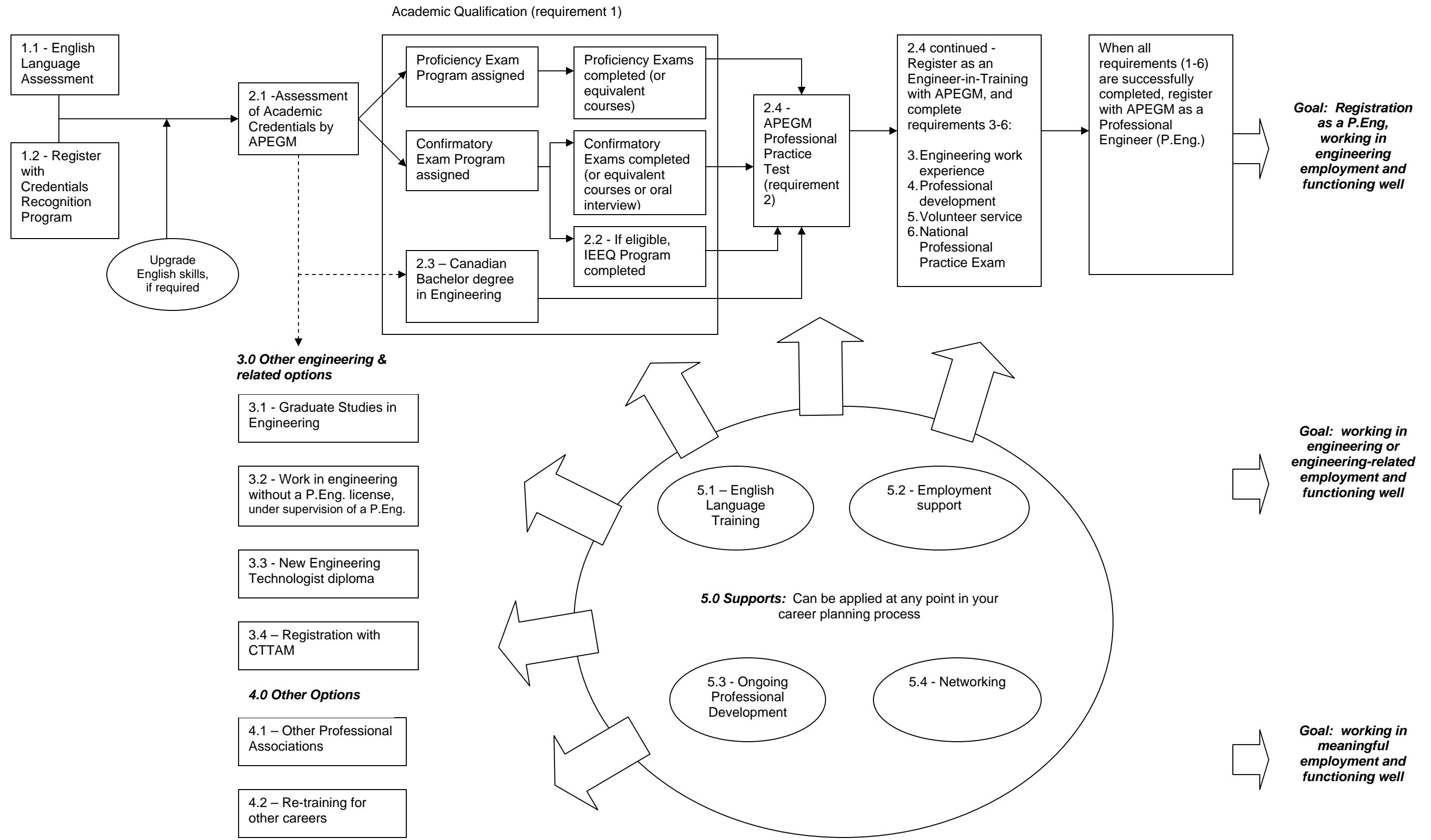
Offers services for Jewish newcomers.

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1.0 Preliminary Steps

2.0 Process for registration with APEGM as a Professional Engineer (P.Eng.) in Manitoba (6 requirements)



Section 1.0 PRELIMINARY STEPS

1.1 English Language Assessment

Before you make decisions about an engineering career in Canada, it is recommended that you take an English language test, if English is not your first language. The results of the language test can help you make an informed decision about which career path to pursue, and whether you need to take additional English language training to meet your goals.

Language testing is available for all immigrants, at no cost, through the Government of Manitoba. It is called Canadian Language Benchmarks Placement Test (CLBPT). It is provided through the Adult Language Training Branch of Manitoba Labour & Immigration.

Who is eligible: Permanent residents or Canadian citizens born outside Canada and refugee claimants are eligible for an English language assessment. It does not matter how long you have already lived in Canada.

The CLBPT is used to assess English language abilities in four areas: reading, writing, listening, and speaking. A person's abilities in any of the four areas are ranked on a scale of 1-12, but the CLBPT test can only measure up to level 8. Advanced level classroom instructors may be qualified to designate your level above 8. Benchmark levels are grouped into three categories:

Basic Proficiency = Canadian Language Benchmarks 1-4

- A person at Benchmark 1 has little or no English.
- At Benchmark 4, a person is able to communicate in common and predictable situations, everyday activities, and familiar topics.

Intermediate Proficiency = Canadian Language Benchmarks 5-8

- In this range, a person develops the abilities to function independently in most familiar situations (social, educational, work-related experiences), and in some less predictable situations.
- College or University Studies: In general, a person at Benchmark 8 is considered ready to consider college or university studies. A study of three courses in Engineering at the University of Manitoba indicated that the levels of English used in the courses were between 7 and 9.
- Working in a Profession: Several professions in Manitoba have also been studied to see what levels of English language are required to function well. The results indicate Benchmark 8 and above are generally required for professional occupations.

Advanced Proficiency = Canadian Language Benchmarks 9-12

- In this range, a person develops the abilities to communicate accurately and fluently in most situations (predictable and unfamiliar), and in general and specific topics.
- An average native English speaker would have English language abilities at about Benchmark 10.
- Levels 11 and 12 would indicate a native English speaker with very advanced language skills.

Recommendation: *Your English language skills should be at least at the following Canadian Language Benchmark levels before you begin the process of foreign credentials recognition in Canada:*

Writing: 7
Speaking, Listening, & Reading: 8

This recommendation takes into account the levels of English required to successfully complete various requirements in the licensing process for professional engineering in Manitoba, and to be successful in related careers and/or additional education & training.

Recommendation: *If your benchmark levels are three or more levels below the recommendation above, you should access basic EAL (English as an Additional Language) training before proceeding with recognition of your foreign engineering qualifications (see section 5.1).*

Recommendation: *If your benchmark levels are one to two levels below the recommendation above, you should access ESP (English for Specific Purposes) training before proceeding with recognition of your foreign engineering qualification (see section 5.1).*

After the language assessment, the staff at the Adult Language Training Branch can give you up-to-date information on English classes that are available to you, free of charge. Information on English classes is also included in this document (see section 5.1).

Cost: There is no cost for the English language assessment.

Timeline: Once you contact the Adult Language Training Branch, it may take up to 6 weeks to schedule an appointment. The language assessment takes up to three hours to complete, depending on your level of English.

Contact: Canadian Language Benchmarks Assessment
Adult Language Training Branch
Manitoba Labour & Immigration
5th Floor, 213 Notre Dame Ave.
Winnipeg, MB R3B 1N3

Call 945-6300 for an appointment. They can answer questions about how long the assessment will take, and what documents you should bring with you.

1.2 Register with the Credentials Recognition Program

Before you make decisions or take steps toward an engineering career in Canada, you should register with the Credentials Recognition Program (CRP). The Credentials Recognition Program is a program through the Government of Manitoba, Labour & Immigration.

The Credentials Recognition Program provides financial assistance to immigrant professionals, to help you with the cost of licensing, upgrading courses, books, and other fees that you may need to pay in order to gain your professional license in engineering, or a related profession, in Manitoba.

As you make decisions and pursue your goals related to an engineering career in Canada, you will encounter various points where you will need to pay fees for assessments and examinations. By registering with the Credentials Recognition Program, you may be eligible to have some of those costs reimbursed to you.

The Credentials Recognition Program will pay 50% of all eligible costs, up to a maximum of \$2250. In order to be eligible for this financial assistance, you must register with the Credentials Recognition Program *before* you pay any fees.

The Credentials Recognition Program also offers assistance (wage subsidies) to employers who hire immigrant professionals like yourself into a job that matches your professional background. The Credentials Recognition Program can give you a letter which explains the wage subsidy program. You can use this letter when you are applying for jobs, to make employers aware of the wage subsidy program.

Cost: There is no cost to register with the Credentials Recognition Program.

Timeline: Once you have contacted the Credentials Recognition Program, it usually takes about one month to get an appointment with the program coordinator to become registered with the program. Once you have paid fees and submit your receipts for reimbursement, it usually takes 4-6 weeks to receive the reimbursement cheque.

To register, contact:

Coordinator, Credentials Recognition Program

Manitoba Labour & Immigration

5th Floor, 213 Notre Dame Ave.

Winnipeg, MB R3B 1N3

Call 945-7305 for an appointment

E-mail: ssimpson@gov.mb.ca

2.0 THE LICENSING PROCESS FOR A PROFESSIONAL ENGINEERING (P.ENG.) LICENSE IN MANITOBA (6 REQUIREMENTS)

To be an engineer in Manitoba...

To be an engineer in Manitoba (sometimes called “practicing engineering” or “to practice” in Manitoba), you need to be aware of how engineering is organized in Canada.

In Canada, engineering is a regulated profession.

What does this mean? The governments of each Canadian province or territory (such as the Government of Manitoba) regulate and govern the engineering profession in that province. Each provincial government has legislation (laws) that call for a professional association to be created to do the day-to-day work of regulating the profession. Regulating the profession includes setting standards for practicing engineering and ensuring that anyone providing engineering services is qualified to do so.

In Manitoba, the professional association that regulates and governs the engineering profession is called **APEGM (The Association of Professional Engineers & Geoscientists of Manitoba)**. In day-to-day talk, you will hear APEGM called “the professional association” or “the regulatory association” or “the regulatory body”.

Each province has its own professional association to govern engineering in that province. In many provinces, the professional association also governs geoscience (geologists, geophysicists, and similar professionals). This document only refers to the governance of engineering. The map in Appendix A shows the names of the corresponding professional associations for engineering in each Canadian province or territory.

APEGM’s purpose: *APEGM’s purpose is to serve and protect the public (the people of Manitoba), by governing and advancing the practice of engineering.*

- It is APEGM’s responsibility to ensure that all persons registered to practice engineering in Manitoba are qualified to do so, by having the appropriate academic background and experience.
- It is APEGM’s responsibility to ensure that no-one who is *not* registered with APEGM is practicing engineering, unless you are working under the direct supervision of a registered professional engineer who takes legal responsibility for your work.
- It is APEGM’s responsibility to ensure that those who are registered with APEGM are practicing responsibly and competently, and to discipline those who are not.

What APEGM is not: APEGM is not a labour union for engineers. It is also not an employment agency for engineers. It is also not a technical society for engineers. APEGM exists primarily to protect the public from unsafe engineering.

What does it mean for me? For an engineer, a primary effect of being part of a regulated profession is that, according to the law, you may not call yourself an engineer and you may not practice engineering in Manitoba unless you are a registered member of APEGM. A registered member of APEGM may use the title Engineer, Professional Engineer, or P.Eng., and a registered member is authorized to practice professional engineering in Manitoba. The process of becoming a registered member of APEGM is often called “getting a P.Eng.” or “getting a P.Eng. license”. The *only* way to get a P.Eng. license is to become a

registered member of APEGM. There is no other agency or association that can issue a P.Eng. license in Manitoba.

This means that even though you have a university degree in engineering from another country and you may have worked as an engineer in another country, you may not call yourself a professional engineer in Manitoba until you have become registered with APEGM. Also, you may not take responsibility for engineering work until you have become licensed with APEGM.

There is one exception: Even if you are not a registered member of APEGM, you may practice engineering under the direct supervision of a Professional Engineer (P.Eng.), who takes full legal responsibility for your work. See section 3.2 for further comments about performing engineering work without a P.Eng. license.

The word ‘engineering’ is defined by law in Canada. In Manitoba, the legal definition of engineering is “any act of planning, designing, composing, measuring, evaluating, inspecting, advising, reporting, directing or supervising, or managing any of the foregoing, *that requires the application of engineering principles* and that concerns the safeguarding of life, health, property, economic interests, the public interest, or the environment”.

APEGM is given the responsibility to decide which professional services qualify as “engineering”. This means that even though you may have a degree or diploma from your home country with “engineering” in the title, your education and professional background may not be called “engineering” in Canada. Sometimes, professionals who are called “engineers” in their home country find that their background matches people who are called “geoscientists”, “architects”, “agrologists”, “engineering technologists”, “computer scientists”, or other related professions in Canada. In this case, you may not qualify for an engineering license (P.Eng. license) in Manitoba. It is best to apply for an *Assessment of Academic Credentials* by APEGM (see section 2.1) for a specific evaluation of your case.

How do I get a P.Eng. license? The following pages describe the process that everyone has to go through to become a registered member of APEGM (to get a P.Eng. license).

APEGM’s Contact Information:

Association of Professional Engineers & Geoscientists of Manitoba (APEGM)

850A Pembina Highway
Winnipeg, Manitoba R3M 2M7

Telephone: 474-2736

Fax: 474-5960

Website: www.apegm.mb.ca

Joan McKinley, Administrative Officer, consultant to internationally-educated engineers and coordinator of the APEGM Assessment / Examination program

e-mail: jmckinley@apegm.mb.ca

Sharon Sankar, P.Eng., Director of Admissions

e-mail: ssankar@apegm.mb.ca

Becoming a registered (licensed) Professional Engineer (P.Eng.) in Manitoba is a two-stage process. Each stage has several requirements that must be met.

Stage 1: The first stage is to qualify to become an Engineer-in-Training (EIT). To qualify to become an EIT, you must meet two requirements.

1. Academic Qualification
2. Professional Practice Test

Stage 2: Once the Stage 1 requirements have been met, you can enroll in APEGM's Pre-Registration Program as an Engineer-in-Training (EIT). Once you are an EIT, you must meet four additional requirements:

3. Acceptable engineering work experience (48 months)
4. Professional development requirements
5. Volunteer service requirements
6. National Professional Practice Exam

Once the Stage 2 requirements have been met and final references have been submitted, you are eligible to become a registered member of APEGM (a Professional Engineer, or P.Eng.).

Everyone who wants to register as a P.Eng. in Manitoba must meet these six requirements. These six requirements apply to people born in Canada and born outside of Canada. These six requirements also apply to those who received their engineering degree from a university in Canada, and those who received their engineering degree from a university outside of Canada.

For requirement 1 (academic qualification), applicants with international degrees are managed differently from applicants with Canadian accredited degrees. This requirement is described in the most detail in the following pages.

Requirement 3 (acceptable engineering work experience) also takes into account that newcomers to Canada with international degrees may have a number of years of engineering work experience before arriving in Canada. The procedures for evaluating acceptable engineering work experience may allow you to receive credit for your professional experience from your home country.

The requirements are described in more detail in the following pages.

Stage 1:

1. Academic Qualification
2. Professional Practice Test

Stage 2:

3. Experience Requirements
4. Professional Development
5. Volunteer Service
6. National Professional Practice Exam

1. Academic Qualification

What is considered acceptable *academic qualification*? Or, who is considered by APEGM to be *academically qualified*?

There are three ways to be considered *academically qualified*

- A. by completing a Bachelor-level degree in Engineering from an accredited Canadian university program (described in more detail below).
- B. by completing a *Verification Assessment* with APEGM if your bachelor-level degree in Engineering is covered by the Washington Accord (described in more detail on the next page).
- C. by completing an *Assessment of Academic Credentials* with APEGM and completing any required exams, if your bachelor-level degree in Engineering is not from Canada and is also not covered under the Washington Accord (described in more detail on the next page). If you fall into this category, it is highly recommended to complete the Assessment of Academic Credentials with APEGM, since this assessment will give you the information you need to evaluate your options for developing your engineering career in Manitoba. This document has been written primarily for this group of internationally-educated engineers, to describe the process of the Assessment of Academic Credentials and other APEGM requirements for registration as a professional engineer, to describe other professional options, and to provide information on support services available to help with career choices and professional integration.

Now each of these three processes is described in more detail:

- A. The most common way to be considered academically qualified is to have an ***undergraduate (Bachelor-level) degree in Engineering from a Canadian university program***. The program must be accredited by the Canadian Engineering Accreditation Board (CEAB).

The CEAB is a committee of the Canadian Council of Professional Engineers (CCPE). The CEAB is responsible for the accreditation of Canadian university undergraduate (Bachelor-level) engineering programs. The CEAB also monitors accreditation

processes in other countries. A Bachelor-level engineering degree accredited by the CEAB is the minimum academic requirement for registration as a professional engineer (P.Eng.) anywhere in Canada. A Bachelor-level engineering degree accredited by the CEAB is also the standard against which all other academic qualifications in engineering are measured.

Most university undergraduate (Bachelor-level) engineering programs in Canada are accredited by the CEAB. Therefore graduates of those programs are automatically considered by APEGM to be academically qualified.

Newcomers to Canada with international degrees may wish to consider completing another accredited undergraduate (Bachelor-level) engineering degree from a Canadian university. More information on this option is available in section 2.3.

B. Under an international agreement called the Washington Accord, Bachelor-level engineering programs in ***some countries' universities are recognized by APEGM and CEAB as equivalent to Canadian accredited degrees***. Graduates with undergraduate (Bachelor-level) degrees in engineering accredited by one of the following bodies will likely be considered by APEGM to be academically qualified:

- in the **USA** by the Accreditation Board for Engineering and Technology (ABET) since 1980,
- in **Ireland** by the Institution of Engineers of Ireland (IEI) since 1989,
- in **Australia** by the Institution of Engineers, Australia (IEAust) since 1989,
- in **Great Britain** by some of the authorized bodies of the Engineering Council since 1989,
- in **New Zealand** by the Institute of Professional Engineers of New Zealand (IPENZ) since 1989,
- in **Hong Kong** by the Hong Kong Institution of Engineers (HKIE) since 1996,
- in **South Africa** by the Engineering Council of South Africa since November 1999,
- in **France** by the Commission des Titres d'Ingénieur (CIT) since October 1999, and
- In **Japan** by the Japan Accreditation Board for Engineering Education (JABEE) since June 2005.

These applicants have to apply to APEGM for a *Verification Assessment*. In a *Verification Assessment*, APEGM will review your transcript to ensure that your Bachelor-level engineering program had the appropriate content and detail, and to ensure that your performance during that program was adequate. To apply for a *Verification Assessment*, you must submit an application form and an original transcript of marks from your engineering degree. An application form for a *Verification Assessment* is available from APEGM's website or by phoning APEGM.

C. Graduates of undergraduate (Bachelor-level) degrees in engineering from ***any other country must apply to APEGM for an Assessment of Academic Credentials***, to have their original engineering degree from their home country assessed on a course-by-course basis. To be eligible for an *Assessment of Academic Credentials*, an

applicant must have completed a university or college program (typically a Bachelor degree) of at least three years' duration, in an engineering-related field.

*Take
Note!*

It is recommended that you have a **language assessment** done before you contact APEGM to inquire about professional licensing (see section 1.1). English language benchmark levels of 7 or higher are very strongly recommended, in order to be successful at the examinations that APEGM generally assigns internationally-educated engineers.

It is also recommended that you register with the **Credentials Recognition Program** before you contact APEGM about professional licensing (see section 1.2). Some of the costs associated with APEGM assessment and licensing requirements are eligible for 50% reimbursement to you, **if** you register with the Credentials Recognition Program **before** you pay the fees.

If you have used all the financial assistance available under the Credentials Recognition Program, you **may** be eligible for further financial assistance for costs associated with APEGM assessment and licensing requirements through **Employment & Training Services** (Advanced Education & Training, Government of Manitoba). Contact one of the four Employment & Training Centres and ask to speak to a PIP (Professional Immigrant Program) counsellor. Locations in Winnipeg:

1122 Henderson Hwy
3338 Portage Ave.
1031 Autumnwood Drive
391 York Ave.

2.1 Academic Qualification through the *Assessment of Academic Credentials* and APEGM Examination Programs

Stage 1:

1. Academic Qualification
2. Professional Practice Test

Stage 2:

3. Experience Requirements
4. Professional Development
5. Volunteer Service
6. National Professional Practice Exam

Purpose: The purpose of the *Assessment of Academic Credentials* is to examine the content of your original engineering degree from your home country, and to assess how close it comes to an accredited engineering degree in the same discipline (for example, mechanical engineering; electrical engineering; etc.) in Canada. The goal is to ensure that anyone who eventually applies for a P.Eng. license in Manitoba has at least the same level of academic background as a graduate from an accredited Canadian engineering program. The goal is also to determine what

examinations must be taken before APEGM is satisfied that you have achieved an academic standing equivalent to that of a graduate of an accredited program.

The *Assessment of Academic Credentials* is done by a committee of APEGM called the Academic Review Committee. The Academic Review Committee is only concerned with your academic background (primarily your original university Bachelor degree in engineering). This committee does not usually consider your past engineering work experience during the *Assessment of Academic Credentials*. However, you should submit a resume in order for the Academic Review Committee to be informed of the type of work experience you have had since graduation.

The application form for the Assessment of Academic Credentials can be downloaded from the APEGM website (<http://www.apegm.mb.ca/register/noaccred/index.html>) or by calling APEGM.

Documents: In the assessment process, your academic record is compared, in detail, to syllabi (program outlines) established by the Canadian Council of Professional Engineers (CCPE) for your specific field of engineering (for example, mechanical engineering, civil engineering, etc.).

For the Assessment of Academic Credentials, you will be asked to provide the following documents:

1. Original degree(s) and diploma(s) OR notarized copies;
2. Original transcripts of marks OR notarized copies. Original transcripts may be sent directly from the university, or submitted by you in an envelope sealed by the university.
3. Original syllabus/calendar (course outlines), giving a complete description of what was covered in each course taken, OR notarized copies. Some applicants have difficulty getting syllabi/course calendars from their university. If this happens to you, APEGM recommends that you write each course description from memory, send it to your university and request your university to stamp or seal it as being accurate and correct.
4. A current resume
5. Thesis or Project Report from your engineering studies, where applicable. This may be submitted in its original language, with the thesis title and outline translated into English.

Important Notes for the application for an Assessment of Academic Credentials:

- It is very important that you provide as much information as possible, to allow the Academic Review Committee to make an accurate and complete assessment.
- It is also important that the course numbers on the transcript (#2 above) and the course numbers on the syllabus or course descriptions (#3 above) match and are clear, so that the Academic Review Committee can easily understand them. If the course numbers on the transcript and the course numbers on the syllabus do not match, you will be asked to complete a 'mapping document', showing which course in the syllabus corresponds to which course on the transcript.
- Many applicants also have Master or Ph.D. degrees, and although APEGM is concerned with how well your program meets that of a *Bachelor* level engineering degree, you **should include information about all other engineering degrees** you have earned (Master and Ph.D. degrees). This may help your assessment, but it does not always mean that any or all exams will be waived.
- If any of the documents are not in English, they must be translated AND notarized. See Appendix C for information on translation and notarization services.

Take Note!

See Appendix B for a short comment on other Credentials Assessment services.

Costs for the *Assessment of Academic Credentials*: The fee for the *Assessment of Academic Credentials* is \$337.00. This fee is eligible for 50% reimbursement by the Credentials Recognition Program (see section 1.2).

If you later decide to submit some additional documents or information to the Academic Review Committee, you will be asked to pay an additional Re-Assessment fee of \$107.00.

Timeline for the *Assessment of Academic Credentials*: It is not possible to set a timeline for how long it will take you to get the materials and documents that you need for the *Assessment of Academic Credentials* application. It will depend on how easily you can access your university in your home country, your university's record-keeping system, and whether you require your documents to be translated into English.

The Academic Review Committee will review your documents. The Academic Review Committee usually meets 5-6 times per year. Your application package must arrive at APEGM at least 2 weeks before the meeting date in order to be considered at the next Academic Review Committee meeting. You can call the APEGM office to find out the date of the next Academic Review Committee meeting.

A letter with the results of the *Assessment of Academic Credentials* will be sent to you by regular mail, approximately two to three weeks after the Academic Review Committee meeting. Results will not be given over the phone or by e-mail. This is because of the privacy laws in Manitoba that APEGM must follow.

Take Note!

Even if you hold a graduate degree (Master or Ph.D. degree), you still have to apply to APEGM for an *Assessment of Academic Credentials*. The Master or Ph.D. degree is not a substitute for the Bachelor-level degree for academic qualification with APEGM. However, individual courses in a previous Master or Ph.D. degree may be considered by the Academic Review Committee during the *Assessment of Academic Credentials*.

Possible Results of the *Assessment of Academic Credentials* by APEGM

There can be several possible results of the *Assessment of Academic Credentials* by APEGM:

One result may be that APEGM indicates that although your education & training was called 'engineering' in your home country, it does not match the definition of engineering in Canada. In that case, you may wish to approach another professional association about licensing (see section 4.1).

Another result may be that you are considered academically qualified for registration without being required to write any technical exams.

However, the usual result of the *Assessment of Academic Credentials* will be to assign you to complete a number of examinations before you will be considered academically qualified. The two possible outcomes are summarized in the table below:

<i>Confirmatory examinations required:</i>	<i>Proficiency examinations required:</i>
<p><i>When are they assigned?</i> The Academic Review Committee may not be able to decide definitively (for sure) whether you have adequate academic qualifications, but the Academic Review Committee may be of the opinion that you are close to being academically qualified. In this case, the Academic Review Committee will assign Confirmatory Examinations, to confirm your engineering knowledge, and at times to address any gaps they identify between your degree and a Canadian degree in the same field. Confirmatory Examinations are professional-level examinations, covering the material typically studied in the final two years of a baccalaureate (Bachelor-level) program.</p>	<p><i>When are they assigned?</i> From the information provided, or from the results of the Confirmatory Examinations assigned, the Academic Review Committee may identify deficiencies (weaknesses) in your academic background. In this case, the Academic Review Committee will assign Proficiency Examinations, at either the fundamental level, the professional level, or both.</p>
<p><i>What will the date of Academic Qualification be?</i> When all Confirmatory Examinations have been completed, the Academic Review Committee will consider your file again. If all requirements have been met, the Academic Review Committee will consider you to be academically qualified, and will determine your date of academic qualification. The date will often, but not always, be the <i>date of graduation from your original engineering degree from your home country</i>. The date of academic qualification becomes very important when considering the engineering experience requirements in the second stage of the registration process (see section 2.4).</p>	<p><i>What will the date of Academic Qualification be?</i> When all Proficiency Examinations have been completed, the Academic Review Committee will consider your file again. If all requirements have been met, the Academic Review Committee will consider you to be academically qualified, and will determine the date of academic qualification. The date will generally be the <i>date of successful completion of all Proficiency Examinations</i>. The date of academic qualification becomes very important when considering the engineering experience requirements in the second stage of the registration process (see section 2.4).</p>

Confirmatory examinations required:	Proficiency examinations required:
<p>How many times can I attempt a Confirmatory Exam? You are allowed only one attempt at each Confirmatory Examination. If you fail a Confirmatory Examination, the Academic Review Committee may (a) assign more examinations, or (b) ask you to write the failed exam again, or (c) assign a Proficiency Examination program instead. This decision is made on a case-by-case basis, taking into account your overall performance in the examination program.</p>	<p>How many times can I attempt a Proficiency Exam? You are allowed three attempts at each Proficiency Examination.</p>
<p>What are the alternatives to writing Confirmatory Exams?</p> <p>If you wish, you can request permission to take University of Manitoba courses instead of writing Confirmatory Examinations (Note: this option is not related to the IEEQ Pilot Program described in section 2.2). This permission must be requested in writing to the Academic Review Committee. The Academic Review Committee has a list of university courses that are considered acceptable substitutes to the Confirmatory Examinations. In the university course, you will be expected to complete all the assignments, labs, tests, and examinations as any other student, and pay the tuition fees. In Canada, university courses are marked by letter grades. The best grade is A+. A failing grade is an F. A passing grade in any course is C or better (C, C+, B, B+, A, or A+).</p> <p>If you were assigned five or fewer Confirmatory Exams by APEGM, another option is to apply to take the Internationally-Educated Engineers Qualification Pilot Program (IEEQ, see section 2.2) at the University of Manitoba instead of writing Confirmatory Exams.</p> <p>As a third option, some applicants who have over ten years of work experience in engineering are given the option of applying for an interview, to see if some or all of the Confirmatory Exams can be waived (cancelled).</p>	<p>What are the alternatives to writing Proficiency Exams?</p> <p>If you wish, you can request permission to take University of Manitoba courses instead of writing Proficiency Examinations (Note: this option is not related to the IEEQ Pilot Program described in section 2.2). This permission must be requested in writing to the Academic Review Committee. The Academic Review Committee has a list of university courses that are considered acceptable substitutes to the Proficiency Examinations. In the university course, you will be expected to complete all the assignments, labs, tests, and examinations as any other student, and pay the tuition fees. In Canada, university courses are marked by letter grades. The best grade is A+. A failing grade is an F. A passing grade in any course is C or better (C, C+, B, B+, A, or A+).</p>

Examination Process for Confirmatory and Proficiency Exams

All examinations are National Examinations. They are set (made up) and marked by Professional Engineers Ontario (the regulatory body for engineering in the Province of Ontario) or the Association of Professional Engineers and Geoscientists of Alberta (the regulatory body for engineering in the Province of Alberta), but all examinations must be written in Manitoba. Examinations are three hours long. Examinations are offered twice per year:

In May: registration is required by February 24.

In December: registration is required by August 27.

(Note: these dates can vary according to the national Examination office timetable; contact APEGM to verify dates).

When the Academic Review Committee sends you a letter with the results of the *Assessment of Academic Credentials* listing the examinations you have been assigned, they will also provide you with a syllabus (topic outline) for each examination and a list of recommended textbooks to help you study for each examination. Copies of past examination papers are available on-line at the APEGBC website (see www.apeg.bc.ca/reg/past-exams/past-nat-exams.htm). These past examinations can help you prepare for your examinations; however, there is no guarantee that the format of the exam will be the same as in the past.

APEGM will give you information on the format of the examinations and a list of any materials (such as calculators, textbooks, etc.) that you may or may not take with you into the exam. Foreign language dictionaries are allowed, after they are checked by the exam invigilator.

Textbooks to study for examinations are *not* available from APEGM.

Textbooks can be purchased at:

- The University of Manitoba bookstore (Fort Garry area of Winnipeg)
- The English Centre in Toronto, Ontario (website www.theenglishcentre.ca, e-mail info@theenglishcentre.ca, phone 416-850-0833, or fax 416-850-0834)
- Special-ordered from major bookstores, such as McNally Robinson (website www.mcnallyrobinson.com, phone 475-0483, or fax 475-0325) or Chapters (website www.chapters.indigo.ca, various locations in Winnipeg and Manitoba).
- Directly from the publishers (search the publisher websites).

Textbooks can also be borrowed from:

- The Millennium Library (Winnipeg Public Library, 251 Donald St. and/or 333 St. Mary Ave., 2nd Floor). There is no cost for a library card for residents of Winnipeg.
- University of Manitoba libraries: Members of the public (those who are not students at the university) must pay a \$50 annual fee for a library card.

The results of the examination will be mailed to you within nine weeks (45 working days) after the examination. APEGM will *not* give any results by phone or in person. If you

disagree with your examination mark, you may request a re-read of your examination paper. This service costs \$200. A re-read is to have another marker read your paper again. A “re-read” is not a chance to write the examination over again. If you want a re-read, you must request it within 30 days of receiving your examination results. After 30 days, the examination papers are destroyed.

Taking University of Manitoba courses instead of Confirmatory or Proficiency Exams

If you wish to take university courses instead of writing the Confirmatory or Proficiency Exams, the recommended process to follow is:

1. Apply to APEGM (through Joan McKinley) for a list of equivalent courses.
2. Write a letter to the Academic Review Committee, requesting permission to take the courses instead of exams. In the letter, specify each Confirmatory or Proficiency Exam and name the exact university courses you are planning to take.
3. Once you receive approval from the Academic Review Committee to take the courses, apply to the University of Manitoba (www.umanitoba.ca/extended/general_studies/guide/app_admis.shtml).

There is one standard application form for the University of Manitoba, and on the form you will be asked to indicate which Faculty or Department you are applying to.

On the application form, you should indicate that you are applying to Extended Education (www.umanitoba.ca/coned). This department was formerly known as Continuing Education. The program you want to apply to within Extended Education is called General Studies Program (www.umanitoba.ca/extended/general_studies). The General Studies program allows you study degree credit courses across the faculties at the without taking a whole degree. On the application form, you should choose the option of “Special Student Not Seeking a Degree”

Once you have been accepted, you should take the list of courses you wish to take to the General Studies office in Extended Education, and they will guide you further in terms of how to register in courses. At this point, General Studies may refer you to the Faculty of Engineering Deans’ Office or the department offices (for example, Civil Engineering office, Mechanical Engineering office) for further assistance.

Please note that there is no direct connection or direct communication between APEGM and the University regarding Confirmatory or Proficiency exam programs.

- Extended Education will probably not be familiar with APEGM or with Confirmatory or Proficiency Exams. Therefore, it is probably not necessary or helpful to introduce yourself as an “exam candidate” or “APEGM candidate” or any similar kind of description when you go to Extended Education. All that really matters to Extended Education is which courses you wish to take at the University of Manitoba.
- Once you have completed your courses, it is your responsibility to provide a record of your final grade back to APEGM.

<p>University of Manitoba, Extended Education contact information 188 CE Complex, University of Manitoba, Winnipeg, Manitoba, R3T 2N2 E-mail: extended@umanitoba.ca</p>
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Costs & Timelines

APEGM Examination Programs:

Costs of the Examination Programs (Confirmatory & Proficiency): If you proceed with the examinations, you will be charged an annual administration fee of \$128.00 for each year you are in the Examination Program. You will also be charged a fee of \$240.00 for each exam you write. The \$240 examination fee and the costs of books to study for the examination(s) are eligible for 50% reimbursement by the Credentials Recognition Program (see section 1.2).

Timeline of Examination Programs (Confirmatory & Proficiency): Once you receive the results of your Assessment of Academic Credentials, you need to notify APEGM within six months whether or not you plan to proceed with the examinations. If you do not notify APEGM within the six month time period, they will conclude that you do *not* intend to proceed with the examinations, and your file will be closed. If your file is closed and you later decide to re-apply, you will need to pay the \$337 fee again and repeat the assessment process.

If you proceed with the examinations, the Academic Review Committee will determine a timeframe in which the examinations must be written. Generally, the Academic Review Committee will allow 6 months for each examination, plus an additional 6 months. For example, an applicant assigned 4 examinations would be allowed $(4 \times 6) + 6$ months = 30 months to complete all of the examinations.

The overall timeframe it will take you to complete the examination program depends on how many examinations you are assigned by Academic Review Committee. Generally, Academic Review Committee assigns between one and five Confirmatory Examinations (one to three years) or between one and 15 Proficiency Examinations (one to eight years).

University of Manitoba courses instead of APEGM Examinations:

Costs of taking University of Manitoba courses instead of Confirmatory or Proficiency Exams: Fees for university courses are charged by the university, based on how many 'credit hours' the course is assigned. Typically, you can expect to pay between \$400 and \$500 for a university course in engineering. In addition, there will be costs for textbooks (\$100 - \$200 per course), and there may be costs for other supplies, notes, or lab fees (usually less than \$50).

Timelines of taking University of Manitoba courses instead of Confirmatory or Proficiency Exams: The schedules of courses are decided by each department in the Faculty of Engineering, and not by APEGM. It is up to each applicant to decide how many courses you want to take at once, and to find out the schedule of each course. At the higher levels in engineering, courses may only be offered once every two years, so it is important to 'map out' your entire program of courses at the beginning of the process.

Oral Interview with APEGM:

Costs of an oral interview to see if Confirmatory Exams can be waived: An oral interview costs \$500.

Timelines of an oral interview: Timeline for an oral interview: The length of time it takes to arrange an oral interview depends on the number of requests for oral interviews that APEGM receives. You should be prepared to wait at least four to six months for an interview.

2.2 Academic Qualification through the *Assessment of Academic Credentials* and Internationally-Educated Engineers Qualification Pilot Program

Another option to fulfill the APEGM requirements for academic qualification is available for a select group of internationally-educated engineers. The option is called the **Internationally-Educated Engineers Qualification Pilot Program** or **IEEQ**.

The IEEQ Program is an alternative to Confirmatory Examinations for those who are assigned **five or fewer Confirmatory Examinations by the Academic Review Committee of APEGM**.

If this applies to you, then you can choose to complete the IEEQ Pilot Program instead of writing Confirmatory Exams.

APEGM recognizes the IEEQ Pilot Program as an approved alternative to a Confirmatory Exam Program. At the successful completion of the IEEQ Pilot Program, you can proceed to the other steps in the process of professional registration (getting the P.Eng. license).

The primary criterion to be eligible for the IEEQ Pilot Program is an assessment result of five or fewer Confirmatory Exams from the *Assessment of Academic Credentials* by APEGM. In addition, applicants are assessed on number of years since graduation from their original engineering degree and their English language abilities. Spaces in the IEEQ Pilot Program are limited, and unfortunately not all eligible candidates can be accepted.

The IEEQ Pilot Program is not currently available to you if you were assigned more than five Confirmatory Examinations, or if you were assigned any number of Proficiency Examinations.

The IEEQ Pilot Program is not an alternative to the *Assessment of Academic Credentials* process by APEGM. To be eligible for the IEEQ program, you must submit the application for the *Assessment of Academic Credentials* to APEGM first and wait for the results of the *Assessment of Academic Credentials* by APEGM, to see if your result is five or fewer Confirmatory Examinations. You **must** go through APEGM first to see if you are eligible for the IEEQ program.

The IEEQ Pilot Program was developed by the Faculty of Engineering, University of Manitoba. It is run by the University of Manitoba and not by APEGM. However, APEGM has approved the IEEQ Program as an acceptable alternative to the examination process, if you were assigned five or fewer Confirmatory Examinations by the Academic Review Committee of APEGM.

The IEEQ Program may be a good alternative to Confirmatory Examinations for you if you prefer the structure of a university program over the self-study process of Confirmatory Examinations, if you prefer a process that may be shorter than the Confirmatory Examinations, and if you are able to financially support yourself through eight months of full-time university study.

Program Structure: The IEEQ Pilot Program is a 12-month program, beginning in September of each year. The program has three components: academic coursework, a paid co-op work experience placement, and a report on the co-op work experience.

Academic coursework includes between three and eight courses at the 3rd and 4th year level in the Faculty of Engineering. The coursework takes place from September – April. The course requirements are broken down as follows:

- Engineering Economics
- Practicing Professional Engineering in Manitoba (a course developed specifically for internationally-educated engineers)
- Technical & design courses, matched as closely as possible to the Confirmatory Examinations assigned to you by APEGM. The exact number of technical & design courses depends on the total number of Confirmatory Examinations assigned by APEGM, and will range from one to six.

The exact technical and design courses are different for each IEEQ program participant, and the exact courses are determined upon consultation with the IEEQ program staff. Courses are subject to space limitations and scheduling limitations in any given year. Each course is generally one term (13 weeks) long. The academic coursework requirements in the IEEQ Program structure are subject to change; interested applicants are asked to contact the IEEQ Pilot Program to verify the requirements.

The second component of the program is a paid co-op work experience placement with an engineering employer in your engineering discipline. This generally takes place after the coursework, from May – August. The IEEQ Program Coordinator works with you to assess your background, experience, and interests, and helps you find a work placement.

Costs: IEEQ participants pay tuition fees to the University of Manitoba on a per-course basis, similar to any other university student. Cost estimates are as follows:

- Course fees will depend on the total number of courses: up to \$4000
- Textbook fees will depend on the total number of courses: up to \$1500
- Incidental fees: \$200 - \$400

The coursework in the IEEQ program is a full-time commitment, and participants should not expect to be able to work at a full-time job and do the courses in the IEEQ program at the same time. Financial support for tuition fees and book costs in the IEEQ Program is available through the Credentials Recognition Program (see section 1.2). As well, IEEQ Program participants are eligible for Government of Manitoba Student Loans. These loans have to be repaid after the program is finished. The IEEQ staff can refer IEEQ program participants to other potential sources of financial assistance, if required.

Timeline: The IEEQ Pilot Program is a 12-month program, beginning in September of any year. A delay in finding an appropriate work experience placement, and/or difficulty in the academic courses may extend the program for some participants.

Contact Information: IEEQ Pilot Program
E2 - 262 Engineering Building
University of Manitoba, Winnipeg, MB R3T 5V6
Telephone: 474-8961 Fax: 474-7676
E-mail: ieeq@UManitoba.ca
Website : <http://ieeq.eng.umanitoba.ca>

2.3 Academic Qualification through a Canadian Bachelor degree in Engineering

As mentioned in section 2.0, most engineers in Canada are considered academically qualified by completing an undergraduate (Bachelor-level) degree in Engineering from an accredited Canadian university. The option to apply to any Canadian university to complete a new undergraduate (Bachelor-level) engineering degree is also available to immigrants, as a way of becoming academically qualified. Completing a new undergraduate (Bachelor-level) degree in Engineering from a Canadian university is an alternative to completing the Confirmatory or Proficiency examinations assigned by APEGM for academic qualification.

The university's engineering program must be accredited by the Canadian Engineering Accreditation Board. Most engineering programs at Canadian universities are accredited; however, you should ask this question directly before beginning a new Bachelor degree program in Engineering.

Take Note!

It is very important to note that academic qualification with APEGM is assessed on the Bachelor-level degree in engineering. Graduate degrees (Master or Ph.D.) are not an alternative to the academic assessment process.

However, if you hold a Bachelor degree in engineering from a university outside of Canada and you also hold a Master or Ph.D. degree (in the same area of engineering) from an accredited Canadian university, the Academic Review Committee shall consider your qualifications and seek to exempt some or all of the Confirmatory Examinations.

If you hold a Bachelor degree and a Master or Ph.D. degree in engineering from a university outside of Canada, the Academic Review Committee will consider your qualifications and may waive (exempt) some of the Confirmatory or Proficiency Exam requirements.

You may want to consider a Canadian Bachelor degree if the results of your *Assessment of Academic Credentials* by APEGM indicate that the time period to complete the assigned examinations is approximately the same as completing a new degree, *and* you would prefer the structured environment of a university program, *and* you can financially support yourself in the process.

The University of Manitoba: The University of Manitoba offers six Bachelor degree programs in Engineering. All six programs are accredited by the Canadian Engineering Accreditation Board: Biosystems Engineering, Civil Engineering, Manufacturing Engineering, Mechanical Engineering, Electrical Engineering, and Computer Engineering. Additional specializations in Aerospace Engineering and Environmental Engineering are available through the Departments of Mechanical Engineering, Biosystems Engineering, and Civil Engineering. Graduates with a Bachelor degree in any of these programs are considered by APEGM to be academically qualified.

All six programs also offer co-op work or internship options, in which students alternate between their university studies and periods of paid work experience in their field.

Costs: The costs of each program vary, depending on the exact number of courses, books, and other materials required in the program. *Approximate* costs are:

\$5000 per year for tuition x 4 years = \$20,000

\$1200 per year for books x 4 years = \$4,800

Each university has its own Financial Aid office that can provide information on sources of financial assistance, including student loans, bursaries, scholarship, and awards.

Timeline: Most Canadian universities will give you some credit for your original Bachelor-level engineering degree from your home country. The exact amount of credit will be determined on a course-by-course by the university. The Faculty of Engineering, University of Manitoba, will generally give a minimum of one-half year of credit for your original Bachelor-level engineering degree from your home country. The amount of credit depends on the age of the degree and the discipline of engineering (how fast knowledge is changing in your field). Therefore, you can expect that you will need up to 3.5 years of full-time study to obtain a four-year Bachelor degree in engineering from a Canadian university.

Taking a full course-load in Engineering should be considered a full-time commitment. Most people do not have the time or energy to work in addition to full-time engineering studies, and some students take longer than the expected time to complete the degree.

For general information: The University of Manitoba
Winnipeg, Manitoba R3T 2N2
Website: www.umanitoba.ca

The process is as follows:

1. Apply to the University of Manitoba, and select the Faculty of Engineering as your choice of which Faculty you wish to enter:

For information on applying to the University of Manitoba:
Enrollment Services – Admissions
General office: 424 University Center
Telephone: 474-8813
Website: www.umanitoba.ca/student/future

2. Once you have been admitted to the Faculty of Engineering, you should apply for an evaluation of credit of your original Bachelor-level engineering degree from your home country. This process takes 6-8 weeks.

For information on Bachelor-level Engineering programs:

Faculty of Engineering
General office: E2 – 290 EITC (Engineering Bldg.)
Telephone: 474-9807
website: www.umanitoba.ca/engineering

3. Once the Faculty of Engineering has evaluated your original degree, you can register for courses.

2.4 Five Other Requirements for a Professional Engineering License in Manitoba

Stage 1:

1. Academic Qualification
- 2. Professional Practice Test**

Stage 2:

3. Experience Requirements
4. Professional Development
5. Volunteer Service
6. National Professional Practice Exam

2. The Professional Practice Test

The Professional Practice Test tests your knowledge of three documents: The Engineering and Geoscientific Professions Act, the APEGM By-Laws, and the APEGM Code of Ethics. These documents are usually called “The Act”, “The By-Laws”, and “The Code of Ethics”. The requirement that all applicants to APEGM take the Professional Practice Test is based on the principle that one must be familiar with these documents to understand the engineering profession and be prepared for ethical practice in Manitoba.

The Act is the Manitoba law that establishes the regulatory body for engineering (APEGM), gives APEGM the right to govern the profession in Manitoba, and defines the responsibilities of APEGM as it governs the profession. The By-Laws set out the operating procedures of APEGM. The Code of Ethics outlines expectations for professional and ethical behaviour that all engineers must follow.

The Professional Practice Test is made up of 50 questions. Each question must be answered either “true” or “false”, and a reference must be provided from either the Act, the By-laws, or the Code of Ethics to justify your answer.

The Professional Practice Test is a test you take at home. The Professional Practice Test is also an open-book test. This means that you can use any materials or documents, including dictionaries, the Act, the By-Laws, and the Code of Ethics for reference as you answer the questions.

The passing mark for the Professional Practice Test is 90%. If you do not pass the test, you may take it again (up to three times).

Cost: There is no cost to take the test. The test and study materials (the Act, By-Laws, and Code of Ethics) are available free of charge from APEGM.

Timeline: Depending on your fluency in English and your personal study habits, you should schedule approximately 20-40 hours to study for the test and take the test. There is no time limit on the test itself; you can take as many hours as you need to complete the test.

When these two requirements of Stage 1 ((1)academic qualification and (2) Professional Practice Test) have been met, you can apply to APEGM as an Engineer-in-Training (EIT), and you will be enrolled in the APEGM Pre-Registration Program.

The second stage is to qualify to become a Professional Engineer (P.Eng.). To qualify to become a P.Eng., you must meet the four requirements in the Pre-Registration Program while you are an EIT.

In this second stage, you must report your activities in each of the Stage 2 requirements to APEGM every six months. Standard reporting forms are available from the APEGM offices and website.

The Academic Review Committee of APEGM deals with all applicants in Stage 1 of the licensing process. The Experience Review Committee of APEGM deals with all applicants in Stage 2 of the licensing process.

Stage 1:

1. Academic Qualification
2. Professional Practice Test

Stage 2:**3. Experience Requirements**

4. Professional Development
5. Volunteer Service
6. National Professional Practice Exam

3. Acceptable engineering work experience

The process towards a P.Eng. license in Canada, including Manitoba, is based on the principle that a fully qualified engineer (P.Eng.) needs both an appropriate level of education, and the time to develop knowledge and skills through engineering practice. Engineering work experience is the application of the principles of engineering which were learned during the education process.

The Experience Review Committee of APEGM determines whether the work experience is considered acceptable or not. This is a different committee from the Academic Review Committee that evaluated your academic qualifications.

Experience must include the application of theory as well as exposure to practical experience, management, communication skill development, professionalism, ethical responsibilities, and the social implications of engineering. You must also show progression in your technical capabilities, responsibilities, maturity of judgment, and communication skills over the period of your engineering experience. APEGM provides more detailed information outlining acceptable engineering work experience on its website (www.apegm.mb.ca/register/accred/index.html).

You must obtain at least four years (48 months) of acceptable work experience. This experience must be:

1. Obtained under the direct supervision of a registered professional engineer (P.Eng.); and,
2. Obtained **after** the date of academic qualification.
 - a. If you were assigned a Confirmatory Examination program and the assigned date of academic qualification is the date of your original engineering degree from your home country, you can submit your previous engineering work experience from your home country for evaluation. Up to three years of your previous engineering work experience from overseas, after the date of academic qualification, may qualify toward this requirement. You will need to be able to provide references from your engineering supervisors in your previous jobs. Therefore, it is important that you stay in contact with these people.

Example: Engineer X graduated from mechanical engineering from the University of Tehran on March 1, 1994. He worked for five years in mechanical engineering in Iran, before immigrating to Canada in 1999. He applied for *Assessment of Academic Credentials* with APEGM in January 2000 and completed his Confirmatory Exams in January 2003. The date of academic qualification was declared to be the date of his Bachelor degree (1994). Engineer X can therefore submit three years (of

his five years) of professional experience from Iran to the Experience Review Committee for review toward the requirement for 48 months (4 years) of acceptable engineering work experience.

- b. If you were assigned a Proficiency Examination program and the assigned date of academic qualification is the date of completion of the Proficiency Examinations, your engineering work experience from your home country will not be eligible to meet this requirement.

At least one year of this experience must be obtained in a Canadian environment (in Canada, or with a Canadian company overseas).

A year of work experience is defined as full-time employment, or equivalent, of at least 35 hours per week, for at least 49 weeks in a twelve-month period.

Experience must be reported on standard progress report forms every 6 months. These report forms are available from the APEGM website (www.apegm.mb.ca/register/accred/eitprog.html). Your direct supervisor will also be asked to fill out a portion of the report to confirm your experience.

The amount of professional work experience from outside of Canada that you can submit for review and credit depends on the date of academic qualification. However, additional allowances may be made for Canadian work experience obtained in another province, and work experience in Manitoba obtained after receiving the *Assessment of Academic Credentials* application. When you reach this point in the process toward a P.Eng. license, it is best to discuss your specific case with APEGM. What matters is not only how much experience you have, but that the Experience Review Committee will assess whether it is considered appropriate engineering experience.

It is very important that you stay in contact with your former supervisors, so that you will be able to contact them when you submit your non-Canadian work experience for review to the Experience Review Committee.

Cost: There is no direct cost to this requirement; however, there is an annual fee of \$129.00 to remain in the Engineer-in-Training program with APEGM.

Timeline: The timeline to complete the acceptable engineering work experience requirement will vary for each individual and will depend on the date of academic qualification. For some who can prove many years of appropriate engineering work experience from their home country after the declared date of academic qualification, and who are working in an engineering role while completing the examination program, the requirement may be complete at the time of application. For others, it may take four years or longer to obtain 48 months of acceptable engineering work experience.

Besides monitoring the work experience requirement of an Engineer-in-Training (EIT), the Experience Review Committee also monitors the following three areas of the Pre-Registration Program for EITs: professional development, volunteer service, and the National Professional Practice Exam.

Stage 1:

1. Academic Qualification
2. Professional Practice Test

Stage 2:

3. Experience Requirements
- 4. Professional Development**
5. Volunteer Service
6. National Professional Practice Exam

4. Professional Development

The basic requirement is for all EITs to take a minimum of 12 hours of professional development activities each year, for four years.

Professional development is sometimes called Continuing Education. Professional development is formal or informal training to enhance your skills, knowledge, and ability to practice engineering. Professional development activities can be in the form of short courses, seminars, conferences, and involvement with technical organizations.

Recommended topics for professional development activities include management, supervision, communications, business, law, and self-development.

APEGM provides more information outlining acceptable professional development topics on its website (www.apegm.mb.ca/register/accred/05eitprer.html). It also maintains a listing of current professional development opportunities on its website (www.apegm.mb.ca/pdnet/index.html).

Cost: The cost of a professional development activity varies widely, from \$10-\$20 for a one-hour APEGM seminar, to a 3-day conference for hundreds of dollars. As an EIT, it is expected that you will be employed, and many employees have the opportunity to participate in workshops, seminars, short courses, and conferences through the workplace in which the employer pays for some or all of the cost.

Timeline: Your specific requirements for professional development will be determined by the Experience Review Committee, taking into account the date of academic qualification assigned and the amount of work experience from your home country for which you received credit. Generally, you can expect to have to take *at least* one years' worth of professional development activities (12 hours).

Stage 1:

1. Academic Qualification
2. Professional Practice Test

Stage 2:

3. Experience Requirements
4. Professional Development
- 5. Volunteer Service**
6. National Professional Practice Exam

5. Volunteer Service

Volunteer service is service done on behalf of the profession, including service to, or on behalf of, APEGM. Volunteer service may include both professional service and community service. The basic requirement is for all EITs to serve a minimum of 48 hours of volunteer service over four years.

Professional service includes such activities as serving on an APEGM committee, assisting in organizing a technical society function, serving on a technical society committee, mentoring a student, and making a presentation on engineering as a career to school classes.

Community service includes serving on the board of a community club, cultural group, or religious organization, coaching or managing a sports team, organizing a cultural event, and organizing a charity event.

APEGM provides more information outlining acceptable volunteer service activities on its website (www.apegm.mb.ca/register/accred/05eitprer.html). APEGM can also provide referrals to appropriate opportunities to fulfill professional service requirements.

Cost: There should generally be no cost to do volunteer service.

Timeline: Your specific requirements for volunteer service will be determined by the Experience Review Committee, taking into account the date of academic qualification assigned and the amount of work experience from your home country for which you received credit. Generally, you can expect to have to take *at least* one year's worth of volunteer service activities (12 hours).

Stage 1:

1. Academic Qualification
2. Professional Practice Test

Stage 2:

3. Experience Requirements
4. Professional Development
5. Volunteer Service
- 6. National Professional Practice Exam**

6. National Professional Practice Exam

The National Professional Practice Exam is an examination that each EIT must pass before becoming registered as a P.Eng. The topics of the examination include professionalism, professional practice and ethics, regulatory authority requirements, law and legal concepts, and the Engineering Act.

The National Professional Practice Exam is very different from the Professional Practice Test described in Stage 1 of the process for a P.Eng. license. The National Professional Practice Exam is a national exam that everyone in Canada writes. The Professional Practice Test is a test just for Manitoba applicants. The National Professional Practice Exam covers much more material than the Professional Practice Test. The National Professional Practice Exam is a closed book exam; the Professional Practice Test is an open-book test. The National Professional Practice Exam is a time-limited exam; the Professional Practice Test is time-unlimited.

Currently there is no formal course or seminar in Manitoba to help EITs study for the National Professional Practice Exam. The questions on the National Professional Practice Exam are based on two books, four pamphlets, and the Engineering Act, By-Laws, and Code of Ethics. The list of study materials and more information on the National Professional Practice Exam can be found on the APEGM website (www.apcgm.mb.ca/register/geninfo/ppeinfo.html).

You must apply to write the National Professional Practice Exam. The application form is available from the website address given above.

Cost: The cost of the study materials is \$125.00 (or as listed on the website). The cost of writing the examination is \$120.00 (or as listed on the website).

Timeline: Generally, each EIT has to find their own time to study for the exam. Often, this happens during the hours that you are not working at a job. Depending on your fluency in English and your personal study habits, you should schedule approximately 5-10 hours per week for 2-6 months to study for this exam.

The exam itself is two hours long. It is closed-book, which means that you may not take any books or other materials into the exam with you. The exam consists of 100 questions in multiple choice format. The National Professional Practice Exam can be written in Manitoba two times per year (April and October).

If you fail the National Professional Practice Exam, you may write it again. You will also have to pay the exam fee again.

In addition to the six requirements for full registration as a P.Eng., you must also be a Canadian Citizen or a Permanent Resident or legally entitled to work in Canada.

When all of these requirements:

- (1) Academic qualification;
- (2) Professional Practice Test;
- (3) Acceptable engineering work experience;
- (4) Professional development;
- (5) Volunteer service; and,
- (6) National Professional Practice Exam

have been met and final references have been submitted, you can apply for full membership as a registered professional engineer (P.Eng.) with APEGM.

Provisional License

Stage 1:

1. Academic Qualification
2. Professional Practice Test

Stage 2:

3. Experience Requirements
4. Professional Development
5. Volunteer Service
6. National Professional Practice Exam

EITs who complete all requirements in Stage 2, except the one year of Canadian experience, may be eligible to apply for a **provisional license** with APEGM. Even though a provisional license does not give any more rights than an EIT, some applicants may find it helpful in finding employment in Canada.

To qualify for a provisional license with APEGM, you must meet the following criteria:

- 48 months of experience approved by the Experience Review Committee;
- Completed all required Professional Development hours;
- Completed all required Volunteer Service hours;
- Passed the National Professional Practice Exam; and,
- Submitted references which have been approved.

Summary of the requirements for registration as a Professional Engineer (P.Eng.) in Manitoba

ACTIVITY	TIMELINE	COST
Stage 1 Activities:		
1. Academic Qualification Activities		
Verification Assessment	Time to compile your documents will vary. Results should be sent to you within 2-3 weeks of the Academic Review Committee meeting in which your documents are assessed.	No cost.
Assessment of Academic Credentials	Time to compile your documents will vary. Results should be sent to you within 2-3 weeks of the Academic Review Committee meeting in which your documents are assessed.	\$337.00 (one time). This fee is eligible for 50% reimbursement by the Credentials Recognition Program (see section 1.2).
Re-assessment of academic credentials, if desired	Same as above	\$107.00 per re-assessment
Examination program: (Confirmatory or Proficiency Exams)	6 months per exam, plus an additional 6 months. (for example, 5 exams = 36 months)	Administration fee: \$128.00 per year (plus \$54.00 if payment is late) Exam fee: \$240.00 per exam. The exam fee and the costs of books to study for the exam(s) are eligible for 50% reimbursement by the Credentials Recognition Program (see section 1.2).
2. Professional Practice Test	Estimate 20-40 hours to read the materials and take the test	No cost
Stage 2 Activities: (Pre-Registration Program for EITs)		
Fee to enroll as an EIT		\$125.23 (one time)
Annual fee during the EIT period		\$129.00 per year
3. Experience Requirements	Must have 48 months approved by the Experience Review Committee. The amount you can claim immediately depends on the assigned date of academic qualification, how much previous work experience you have, and how easily you can contact previous engineering supervisors to confirm your experience.	No cost
4. Professional development	Proficiency Examination applicants: 48 hours over 4 years. Confirmatory Examination applicants: will vary from 12 – 48 hours total required.	Variable
5. Volunteer service	Proficiency Examination applicants: 48 hours over 4 years Confirmatory Examination applicants: will vary from 12 – 48 hours total required.	No cost
6. National Professional Practice Exam	Estimate 5-10 hours per week, for 2-6 months to study for the exam. The exam is 2 hours long.	Study materials: \$125.00 (one time) Exam fee: \$120.00 (one time)
Annual fee payable at registration, when all requirements for P.Eng. registration have been met.		\$272.00 per year, once you are a P.Eng.

3.0 OTHER ENGINEERING AND ENGINEERING-RELATED OPTIONS

The following options 3.1 through 3.4 are not mutually exclusive. That is, you can pursue more than one option at the same time.

3.1 A Canadian Master or Ph.D. Degree in Engineering

When is it useful? A Master or Ph.D. degree in Engineering can be useful if your professional interests are to work in research and development areas. As well, the Ph.D. is a requirement if your professional interest is to work as a university professor. In some highly complex specialties of engineering, a Master degree is increasingly useful and necessary to find employment. A discussion with a university professor in your engineering specialty can help you understand whether this is true for your area of expertise or not.

When is it not useful? A Master or Ph.D. degree in Engineering is **not** a practical substitute for either the P.Eng. license or the Bachelor degree in engineering required for academic qualification by APEGM.

A Master or Ph.D. degree in Engineering is **not** a direct substitute for a Bachelor degree in engineering from a Canadian university to meet the APEGM requirements for academic qualification. In the APEGM process (section 2.0), the undergraduate (Bachelor-level) degree is the primary degree that APEGM considers in determining academic qualification. Some internationally-educated engineers think that taking a Canadian Master degree would be preferable to writing the Confirmatory or Proficiency examinations assigned by APEGM. However, it is very important to realize that a Master or Ph.D. degree from a Canadian university Ph.D. degree is **not** a direct alternative to Confirmatory or Proficiency examinations.

Some internationally-educated engineers also believe that a Canadian Master degree will assist them with finding engineering employment in Canada. It is difficult to say whether this is true or not. In some industries or areas of engineering, a Master degree may be an asset, while in other industries it is not. However, it is fair to say that most employers value professional experience just as highly, or higher than a university degree, and most employers will put an **equal or larger value on the P.Eng. designation**. The P.Eng. designation indicates that in addition to your academic background, you have also developed as an engineer through at least four years of acceptable engineering work experience. Section 3.2 briefly discusses working in engineering-related areas without the P.Eng. license.

The University of Manitoba: The University of Manitoba offers the following degrees: Master of Science in Engineering (M.Sc.), Master of Engineering (M.Eng.), and Ph.D. programs in Biosystems Engineering, Civil Engineering, Manufacturing Engineering, Mechanical Engineering, Electrical Engineering, and Computer Engineering. Depending on an assessment of the content of your undergraduate (Bachelor-level) degree and/or your marks in your undergraduate (Bachelor-level) degree, the University may ask you to complete a Pre-Master year before beginning a Master degree program.

The difference between an M.Sc. degree and an M.Eng. degree: An M.Eng. degree is generally an industry-oriented program of broad-based studies. Students in the M.Eng. program should have some professional experience in engineering before beginning the program. The M.Eng. program consists of coursework and a smaller-scale project. The M.Sc. program is a more focussed program of coursework and research. The M.Sc. program consists of coursework and an in-depth thesis (research project).

For general information: The University of Manitoba
Winnipeg, Manitoba R3T 2N2
Website: www.umanitoba.ca

Descriptions of the graduate program options in engineering can be found on the website at http://umanitoba.ca/faculties/graduate_studies/

You can also link to the specific Engineering departments from the Engineering website: www.umanitoba.ca/engineering

Applying to graduate (Master or Ph.D.) programs:

Admission for graduate programs at the University of Manitoba depends on the past academic performance of the applicant, the capacity of the department to provide the program, and the availability and willingness of a faculty member to supervise the program of study and research. In some cases, an English Language Proficiency Test may be required. For those applying from outside of Canada on a student visa, additional requirements may apply.

Due to limited resources and space, the Faculty of Engineering, University of Manitoba is not able to accept all of the excellent people who apply for graduate studies. Some engineering departments may have a Pre-Admission process to match candidates with advisors in the departments, according to available research projects and funds. Please review the website of the engineering department for up-to-date information.

Once you have been accepted through the Pre-Admission Application process with the department (if applicable), you can then apply to the Faculty of Graduate Studies for formal admission to the University of Manitoba. All Master and Ph.D. students are students in the Faculty of Graduate Studies (not the Faculty of Engineering). The Faculty of Graduate Studies website is at http://umanitoba.ca/faculties/graduate_studies/

Costs: There is a \$50 Application Fee, once you apply to the Faculty of Graduate Studies. Base tuition costs are as follows for Canadian Citizens and Permanent Residents of Canada (as of 2005/2006):

M.Eng.: \$4177.00 x 1 year, plus books and incidental fees.

M.Sc.: \$4177.00 per year x 2 years, plus books and incidental fees

Ph.D.: \$4177.00 per year x 2 years, plus books and incidental fees.

If it takes longer than the expected time to complete the program, a continuing fee of approximately \$700 per year is applied, until the completion of the program.

Each university has its own Financial Aid office that can provide information on sources of financial assistance, including student loans, bursaries, scholarships, and awards. M.Sc. and Ph.D. graduate students in engineering may also be paid a small salary by their advisor for the duration of their research program, depending on the advisor's resources.

Timeline: The time for the Pre-Admission Application (if applicable) will vary, depending on the resources of the department and a potential match with your background and research interests. It is not possible to put a firm timeline on this part of the application process.

Taking a full-time course-load, the times to complete the degrees are generally:

- 12-18 months for a Master of Engineering (M.Eng.)
- 18-24 months for a Master of Science in Engineering (M.Sc.)
- 2-4 years for a Ph.D. in Engineering.

3.2 Working in Engineering without a P.Eng. License, under Supervision of a P.Eng.

Engineering in Canada is a regulated profession. Section 2.0 describes what this means. For an engineer, a primary effect of being part of a regulated profession is that, according to the law, you may not call yourself an engineer and you may not practice professional engineering in Manitoba unless you are a registered member of APEGM. A registered member of APEGM may use the title Engineer, Professional Engineer, or P.Eng., and a registered member is authorized to practice professional engineering in Manitoba.

This means that even though you have a university degree in engineering from another country and you may have worked as an engineer in another country, you may not call yourself a professional engineer in Manitoba until you have become registered with APEGM. Also, you may not perform professional engineering work until you have become registered with APEGM.

There is one exception: Even if you are not a registered member of APEGM, you may practice engineering under the direct supervision of a Professional Engineer (P.Eng.), who takes full legal responsibility for your work.

In some areas of engineering, being a registered member of APEGM (holding a P.Eng. license) is critical for job opportunities. These areas include working in consulting, working for the government (municipal, provincial, or federal) and Crown Corporations (companies owned by the government), as well as selected industries.

The P.Eng. license is not as critical for job opportunities in the manufacturing sector. Winnipeg and Manitoba generally have a large manufacturing sector, and many engineers find employment here. As a very general example, a large manufacturing company may have 30 engineers employed. Out of these 30 engineers, perhaps five or six have a P.Eng. license, while the other 24 or 25 do not. The five or six that have a P.Eng. license take legal responsibility for all of the engineering work done in the company. Therefore, while the P.Eng. license may not be critical for job opportunities in the manufacturing sector, it is still a benefit for career advancement within a company.

It is possible to find engineering work without having a P.Eng. license, especially if your engineering background fits into a manufacturing environment, and if there is an engineer in the company who has a P.Eng. license and is willing to take legal responsibility for your work. However, many internationally-educated engineers find that employers place a lot of value on the P.Eng. license, because it indicates that you have gone through a process of evaluation with APEGM in which your education and your experience have been reviewed, and you are considered qualified as an engineer. Without the P.Eng. license, employers generally have no simple way to evaluate the quality of your engineering degree and your professional experience from your home country. Employers immediately know what minimum qualifications someone with a P.Eng. license has. The P.Eng. license becomes a measure of certainty for the employer of your background and skills as an engineer. Many internationally-educated engineers have said that it is extremely difficult to find engineering work without the P.Eng. license.

It can be beneficial in your job search to have started the process of registration as a P.Eng. with APEGM, even if you have not yet completed it. Many employment postings look for applicants who are “eligible for registration with APEGM”, and hire employees on the expectation that you will become registered in time.

3.3 A Canadian Diploma in Engineering Technology

There are at least three cases in which to consider completing a new Engineering Technology Diploma in Canada:

1. You have completed an *Assessment of Academic Credentials* with APEGM, and APEGM has assigned a number of Confirmatory or Proficiency Examinations before APEGM will consider you academically qualified. Rather than completing the examinations and the other requirements for registration with APEGM, you may decide to pursue a career as an engineering technologist instead of an engineer. Appendix D summarizes the differences between the work of engineers and engineering technologists in Canada.
2. You have completed an *Assessment of Academic Credentials* with APEGM, and the result is that APEGM does not consider your educational background to match that of an engineer. You may have also approached CTTAM to inquire about registration as a Certified Engineering Technologist (C.E.T.) (see section 3.4). The result of the assessment of your academic qualifications by CTTAM indicates that CTTAM does not consider your educational background to match that of an engineering technologist.
3. You feel that, for whatever reason, your past education and work experience will not be valued or recognized in Canada, and you wish to complete a Canadian academic qualification that will help you find engineering-related work. Two options in engineering-related fields include a Bachelor degree in Engineering (see section 2.3) and a Diploma in Engineering Technology.

Completing a diploma in Engineering Technology from an accredited program in Manitoba and obtaining two years of work experience qualifies you for registration with the Certified Technicians & Technologists Association of Manitoba (CTTAM) as a Certified Engineering Technologist (C.E.T.). Section 3.4 summarizes the benefits and process of registration with CTTAM.

Red River College: In Manitoba, Red River College offers a number of diploma programs in Engineering Technology. Most of these programs are accredited by CTTAM and will qualify you for membership with CTTAM as a Certified Engineering Technologist (C.E.T.) once you have also obtained two years' work experience.

- Civil Technology Programs (32 months). Choose from: Architectural/Engineering Technology; Environmental Protection Technology; Geomatics Technology; Municipal Engineering Technology; and Structural Engineering Technology.
- Building Design CAD Technology (20 months, not accredited).
- Civil Technician Program (10 months; not accredited)
- Electronic Engineering Technology Programs (28 months): Choose from: Electrical Engineering Technology; Electronic Engineering Technology; Instrumentation Engineering Technology.
- Electronic and Network Technician (10 months, not accredited).
- Mechanical Engineering Technology (28 months).

- Manufacturing Design CAD Technology (not accredited).
- Information Systems Technology (24 months), with four specialty areas: application development; database management; network management; and web development.

Red River College also offers courses on campuses in other locations in Manitoba (including Gimli, Portage la Prairie, Steinbach, and Winkler), and some courses may be available through Continuing Education and/or Distance Education options. Please contact Red River College directly for up-to-date information.

Costs: The costs of each program vary. In general, tuition/program costs range from \$1500 to \$4000 per year, and book/supplies costs range from \$1000 to \$1500 per year. The web page of each program contains cost estimates for each individual program.

Red River College has an office that can provide information on sources of financial assistance, including student loans, bursaries, scholarships, and awards. For information on these services at Red River College, see the website <http://me.rrc.mb.ca/Catalogue/>

Timeline: The expected times to complete the diploma programs, on a full-time basis, are noted above.

For general information: Red River College
2055 Notre Dame Avenue
Winnipeg, Manitoba, R3H 0J9
Website: www.rrc.mb.ca

For information on Engineering Technology Programs: <http://me.rrc.mb.ca/Catalogue/> and search under “Full-time Programs”

For information on applying to Red River College: The web page of each individual program contains information on applying either on-line or by paper application. Please see <http://me.rrc.mb.ca/Catalogue/> and link to the program of interest.

3.4 Registration with the Certified Technicians and Technologists Association of Manitoba (CTTAM)

How registration with CTTAM can help you: Registration with CTTAM as a Certified Engineering Technician (C.Tech.) or a Certified Engineering Technologist (C.E.T.) allows you to use the initials C. Tech. or C.E.T. on your resume, your business cards, and when you introduce yourself to others. These designations are very familiar and highly regarded professional credentials in Canada. Employers particularly recognize the C.E.T. designation and immediately have a sense of your educational background and the kind of work you can do. It can increase your chances at finding engineering-related employment. Being a member of CTTAM also gives you access to various upgrading courses and other professional development opportunities offered through CTTAM.

There are at least two cases in which to consider registration with CTTAM:

1. The result of the *Assessment of Academic Credentials* by APEGM indicates that although APEGM considers your background to match that of an engineer, APEGM has assigned a number of Confirmatory or Proficiency Examinations before APEGM will consider you to be academically qualified. You may find that registration with CTTAM broadens your employment opportunities in engineering-related fields during the time you are also working to fulfill the APEGM requirements for registration as a professional engineer.
2. The result of the *Assessment of Academic Credentials* by APEGM indicates that APEGM considers your educational background to match that of an engineering technologist, and not an engineer. In this case, you may want to pursue career opportunities as an engineering technologist. See Appendix D for a brief summary of the differences between engineers and engineering technologists.

Registration with CTTAM is different than registration with APEGM. In order to call yourself an engineer or to practice professional engineering in Manitoba, you **must** be a registered member of APEGM (registration is mandatory). Registration with CTTAM is voluntary, not mandatory. The mission or goals of the two associations are also different. APEGM serves the public by regulating the engineering profession in Manitoba. CTTAM serves its members (engineering technologists) by giving public recognition to engineering technicians and technologists.

Becoming a C.E.T. does not prevent you from continuing to pursue a P.Eng. license. You can be both a C.E.T. and a P.Eng. at the same time and use both titles at the same time.

CTTAM Requirements: To become registered with CTTAM you must meet several requirements:

- Academic qualification (note: this is **not** the same 'academic qualification' as required by APEGM).
- Two (2) years' appropriate work experience, some of which must be in Canada. There is no fixed guideline on how much of the work experience must be in Canada. It is determined on a case-by-case basis, and can vary from six months to two years. CTTAM requires you to have enough Canadian experience that three professional references can confirm that you are working at the level of a

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

- A professional practice exam (note: this is **not** the same exam as the National Professional Practice Exam required for registration with APEGM).
- Three (3) professional references
- To become registered as a Certified Engineering Technologist (C.E.T.) there is an additional requirement of a technical report. This requirement does not exist for registration as a Certified Engineering Technician (C.Tech.) or an Associate Member of CTTAM.

For applicants with a degree or diploma from outside of Canada, the academic qualification requirement of CTTAM is evaluated on a case-by-case basis by a Panel of Examiners.

For applicants with a degree or diploma from outside of Canada, the most common route is to first become an Associate Member of CTTAM, based on appropriate academic qualification. When you have completed the professional practice exam, obtained an appropriate amount of Canadian work experience, supplied three professional references, and completed a technical report (if required), you can apply to become a Certified Member of CTTAM.

To apply to CTTAM, you must submit an application form to the Certification Board. Application forms, including a list of supporting documents required, can be found at the CTTAM website: <http://www.cttam.com>

Costs: The cost of the application is \$140. The cost of the Professional Practice Examination is included in this \$140 application fee.

The annual fee for Associate Members is \$110. The annual fee for Certified Members (C.Tech. or C.E.T.) is \$155.

Timeline: The Panel of Examiners meets every two months. The results of the application will be mailed to you within four weeks of the meeting.

Contact information:

Certified Technicians and Technologists Association of Manitoba Inc.
(CTTAM)
602-1661 Portage Ave.
Winnipeg, Manitoba R3J 3T7
Telephone: 784-1088
Fax: 784-1084
E-mail: admin@cttam.com
Website: www.cttam.com

4.0 OTHER OPTIONS

4.1 Other Professional Associations

One possible result of the *Assessment of Academic Credentials* by APEGM is that your education does not match the definition of engineering in Canada. It may match the definition of geoscientist (geologist, geophysicist), engineering technologist, agrologist, architect, computer scientist, or other related professions in Canada. In this case, you may want to contact one of these professional associations.

Geoscience: Like engineering, geoscience is a regulated profession in Canada. You need a professional license (P.Geo.) to practice geoscience and to call yourself a professional geoscientist in Manitoba. APEGM, the regulatory body for engineers, is also the regulatory body for geoscientists in Manitoba. The process to obtain a P.Ge. license is parallel to the process of obtaining a P.Eng. license in Manitoba, and therefore the steps in sections 2.1 and 2.4 would apply to you.

The legal definition of the practice of geoscience in Manitoba is as follows: “any act of documenting, analysing, evaluating, interpreting or reporting on the earth’s materials or on resources, forms or processes, or managing any of the foregoing, that requires the application of the principles of geology, geophysics or geochemistry and that concerns the safeguarding of life, health, property, economic interests, the public interest or the environment”.

Agrology; Architecture: Agrology and architecture are also regulated professions in Canada. The regulatory bodies are:

Manitoba Institute of Agrologists
201 – 38 Dafoe Road
Winnipeg, Manitoba R3T 2N2
Telephone: 275-3721
Fax: 474-7521
E-mail: mia@mts.net
Website: www.mia.mb.ca

Manitoba Association of Architects
2nd Floor, 137 Bannatyne Avenue
Winnipeg, Manitoba R3B 0R3
Telephone: 925-4620
Fax: 925-4624
E-mail : info@mbarchitects.org
Website: www.mbarchitects.org

Engineering Technicians & Technologists: Engineering technicians and technologists do not need a license to practice. However, they are encouraged to join the Certified Technicians & Technologists Association of Manitoba (CTTAM) voluntarily. Membership in CTTAM gives engineering technologists the right to use the title Certified Engineering Technician (C.Tech.) or Certified Engineering Technologist (C.E.T.), which are highly recognized and valuable professional credentials. See section 3.4 for further information on CTTAM.

Certified Technicians & Technologists Association of Manitoba
602 – 1661 Portage Avenue
Winnipeg, Manitoba R3J 3T7
Telephone: 784-1088
Fax: 784-1084
E-mail: admin@cttam.com
Website: www.cttam.com

Computer Science: Computer scientists do not need a license to practice in Manitoba. They also do not need a license to call themselves computer scientists. A college or university education is the only credential needed to work as a computer scientist.

The Province of Manitoba has created Occupational Fact Sheets which can help you understand the differences between these professions. These Occupational Fact Sheets are included in Appendix E. Appendix D also discusses the differences between engineers and engineering technologists.

4.2 Re-Training for Other Careers

Upon investigating various engineering-related career options, you may decide to look at other career options entirely. If you are interested in re-training in an entirely new career, Manitoba has a number of educational institutions with a variety of program offerings. Students can generally apply to take a single course, a complete program (certificates, diplomas, and degrees), or anything in between. Many courses are also available through Distance Education offerings, so that you can access courses even if you don't live in the same location as the university.

Colleges: Colleges in Manitoba offer a variety of certificate and diploma programs in skilled trades, technical occupations, social service areas, and health-related occupations.

- Red River College: located in Winnipeg, with regional campuses in Steinbach, Winkler, Portage la Prairie, and Gimli, Manitoba. Contact information: 2055 Notre Dame Avenue, Winnipeg, MB, R3H 0J9, Phone 632-2311, Website www.rrc.mb.ca
- Assiniboine Community College, Brandon, Manitoba. Contact information: 1430 Victoria Avenue East, Brandon, MB, R7A 2A9, Phone 1-800-862-6307, Website <http://public.assiniboine.net/>
- University College of the North, various regional campuses in Northern Manitoba. Contact information for The Pas Campus: Box 3000, The Pas, MB, R9A 1M7, Phone 627-8500; Contact information for Thompson Campus: 504 Princeton Drive, Thompson, MB, R8N 0A5, Phone 677-6450, Website www.keewatincc.mb.ca/

Universities: Universities in Manitoba offer a variety of certificate, diploma, and degree programs in general and professional studies.

- The University of Winnipeg is primarily an undergraduate arts and sciences university in Winnipeg. It offers Bachelor degrees with a variety of program majors in Education, Humanities, Science, and Social Sciences. It also offers selected Master degrees, as well as Continuing Education options. Contact information: 515 Portage Avenue, Winnipeg, MB, R3B 2E9, Website www.uwinnipeg.ca
- The University of Manitoba is a graduate-level research institution in Winnipeg. It offers Bachelor degrees in Arts and Science, as well as Bachelor degrees in professional schools such as Education, Nursing, Law, Engineering, Medicine, Dentistry, Pharmacy, Business, Agriculture, Architecture, Fine Art, Music, Social Work, Physical Education, and Human Ecology. The University of Manitoba also offers Master and Ph.D. programs in most of these areas, as well as Continuing Education options. Contact information: University of Manitoba, Winnipeg, MB, R3T 2N2, Website www.umanitoba.ca
- Brandon University is primarily an undergraduate, liberal arts university in Brandon. It offers Bachelor degrees with a variety of program majors in Education, Humanities, Science, Nursing, and Music. It also offers selected Master degrees, as well as Continuing Education options. Contact information: 270-18th Street, Brandon, MB, R7A 6A9, Website www.brandonu.ca

- Canadian Mennonite University is a Christian, undergraduate university in Winnipeg. It offers Bachelor degrees in Arts, Theology, Christian Ministries, Church Music, and Musical Arts. It also offers Continuing Education options. Contact information: 500 Shaftsbury Blvd., Winnipeg, MB, R3P 2N2, Website www.cmu.ca

Certified Accountant: Training to be a professional accountant in Manitoba is done through the Certified General Accountants association. This is both the regulatory body and the body which delivers the professional studies curriculum for accountants.

Address: 4 Donald St. South, Winnipeg, MB, R3L 2T7

Phone: 477-1256

Fax: 453-7176

Website: www.cga-manitoba.org or www.cga-online.org/mb

5.0 SUPPORT SERVICES

These services can be used at any time and at the same time as pursuing other professional requirements and goals. These services can also be used more than once.

5.1 Improving English Language Skills

Whichever decision you make regarding your professional future in Canada and whichever path you choose toward your career goals, you may find that you need to upgrade your English language skills in order to be successful at courses, examinations, or job competitions. Interviews with numerous employers of immigrants with foreign engineering qualifications indicate that the most important factor in determining an immigrant professional's level of employment is his or her ability to communicate in English. Employers have identified English language skills as the single most important skill area for immigrant professionals to address.

As a newcomer to Canada, there are a number of options available to you for English language training. Options are available on both a part-time basis and full-time basis, for several weeks or months at a time. Taking an English language course is something you could plan as a full-time activity, or as something to pursue while you are also working on other steps in your career plan.

1. The first step is to assess your current English language abilities. A free English language assessment is available to you through the Government of Manitoba, Department of Labour & Immigration. The details on this assessment can be found in section 1.1.
2. Once you have completed the language assessment, the Adult Language Training Branch can refer you to appropriate English classes. These classes include both Basic English as an Additional Language (Basic EAL) as well as Advanced English as an Additional Language (Advanced EAL). Advanced EAL is also sometimes called English for Specific Purposes (ESP).

The table on the next page is a summary of Basic EAL and Advanced EAL / ESP options in Winnipeg. These programs are free for immigrants. The details may change over time, and if you are a first-time user of these services, you are encouraged to contact the Adult Language Training Branch for an appropriate referral.

In addition to these free programs, there are a number of organizations and educational institutions in Winnipeg that offer courses for a fee. These are not included in this document.

Cost: There is no cost for the EAL programs sponsored by the Province of Manitoba, Department of Labour & Immigration.

Timeline: The times and lengths of programs vary. Some information is included below. Contact the service provider for up-to-date information.

Contact Information: Adult Language Training Branch
Manitoba Labour & Immigration
5th Floor, 213 Notre Dame Ave.
Winnipeg, MB R3B 1N3
Telephone: 945-6300

Summary of no-cost or low-cost EAL options for immigrants

NAME / SERVICE	SERVICE PROVIDER	COMMENTS
<i>Basic and Intermediate EAL:</i>		
Benchmarks 1-8, EAL/EAL Literacy	Various service providers: <ul style="list-style-type: none"> • Winnipeg School Division Adult EAL Day Program • Winnipeg School Division Adult EAL Evening Program • Applied Linguistics Centre • St. Boniface College • St. Vital Adult EAL Program • Louis Riel Division Adult EAL Evening Program • Red River College Language Training Centre 	Continuous Intake options; Day options & evening options; Some programs offer childcare for pre-school aged children; Classes offered at various locations in Winnipeg. Before you register in a program, you will need a CLB assessment. If you contact programs directly, they will refer you first to the Adult Language Training Branch for an assessment.
Community-Based Language Training	Telephone 945-0507	Community classes for women and seniors, with supports such as childcare and/or transportation.
<i>English for Specific Purposes (generally require High Intermediate to Advanced level Benchmarks (7-9), depending on the course)</i>		
Intensive EAL	Red River College Full-time programs 5 months long September – January or February – June	Language and information for settlement and employment in Canada; computer orientation; work experience placement.
English for Business Purposes		Language and cultural orientation for business in Canada; computer orientation; work experience placement.
English for Professional Purposes		Language for post-secondary training and employment; computer orientation.
English for Technical Purposes		Language and information on post-secondary training, employment, and technologies in Manitoba; computer orientation.
Academic English Preparation for University & College Entrance (AEPUCE)	Red River College Full time 12 weeks long Three starting dates per year.	Language and study skills for university and college programs in Manitoba; obtain equivalent of CanTEST or TOEFL requirement for admission to colleges and universities.

NAME / SERVICE	SERVICE PROVIDER	COMMENTS
<i>English for Specific Purposes – continued</i>		
English for Engineering Professionals	Canadian English for Professionals 7 hrs/week (evenings or Saturdays) for 6 months Web-based program available Pre-requisite: Canadian Language Benchmark level 7	Emphasis on writing & speaking, cultural aspects of communication; functional language skills for employment or further study.
Pronunciation & Accent Development	Winnipeg Transition Centre – English Skills Program Pre-requisites: Canadian Language Benchmark levels 5-8; business, professional, or managerial background. A \$35 registration fee applies to these classes. Contact the Winnipeg Transition Centre for course dates and times.	Techniques to improve oral communication and overall pronunciation skills.
Strategies for Listening and Understanding		Develop strategies and confidence in effective listening.
Professional and Technical Reading Skills Centre		Learn skills to improve reading speed, comprehension, test-taking, and study skills.
Writing Skills Centre		Learn techniques and language structure to improve business and professional correspondence.
Classes for specific language/employment needs (for example, plain language writing, using documents, etc.).	Some workplaces offer free EAL classes within the workplace. If you are employed, you can check with your employer whether she or he offers this service.	

Contact Information:

Red River College Language Training Centre
 3rd Floor, 123 Main St.
 Winnipeg, MB R3C 1A3
 Phone 945-6151 Fax 948-3214
 Website: www.rrc.mb.ca/ltc/
 E-mail: sbates@rrc.mb.ca

Canadian English for Professionals
 English for Engineering Professionals
 Website: www.cefp.ca
 E-mail: info@cefp.ca

Winnipeg Transition Centre
 259 Portage Avenue, 4th Floor
 Winnipeg, MB R3B 2A9
 Phone: 927-4375 Fax 944-8062
 Website: www.winnipegtransitioncentre.com

Please take note!

Before you register in any EAL program, you will need a CLB assessment. (see section 1.1). If you contact programs directly, they will refer you first to the Adult Language Training Branch.

5.2 Employment Supports

Whichever decision you make regarding your professional future in Canada and whichever path you choose toward your career goals, you may find that you need some support and guidance in your job searches. There are a number of options available to you, as a newcomer to Canada.

1. The table on the next page is a summary of some of the services and the service providers that provide support for cultural integration and employment. Many of these services are specifically targeted to immigrants and newcomers to Canada, and are available to you free of charge. You can access them at any time while you are working on the other steps in your career plan. The details of the specific services may change over time, and you are encouraged to contact the service provider directly for details.
2. This section also contains a list of useful websites which can help with job searches
3. There are a number of employment agencies that can assist you in a job search. They are sometimes called recruitment agencies or 'headhunters'. They are hired and paid by companies (employers) to find suitable employees for open positions within the company. These agencies save the company time by gathering and reviewing resumes for them. You can contact one of these employment agencies and there is generally no fee to submit your resume to the agency and have them try to find a suitable placement for you. You should be aware that the agency will likely try to sell you some of their other services for which there is a cost, such as re-writing your resume or practicing interview skills.
4. Finally, there are employment supports for employers that you should be aware of, and they are summarized in the next pages.

Cost: There is no cost to the support programs sponsored by the Province of Manitoba, Department of Labour & Immigration.

There is no cost for services offered through Employment Centres of the Government of Canada (Human Resources & Skills Development Canada) and the Government of Manitoba (Advanced Education & Training).

Programs or services offered through employment agencies may have a cost.

Timeline: The times and lengths of programs and services vary. Contact the service provider for up-to-date information.

Service Providers for Employment Support to Immigrants

ORGANIZATION	AREAS OF SERVICE	ADDITIONAL INFORMATION
<p>Province of Manitoba, Employment & Training Services</p> <p>In Winnipeg: 1122 Henderson Hwy 3338 Portage Ave. 1031 Autumnwood Drive 391 York Ave. Website: http://www.edu.gov.mb.ca/aet/</p>	<ul style="list-style-type: none"> • Career counselling • Job vacancy listings • Labour market information and job search assistance • Information/referral to other employment and training services and programs • Access to computers for resume writing and job search • Access to fax machine 	<p>Employment & Training Services is a government service. It also offers specialized services to persons receiving Employment Insurance benefits, job-threatened persons, persons on Income Assistance, and low-income families with children.</p> <p>Services are free to all residents of Manitoba, and are an excellent starting point to learn about other organizations, program, and services.</p>
<p>Success Skills Centre</p> <p>440-500 Portage Ave. Winnipeg, MB R3C 3X1 Phone 975-5111 Fax 975-5108 E-mail: ssc@successskills.mb.ca Website: www.successskills.mb.ca</p>	<ul style="list-style-type: none"> • Resume & cover letter writing • Interview skills • Job search techniques & self-marketing • Labour market information • Assistance with the credentials recognition process • Placements for 6-week unpaid work experience opportunities • Counselling & workshops • Workspace and computers with Internet access. 	<p>Success Skills Centre works primarily with professional and highly-skilled immigrants, who have their education and professional experience from outside of Canada.</p> <p>First-time users are asked to come to a 2-hour orientation session on the first Thursday of each month. Contact Success Skills Centre to register.</p> <p>There is no charge for the services at Success Skills Centre.</p>
<p>Employment Projects of Winnipeg</p> <p>990-167 Lombard Ave. Winnipeg, MB R3B 0V3 Phone 949-5300 or 949-5323 Fax 944-9918 E-mail: epwinc@epw.ca Website: www.epw.ca</p>	<ul style="list-style-type: none"> • Individual assessment & employment counselling • Training & development workshops • Resume & cover letter writing • Interview skills • Career planning & job search techniques • Labour market information • Assistance with volunteer and permanent job placements • Workspace and computers with Internet access 	<p>Employment Projects of Winnipeg works with immigrants and Canadian-born people, to help prepare people for full participation in the workforce.</p> <p>To become a client, contact Employment Projects of Winnipeg for an appointment.</p> <p>There is no charge for the services at Employment Projects of Winnipeg. Services are offered in 13 languages.</p>
<p>International Centre of Winnipeg</p> <p>406 Edmonton St. Winnipeg, MB R3B 2M2 Phone 943-9158 Fax 949-0734 E-mail: info@international-centre.ca Website: www.international-centre.ca</p>	<ul style="list-style-type: none"> • Employment orientation & labour market information • Pre-employment counselling and career planning • Job search skills • Workplace expectations • Workspace and computers with Internet access • Focus on entry-level transition jobs 	<p>The International Centre is a full settlement resource centre providing a broad range of programs including Employment, Settlement, Language Bank, Nutrition, Career Mentorship, Adult Education, counselling, assessment, and referrals.</p> <p>Services are free to Permanent Residents/Landed Immigrants.</p>

Job Search Websites and other Information

Service Canada Job Bank: This is a very large and comprehensive database of available positions from employers in private industry from across Canada.

www.jobbank.gc.ca

While APEGM is not a job placement service, companies in Manitoba and other provinces post job opportunities on APEGM's website:

www.apegm.mb.ca/practice/infomem/careers.html

If you do not have Internet access, you can access these databases at no cost at the following locations:

- Service Canada – Employment and Training Centres: 391 York Ave., 1122 Henderson Hwy, 1031 Autumnwood Drive, or 3338 Portage Ave.
- Millennium Library, 251 Donald Street
- Osborne Village Resource Centre, 445-B River Ave.
- Kildonan Place Shopping Centre, 1555 Regent Ave. W.
- Winnipeg Technical College, 130 Henlow Bay or 1551 Pembina Hwy
- Garden City Shopping Centre, 2305 McPhillips St.
- Employment Projects of Winnipeg, 990-167 Lombard Ave.
- Success Skills Centre, 440 – 500 Portage Ave.
- University of Manitoba, Room 474 University Centre
- University of Winnipeg Room 102-515 Portage Ave.
- Job Works, 1175 Pembina Hwy.

Job postings in government:

Government of Canada: <http://jobs.gc.ca>

Province of Manitoba: www.gov.mb.ca/csc/employment/jobs.html

City of Winnipeg: www.winnipeg.ca/hr/

Most companies also have internet websites which you can use to learn more about the company, and search career postings within the company.

Employment Agencies

There should be no cost to you for an employment agency (sometimes called recruitment agencies or ‘headhunters’) to receive your resume and work to place you in an appropriate position. There will be a charge for additional services, such as revising your resume, practicing interview skills, etc.

People First HR Services Ltd. – www.peoplefirsthr.com/

Manpower – www.manpower.ca

Personnel Management Group – www.pmg.mb.ca/

Houston Personnel Group – www.houstongrp.com/

Spherion – www.spherion.ca/index.htm

The People Bank – www.thepeoplebank.com

Assistance for Employers

SPONSOR	ASSISTANCE AVAILABLE	ELIGIBILITY
<p>Manitoba Labour & Immigration</p> <p>Employers should contact: Credentials Recognition Program 5th Floor, 213 Notre Dame Ave. Winnipeg, MB R3B 1N3 Phone: 945-7305 Fax: 948-2148 E-mail: ssimpson@gov.mb.ca</p>	<p>A wage subsidy is available for employers who provide employment experience related to your education background. The assistance paid to the employer is 40% of the employee’s wage, to a maximum of \$4500. Some employers may not be aware of this potential wage subsidy. Manitoba Labour & Immigration can give you a letter that explains the program. It can be helpful for presenting to employers when applying for jobs.</p>	<p>To be eligible:</p> <p>Employee: landed immigrants or recently naturalized Canadian; minimum 2-year post-secondary education from outside of Canada; credentials that are not formally recognized in Canada.</p> <p>Employer: must create a new, permanent, full-time position.</p>
<p>Manitoba Advanced Education & Training</p> <p>Employers should contact: Verna Kurcher, 945-5038 (North East Winnipeg) Kris Goodmanson, 945-5398 (Winnipeg Centre) Owen Thompson, 945-1418 (South West Winnipeg) Carole Robidoux, 945-7160 (St. Boniface)</p>	<p>A wage subsidy is available for employers to help unemployed people obtain on-the-job training and work experience. The assistance paid to the employer is negotiated based on individual client training needs.</p>	<p>To be eligible:</p> <p>Employee: must be legally able to work in Canada; unemployed and receiving or have received Employment Insurance benefits; job-threatened; receiving or eligible for Income Assistance; a low-income parent.</p> <p>Employer: provide a permanent employment opportunity of at least 30 hrs a week</p>

5.3 Ongoing Training and Professional Development

Internationally-educated engineers immigrating to Canada are generally found to be very willing and eager to upgrade their technical and non-technical skills and knowledge. APEGM has also identified ongoing education, training, and professional development as a responsibility for every professional engineer in Manitoba, regardless of age, ethnicity, or nationality.

As you make career decisions and pursue your professional goals, you may have a need or a desire to obtain additional training, or new training, in a given area. There are a number of options for ongoing education available in Winnipeg, with varying levels of time commitment and costs. The options range from short courses (one or two days), to longer courses (several months), to entire programs of one year or more.

The table below gives a summary of reputable organizations and educational institutions in the Winnipeg area.

ORGANIZATION	TYPES OF COURSES	ADDITIONAL INFORMATION
<p>Success Skills Centre</p> <p>440-500 Portage Ave. Winnipeg, MB R3C 3X1 Phone 975-5111 Fax 975-5108 E-mail: ssc@successskills.mb.ca Website: www.successskills.mb.ca</p>	<ul style="list-style-type: none"> • Introduction to computers (Internet, basic Microsoft Word); • Software training: AutoCAD, AccPac, Access, Excel, Simply Accounting, Power Point, Payroll 	<p>Courses vary 30-35 hrs long; Fees: no charge, except for AutoCAD, Access, Excel, and Power Point, which carry low fees. Courses are offered on demand; contact Success Skills Centre for dates and times.</p>
<p>Employment Projects of Winnipeg</p> <p>990-167 Lombard Ave. Winnipeg, MB R3B 0V3 Phone 949-5300 or 949-5323 Fax 944-9918 E-mail: epwinc@epw.ca Website: www.epw.ca</p>	<ul style="list-style-type: none"> • Introduction to computers; • Introduction to the Internet • Introduction to software packages: Excel, Access, MS Word, PowerPoint 	<p>Courses vary 15-45 hrs long; Fees: no charge. Contact Employment Projects of Winnipeg for dates and times.</p>
<p>Red River College</p> <p>2055 Notre Dame Ave. Winnipeg, MB R3H 0J9 Phone 632-2311 Website: www.rrc.mb.ca</p>	<p>Red River College offers a variety of individual courses for ongoing education in technical, management, and professional areas. See the course catalogue for descriptions, see http://me.rrc.mb.ca/Catalogue/</p> <p>Many newcomers wish to take courses to learn AutoCAD. These courses are found under the Civil Technician program.</p>	<p>Courses are generally 40 hours long and may be offered in evening or weekend timeslots. Costs are generally in the range of \$300 - \$400 per course, plus books and/or supplies. See the website or contact Red River College for course dates and times.</p>

ORGANIZATION	TYPES OF COURSES	ADDITIONAL INFORMATION
<p>University of Manitoba Extended Education</p> <p>188 CE Complex Phone 474-9921 Fax 474-7661 Website: www.umanitoba.ca/coned/ E-mail: extended@umanitoba.ca</p>	<p>The Division of Extended Education offers a variety of short courses, degree credit courses, and programs (certificates & diplomas) in management and professional areas. Some options are also available through Distance Learning.</p> <p>Students can take courses in the Faculty of Engineering and other faculties (Management, Science, Agriculture, etc.) through the General Studies option in Extended Education.</p>	<p>Since Extended Education offers a variety of course types and formats, it is best to consult Extended Education directly for course lengths, costs, dates, and times.</p>
<p>University of Winnipeg Continuing Education</p> <p>Massey Building 294 William Ave. Winnipeg, MB R3B 0R1 Phone 982-6633 Fax 944-0115 Website: www.uwinnipeg.ca/ or www.uwinnipeg.ca/index/dce-index</p>	<p>The Division of Continuing Education offers workshops, courses, and programs (certificates & diplomas) in information technology, management, and professional areas.</p>	<p>Since Continuing Education offers a variety of course types and formats, it is best to consult Continuing Education directly for course lengths, costs, dates, and times.</p>
<p>Winnipeg Technical College</p> <p>1551 Pembina Highway Winnipeg, MB R2T 2E5 or 130 Henlow Bay Winnipeg, MB R3Y 1G4 Phone 989-6500 or 989-6566 Website: www.wtc.mb.ca</p>	<p>Winnipeg Technical College offers a variety of short courses and programs in skilled trades / technical areas, information technology, and computer applications including AutoCAD and introductory computer courses.</p> <p>Students can begin courses and programs on a monthly basis.</p>	<p>Since a wide variety of courses are offered, it is best to consult Winnipeg Technical College directly for course lengths, costs, dates, and times.</p>
<p>Association of Professional Engineers & Geoscientists of Manitoba (APEGM)</p> <p>Website: www.apegm.mb.ca/pdnet/index.html</p>	<p>APEGM maintains a listing of seminars, workshops, and short courses in Winnipeg and other locations that may be of interest to engineers. These opportunities are organized by APEGM or by other technical societies and institutions.</p>	<p>Length of courses and costs vary. Refer to the course information for details.</p> <p>Generally, one does not need a P.Eng. license to attend these events.</p>
<p>Certified Technicians and Technologists Association of Manitoba (CTTAM)</p> <p>Website: www.cttam.com/Education.htm</p>	<p>CTTAM maintains a listing of seminars, workshops, and short courses in Winnipeg and other locations that may be of interest to engineers and engineering technologists. These opportunities may be organized by CTTAM or by other organizations.</p>	<p>Length of courses and costs vary. Refer to the course information for details.</p> <p>Generally, one does not need a P.Eng., C.Tech., or C.E.T. registration to attend these events.</p>

If you are employed, be sure to check with your employer for the company's professional development policy. Many employers will pay part or all of the cost of workshops, courses, or programs related to your job.

The Province of Manitoba, Employment & Training Services (ETS) **may** be able to assist with cost of training courses and programs. ETS reviews your request for assistance in relation to your skills, current circumstances, the needs of the labour market and ETS service priorities. You may be eligible to fit into one of the following categories:

- Unemployed (working less than an average of 20 hours / week) and a current or previous Employment Insurance recipient
- Unemployed and receiving or eligible for income assistance benefits
- Low income parent(s) with dependent child(ren)
- An individual about to lose your job
- Immigrants with professional qualifications

Contact:

**Province of Manitoba, Employment & Training Services
(A branch of Manitoba Advanced Education & Training)**

Locations in Winnipeg:

1122 Henderson Hwy
3338 Portage Ave.
1031 Autumnwood Drive
391 York Ave.

Website: <http://www.edu.gov.mb.ca/aet/>

5.4 Networking

An important yet difficult challenge in integrating into the engineering profession in Manitoba is to develop contacts with other engineers. This is called **networking**. Networking can help you get to know other engineers in your field of specialty, develop knowledge of the labour market in your area of engineering, develop contacts with whom to discuss career options, and develop personal relationships and support.

APEGM does not offer any formal networking opportunities for internationally-educated engineers seeking a P.Eng. license. However, there are two services that are available to the general public, including yourself:

- Professional development opportunities organized by APEGM. These often take the form of one-hour breakfast or lunch meetings with a meal and a speaker on a general area of engineering interest. The cost is generally \$10 - \$20. These events are an opportunity to learn about engineering projects and processes in Manitoba and Canada, and to meet engineers working in Manitoba. For a listing of seminars, see www.apegm.mb.ca/pdnet/index.html or call the APEGM office at 474-2736 for upcoming events.
- APEGM also publishes a newsletter for the engineering community in Manitoba. It is called the Keystone Professional. It is available on-line at <http://www.apegm.mb.ca/keydocs/index.html>. The Keystone Professional can help familiarize you with the profession in Manitoba. It covers important technical issues in engineering in Manitoba, and it summarizes the activities of APEGM and its committees.

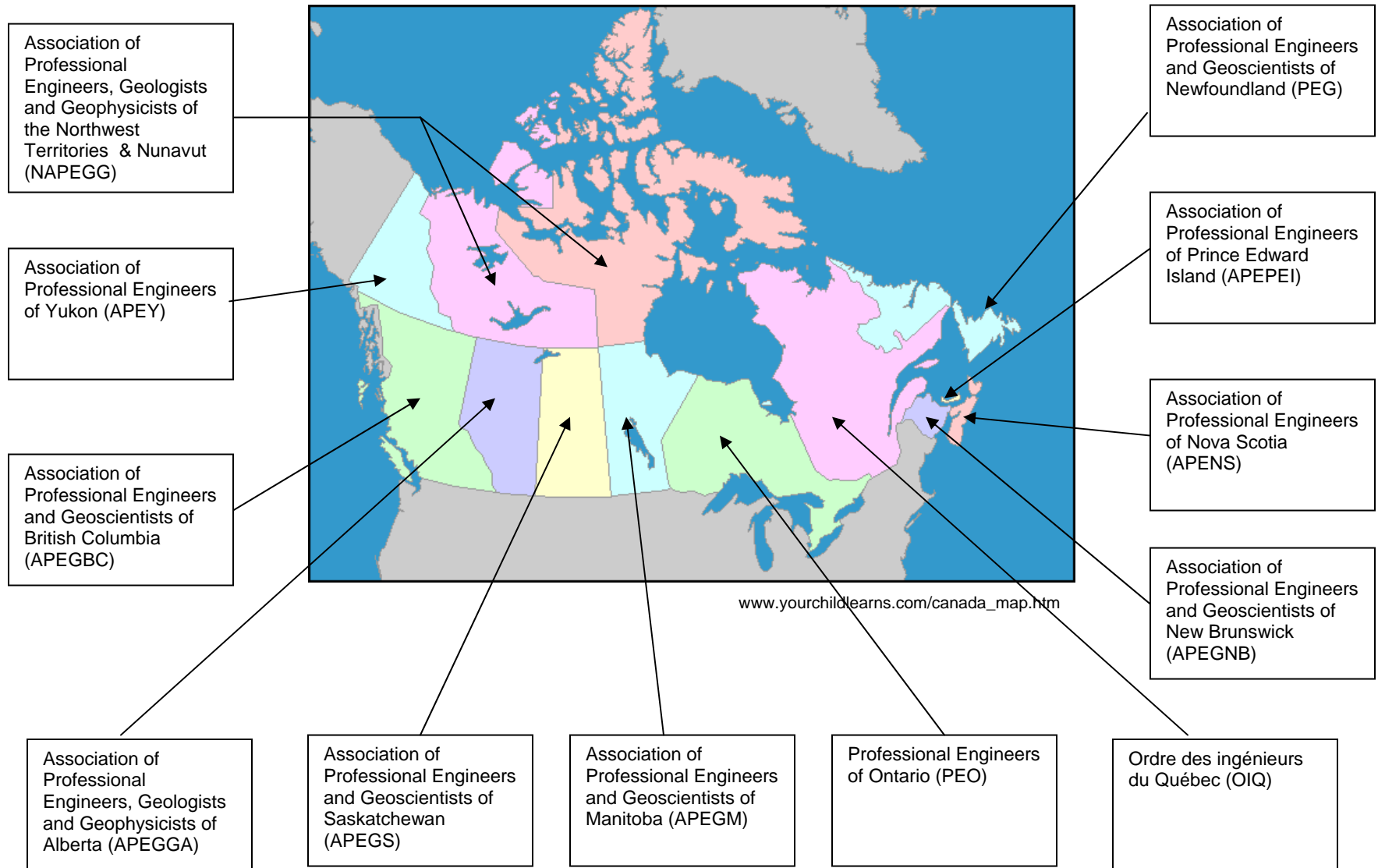
The **International Centre of Winnipeg** offers a networking program called Career Mentorship, in which internationally-educated engineers (recently immigrated, such as yourself) are matched with engineers (Canadian-born or immigrants) who have lived and worked in Manitoba for a longer period of time. The person with whom you are matched is called a mentor. This program is intended to be a source of personal support and information for immigrant professionals. To learn more about this program, or to request a mentor for yourself, contact

Career Mentorship Facilitator
International Centre of Winnipeg
406 Edmonton St.
Winnipeg, MB R3B 2M2
Phone 943-9158
Fax 949-0734
Website: www.international-centre.ca
e-mail: info@international-centre.ca

There is no cost to be involved in this networking program through the International Centre of Winnipeg.

APPENDICES

Appendix A: The Provincial & Territorial Engineering Associations (Regulatory Bodies)



In Canada, engineering is a regulated profession. The government of each Province or Territory gives the engineering profession the right and the responsibility to govern itself through the provincial engineering association. In Manitoba, the regulatory body (professional association) for engineering is called the Association of Professional Engineers and Geoscientists of Manitoba (APEGM). The names of the corresponding regulatory bodies (professional associations) for engineering in the other provinces and territories are shown on the map.

The 12 provincial or territorial engineering associations are brought together by the **Canadian Council of Professional Engineers (CCPE)**. The CCPE is the national organization of the 12 provincial and territorial associations. Its role is to coordinate the engineering profession on a national scale. CCPE serves the 12 associations by delivering national programs to ensure high standards in engineering education, professional qualifications and professional practice. CCPE also coordinates the development of national policies and guidelines on behalf of the engineering profession (to ensure that the regulation of the profession is relatively similar in each province or territory). It also promotes greater understanding of the contribution of professional engineers and engineering to society, and carries out relations with media and government on behalf of the 12 associations.

The CCPE does not have any individual members, but every licensed engineer registered with a provincial association is also indirectly a member of CCPE.

Two major activities of the CCPE include:

Through the **Canadian Engineering Accreditation Board (CEAB)**, CCPE accredits Canadian undergraduate (Bachelor-level) university engineering programs that meet educational standards. Graduates of those programs are considered by the profession to have the required academic qualifications to be licensed as a professional engineer in Canada.

Through the **Canadian Engineering Qualifications Board (CEQB)**, CCPE develops national guidelines on the qualifications, standards of practice and ethics expected of professional engineers. It also publishes the CCPE Examination Syllabus, which APEGM uses in their assessment of internationally-educated engineers.

The CCPE has no regulatory power of its own. It works through the 12 provincial associations, and on behalf of the 12 provincial associations. Therefore, although APEGM adopts the various recommendations, guidelines and documents of the CCPE (CEAB and CEQB), the process of obtaining a P.Eng. license in any province, including Manitoba, **has** to go through the provincial professional association (in this case, APEGM), and **not** through CCPE.

Contact Information

for the Canadian Engineering Associations (in alphabetical order):

Alberta: Telephone (780) 426-3990 or 1-800-661-7020; website www.apegga.org

British Columbia: Telephone (604) 430-8035 or 1-888-430-8035; website www.apeg.bc.ca

New Brunswick: Telephone (506) 458-8083; website www.apegnb.com

Newfoundland & Labrador: Telephone: (709) 753-7714; website www.pegnl.ca

Northwest Territories & Nunavut: Telephone: (867) 920-4055; website www.napegg.nt.ca

Nova Scotia: Telephone: 902-429-2250 or 1-888-80APENS; website: www.apens.ns.ca

Ontario: Telephone: (416) 224-1100 or 1-800- 339-3716; website:
www.peo.on.ca

Prince Edward Island: Telephone: (902) 566-1268; website www.apepei.com

Quebec: Telephone: (514) 845-6141 or 1-800-461-6141; website: www.oiq.qc.ca

Saskatchewan: Telephone: (306) 525-9547 or 1-800-500-9547; website www.apegs.sk.ca

Yukon Territory: Telephone: (867) 667-6727; website www.apey.yk.ca

Appendix B: Credentials Assessment and Credentials Recognition Services

The *Assessment of Academic Credentials* required and done by APEGM is **not** the same as other credential assessment services that you may be aware of.

For example, the Canadian Council of Professional Engineers (CCPE) offers a service called *The Engineering International-Education Assessment Program (EIEAP)*. The EIEAP assesses the educational qualifications of individuals who were educated and trained outside of Canada, by comparing their education to a Canadian engineering education. The EIEAP assessment provides you with information on how your foreign education compares to a Canadian engineering education. **The purpose of this assessment is to enable you to make an informed choice about whether to immigrate to Canada as a skilled worker or in the family class of immigration.** Another purpose of this assessment is to give you an idea of whether your education and training from your home country will be considered to be engineering, or whether it will fall into another professional category in Canada. This assessment by CCPE does **not** guarantee a P.Eng. license, and it does **not** replace the *Assessment of Academic Credentials* required by APEGM.

Some immigrants who came to Canada before 2004 may be aware of an assessment service through the Government of Manitoba, Labour & Immigration, called the *Academic Credentials Assessment Service*. In this assessment, your education and training from overseas is compared to an education in Canada, and you are given an *Academic Credentials Report*. **The purpose of this service is to help you understand how your education and training may be classified in Canada, in order to make informed career plans and to help define appropriate jobs.** This service is currently on hold. This service also does **not** guarantee a P.Eng. license, and it does **not** replace the *Assessment of Academic Credentials* required by APEGM.

Other immigrant settlement agencies, government-related agencies, and employment agencies may provide a service called 'credentials assessment', or something similar. Again, these services do **not** replace the *Assessment of Academic Credentials* required by APEGM. The purpose of these assessments is generally to help the immigrant define what their academic education & training and/or work experience would be called in Canada, and to help make decisions on career paths and job searches.

The **only** assessment that counts toward the P.Eng. license is the *Assessment of Academic Credentials* by APEGM.

Several reputable agencies that serve immigrant professionals also offer advisory services in how to have your foreign credentials recognized. These services may be called 'credentials recognition', or something similar. These include Success Skills Centre and The International Centre of Winnipeg (see section 5.2). These agencies have a lot of experience working with immigrant professionals, and you are encouraged to make contact with them. These agencies provide guidance, information, and explanation to immigrant professionals (including engineers) on the process of obtaining a professional license in Manitoba. They can direct you to the appropriate regulatory authority (for engineers, this is APEGM), and they can guide you through the process of credentials recognition and help you avoid longer and costlier routes. However, it is important to note that these agencies cannot and do not provide any formal or official recognition of foreign credentials on their own.

Only the assessment process with APEGM can formally recognize foreign engineering credentials in Manitoba.

Appendix C: Translation Services

The *Assessment of Academic Credentials* by APEGM requires all information to be presented in English. If your original engineering degree or diploma, transcripts, and course syllabi (course outlines) are not in English, you need to provide a notarized English translation.

Verification and notarization services are available through the Language Bank at the **International Centre of Winnipeg**.

406 Edmonton St.
Winnipeg, MB R3B 2M2
Phone 943-9158 Fax 949-0734
E-mail: info@international-centre.ca
Website: www.international-centre.ca

For short documents, including degrees/diplomas and transcripts of marks:

1. Translate the document yourself, to the best of your ability. You can also ask a friend or family member to help you.
2. Bring the original copy of the non-English document (not a fax, photocopy, or e-mail) plus the English translation to the International Centre.
3. Volunteers at the International Centre will verify the translation. Volunteers can also fill in words that you may be unsure of, and make minor corrections.
4. A Notary Public at the International Centre will notarize (certify) the translation.
5. Costs: This service is free for landed immigrants/permanent residents who have been in Canada up to three years. Otherwise, the cost is \$5 per page of translation verification plus a \$30 administration fee, for visa holders and/or those who have been in Canada three years or longer.

For long documents, including course syllabi (course outlines):

1. Translate the document yourself, to the best of your ability. You can also ask a friend or family member to help you.
2. The International Centre will help you complete a Statutory Declaration, declaring your name, your address, the name of your document(s), and that you have translated them to the best of your ability. You will be asked to sign your Statutory Declaration.
3. A Notary Public at the International Centre will notarize (certify) the Statutory Declaration.
4. Costs: This service is free for landed immigrants/permanent residents who have been in Canada less than three years. Otherwise, the cost is \$20 per Statutory Declaration for visa holders and/or those who have been in Canada three years or longer.

If you absolutely feel that you cannot translate documents yourself and none of your family or friends can help you with translation, the International Centre can also refer you to the Translation Services section of the Yellow Pages phone book for professional translators. However, this service is expensive and can cost as much as \$0.25 per translated word.

Appendix D: Differences between Engineers and Engineering Technologists

Several authors have described the differences between engineers and engineering technologists:

*“The **engineer** usually provides the key link between theory and practical applications. The engineer must have a combination of extensive theoretical knowledge, the ability to think creatively, and the knack of obtaining practical results. The Bachelor’s degree is the basic educational requirement, although the master’s degree may be preferred by some employers. In Canada, the engineer is required by law to be a member of a provincial or territorial Association of Professional Engineers in order to practice engineering. Engineers are usually concerned with creating devices, structures, and systems for human use. However, many engineers are engaged in managing engineering companies or the discovery and utilization of resources, and also are frequently employed in consulting capacities in construction, testing, and manufacturing, and as agents for governmental bodies.*

*The **technologist** usually works under the direction of engineers in applying engineering principles and methods to fairly complex engineering problems. The basic educational requirement is usually graduation from a technology program at a community college, or college of applied arts and technology. The technologist often supervises the work of others and is encouraged to have qualifications that are recognized by a technical society. In some provinces, an association of certified engineering technicians and technologists may confer the designation Certified Engineering Technologist (CET). These association are voluntary organizations, and the title is a beneficial but not an essential requirement for working as a technologist”.*

Source: Canadian Professional Engineering Practice & Ethics, 2nd edition, by Gordon Andrews & John Kemper. © 1999 by Nelson Thomson Learning. (Pages 7-8)

“The academic programs that form the basis for engineers, technologists, and technicians appear to have a great deal in common. Indeed, it is normal to find courses at universities and community colleges with the same title and very similar calendar descriptions. At times, the courses even use the same textbook. Upon looking beyond the surface however, it is clear that each group addresses the material from a different perspective.

***Engineering** courses tend to take a theoretical approach, with an emphasis on gaining an understanding of how the specific elements of the subject interact with one another. The reasons behind, and limitations of, design calculations and design processes dominates. Some time is spent considering the practical elements of the subject, but this is done to provide understanding, not in-depth skill. Codes and standards become moving targets that define minimum performance levels and require frequent modification as technology progresses. Graduates enter the real world with a sound engineering education upon which they can build their careers, but in general, without an extended package of on-the-job physical skills.*

***Technologists’** programs tend to have a more practical emphasis. Design calculations are studied assuming that the codes and standards associated with the subject provide the foundation upon which all else is based. Students in these programs gain a significant level*

of skill using current design aids and a significant level of knowledge associated with the current codes and standards. Where engineering programs only touch on the practical skills associated with the subject matter, technologists' programs provide much more hands-on experience to complement the calculations. Graduates of these programs tend to "hit the ground running" because they have been trained to work with current technical material. Their academic background tends to be narrower than the engineering graduate's and their academic skills more focused".

Source: An Introduction to Engineering: A Canadian Perspective, by M.G. (Ron) Britton. © 2003 by Pearson Custom Publishing. (Page 26).

The Association of Professional Engineers & Geoscientists of Manitoba (APEGM) and the Certified Technicians and Technologists Association of Manitoba (CTTAM) both conduct regular salary surveys of their membership. Information on the salaries of engineers and engineering technologists can be found at the websites:

Engineers: www.apegm.mb.ca and follow the links to Salary Survey

Engineering Technicians and Technologists: www.cttam.com, and follow the links to Salary Survey

**Appendix E: Occupational Fact Sheets for Geoscientists, Agrologists, Architects,
and Engineering Technicians & Technologists**

These Occupational Fact Sheets are provided by the Province of Manitoba, Labour &
Immigration



GEOSCIENTISTS

Geologists, Geophysicists and Geochemists conduct programs of exploration and research to improve our knowledge of the structure, composition, and processes of the earth. Petroleum and mining companies, consulting firms, government, and educational institutions employ them, or they may be self-employed.

EDUCATIONAL REQUIREMENTS

At the moment there are no accredited Geoscience degrees. To be eligible for an assessment of academic credentials, an applicant must have completed an appropriate post-secondary program, typically a Bachelor's degree, of at least three years' duration, in geology or geophysics or a related field such as physics, chemistry, biology, geography, or geological engineering.

WORK EXPERIENCE REQUIREMENTS

A minimum of four years of geoscience experience is required. At least one year of this experience must be obtained in a Canadian environment. At least three years of this experience must be obtained after completion of the degree.

Both education and work experience components must be met.

ASSESSMENT PROCESS

To become registered as a Professional Geoscientist in Manitoba an individual must first apply to the **Association of Professional Engineers and Geoscientists of Manitoba (APEGM)**. The applicant must submit:

- a completed application form (available from APEGM);
- original degrees or diplomas;
- all available syllabi, course descriptions and statements of marks; and
- an assessment fee of \$337.00.

If documents are not in English, notarised translations are required.

Credentials are assessed against a geology or geophysics syllabus adopted by APEGM based on a recommendation from the Canadian Geoscience Standards Board (CGSB). A course-by-course assessment is done by APEGM. As a result of this assessment, applicants are normally required to write four to ten examinations. Sometimes fewer exams are assigned depending on the completeness of the degree (in comparison with the geology/geophysics syllabus) and whether or not additional qualifying post-graduate degrees have been completed.

Examinations are held in May and October of each year. Candidates are given syllabi, textbook information etc. to help them prepare for examinations. Candidates are expected to complete an average of one examination per session. (For example, a candidate assigned four examinations will be given two years to complete them). Each examination costs \$240.00 and there is an annual administration fee of \$128.00.

Upon successful completion of examinations, candidates must enrol with APEGM as *Geoscientists-in-Training (GITs)*. The enrolment fee is \$107.00 plus the annual dues of \$116.00 (i.e. first-time enrolment is \$223.00). As *GITs*, candidates are expected to submit detailed information on their work experience, including the names and addresses of supervisors. Supervisors also must submit reports in order to verify this information. Candidates who had been assigned a confirmatory examination program are often allowed to count experience gained in other countries or provinces as well as experience gained in Manitoba while on the exam program. **It is therefore very important that candidates maintain contact with previous employers.*

Finally, all *GITs* are required to pass the *Professional Practice Examination* and provide references before they can be registered as Professional Geoscientists in Manitoba. When all requirements have been successfully completed, and all fees have been paid (*annual dues for 2005 are \$264.00*), candidates are registered in Manitoba as Professional Geoscientists.

The fees, documentation requirements, and assessment process detailed above are subject to change without notice.

For more detailed information please contact:

Association of Professional Engineers and Geoscientists of Manitoba (APEGM)

850A Pembina Highway

Winnipeg, Manitoba

Canada R3M 2M7

Phone: (204) 474-2736

Fax: (204) 474-5960

E-mail: apegm@apegm.mb.ca

Web site: <http://www.apegm.mb.ca>

*Manitoba Labour and Immigration
Settlement and Labour Market Services Branch
5th Floor – 213 Notre Dame Avenue
Winnipeg, Manitoba R3B 1N3
(204) 945-6300
Revised September 2005 (jcm)*



AGROLOGISTS

Agrologists experiment with or give advice on the production, use, processing and/or marketing of agricultural products, crops and or livestock. Agrologists work in every sector of the agricultural and food industry.

EDUCATIONAL REQUIREMENTS

Successful completion of a four-year post-secondary degree, in an agricultural discipline, equivalent to one offered by the University of Manitoba, is required.

WORK EXPERIENCE REQUIREMENTS

Candidates must have a minimum of three years Canadian work experience in agriculture after their education is complete.

ASSESSMENT PROCESS

To become a Professional Agrologist in Manitoba candidates must first apply to The **Manitoba Institute of Agrologists** (MIA) and submit:

- a completed application form;
- original of notarized certificate(s), degree(s), and transcripts;
- references from two practicing Agrologists in Canada*;
- one character reference*;
- registration fee (\$50.00)
- Annual membership fee (\$265.00)

If documents are not in English or French, notarized translations are required.

* Candidates who have not worked in Canada should consult with MIA regarding references.

Candidates whose education is assessed as equivalent but who do not have Canadian work experience in agriculture will be required to enter into the *Agrologist-in-Training Program*. This training program requires candidates to work under the supervision of a Professional Agrologist. It also requires participation in a professionalism seminar and involvement in MIA activities. The program is 1-3 years in length for candidates with minimal to no Canadian experience.

Candidates whose education is assessed as not equivalent may be considered for membership as a Technical Agrologist. Candidates who do not have 1-3 years of Canadian work experience will be required to enter into the *Technical Agrologist-in-Training Program*. This training program requires candidates to work under the supervision of a Technical Agrologist. It also requires participation in a professionalism seminar and involvement in MIA activities.

When all requirements have been met and fees have been paid candidates are registered in Manitoba as Professional Agrologists (P.Ag).

The fees, documentation requirements, and assessment process detailed above are subject to change without notice.

For more detailed information contact:

The Manitoba Institute of Agrologists (MIA)

201 - 38 Dafoe Road
Winnipeg, Manitoba
Canada
R3T 2N2
Phone: (204) 275-3721
Fax: (204) 474-7521
E-mail: mia@mts.net
Web Site: www.mia.mb.ca

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(204) 945-6300
Revised August 2005



ARCHITECTS

Architects conceptualize, plan and develop designs for the construction and renovation of buildings primarily intended for human habitation (commercial, institutional, residential, etc.). Architectural firms, private corporations and government employ architects. Some are self-employed.

The profession of architecture is regulated in the Province of Manitoba. To be permitted to practice as an architect one must be licensed by the Manitoba Association of Architects (MAA).

EDUCATIONAL REQUIREMENTS

A degree in architecture, certified by the Canadian Architectural Certification Board (CACB) to meet the Canadian Education Standard, is required.

WORK EXPERIENCE REQUIREMENTS

All candidates must complete a period of internship and satisfy the Canadian Experience Standard. This period must be a minimum of 5600 hours (including a minimum of 3720 hours in various mandatory components). Applicants may be given credit for work experience gained outside of Canada.

ASSESSMENT PROCESS

Step One

To become a licensed Architect in the province of Manitoba a candidate must first apply to the **Canadian Architectural Certification Board (CACB)** for assessment of academic qualifications. The applicant must submit:

- a completed application form (available from CACB website);
- a notarized copy of her/his transcript outlining all studies relevant to the architecture degree;
- notarized copies of original degrees;
- course syllabi (i.e. description of courses studied);
- portfolio of studio work; and
- an application fee of \$1,123.50 (\$1,050.00 + 7% GST)

If documents are in other than English or French, notarized translations are required.

If the applicant's academic qualifications do not meet the Canadian Education Standard the applicant **must** successfully complete the courses recommended by the CACB.

Step Two

After an applicant has obtained CACB Certification, he or she must find a Mentor (a registered architect who is not an owner, partner or shareholder of the participating employer's firm), and apply for Intern Membership with the **Manitoba Association of Architects (MAA)**. The applicant must submit:

- a completed application form (available from MAA office or website);
- a mentor confirmation form (available from MAA office or website);

- an employer confirmation form (available from MAA office or website); and
- evidence of CACB Certification.

(Annual Intern Membership fee is \$117.70, including GST).

Each applicant must record her or his experience and satisfy the requirements of the Canadian Experience Record Book. Once the applicant has been registered in the Intern program he/she can submit a record of previous architectural work experience for consideration.

Applicants must also successfully complete the *Architect Registration Examination (ARE)*. Examinations are administered on computers at test centers across Canada and the United States. The cost for all nine sections of the *ARE* is \$1,071 U.S. (plus GST). Applicants may begin writing the examinations once they have obtained Intern membership in the MAA.

Note: Intern memberships must be renewed each year. To renew a membership applicants must satisfy MAA's Mandatory Continuing Education requirement (more detailed information is available from the MAA).

When all internship and continuing education requirements have been completed, applicants must submit three character references and a completed application for registered membership *(plus the \$214.00 application fee)* to MAA.

When all requirements have been successfully completed the candidate is given a licence to work as an Architect in the province of Manitoba. *(Annual registered membership fee is \$695.50, including GST.)*

The fees, documentation requirements and assessment process detailed above are subject to change without notice.

For more detailed information contact:

The Canadian Architectural Certification

1508 - 1 Nicholas Street
Ottawa, Ontario
Canada K1N 7B7
Phone: (613) 241-8399
Fax: (613) 241- 7991

Email: info@cacb.ca

Web Site: <http://cacb.ca>

Manitoba Association of Architects

2nd Floor, 137 Bannatyne Avenue
Winnipeg, Manitoba
Canada R3B 0R3
Phone: (204) 925-4620
Fax: (204) 925-4624

Email: info@mbarchitects.com

Web Site: www.mbarchitects.org

*Manitoba Labour and Immigration
Settlement and Labour Market Services Branch
5th Floor – 213 Notre Dame Avenue
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(204) 945-6300
Revised August 2005*



ENGINEERING AND APPLIED SCIENCE TECHNICIANS & TECHNOLOGISTS

Certified Engineering Technicians and Technologists are graduates from an accredited or equivalent college or university program in an engineering technology or an applied science technology. They are employed in such fields as planning and design; construction and installation; production and operation; research and development; teaching and training; technical marketing; and administration and management.

To work as an Engineering or Applied Science Technician or Technologist certification is not mandatory. However to use the titles Certified Applied Science Technician or Certified Engineering Technician; or Certified Applied Science Technologist or Certified Engineering Technologist; one must be registered with the Certified Technicians and Technologists Association of Manitoba (CTTAM). Many employers require registration with CTTAM while others recognise registration as a beneficial professional qualification.

EDUCATIONAL REQUIREMENTS

A degree, college diploma, certificate or equivalent education in an Engineering technology or Applied Science discipline is required.

Applied Science and Engineering disciplines of certified members include:

Mechanical	Civil	Electrical
Electronics	Computer	Petroleum
Instrumentation	Surveying	Biological
Chemical	Metallurgical	Geological
Industrial	Architectural	Mining Forestry
Agricultural	Construction	

WORK EXPERIENCE REQUIREMENTS

A minimum of two years practical engineering technology experience, satisfactory to the CTTAM Certification Board, is required. Foreign work experience is not considered until some Canadian work experience is obtained and verified.

ASSESSMENT PROCESS

When applying for assessment, applicants must submit the following to the **Certified Technicians and Technologists Association of Manitoba (CTTAM)**:

- a completed application form (available from CTTAM);

- a syllabus (i.e. a description of courses studied);
- original transcripts;
- original diploma or certificates;
- evidence of landed immigrant status;
- an up-to date resume; and
- an assessment fee of \$140.00.

*If documents are not in English, notarised translations are required.

All applicants are required to write the *Professional Practice Examination* (fee is included in the assessment fee). This examination covers the Association's Code of Ethics and legislation related to practise. A study guide is provided by CTTAM to help applicants prepare. Examinations are held once per month and are “open-book”.

Full membership is granted by CTTAM to individuals who satisfy both the academic and work experience requirements of the association. Membership fee for Certified Members is (\$155.00)

Associate Membership is granted if academic requirements are met, but work experience requirements are not, **or** if the work experience requirements have been met, but not the minimum educational requirements. Associate members are expected to work toward full membership. Associate Membership fee is (\$110.00)

The fees, documentation requirements, and assessment process detailed above are subject to change without notice.

For more detailed information contact:

The Certified Technicians and Technologists Association of Manitoba (CTTAM)

602 – 1661 Portage Avenue

Winnipeg, Manitoba

Canada R3J 3T7

Phone: (204) 784-1088

Fax: (204) 784-1084

E-mail: admin@cttam.com

Web site: <http://www.cttam.com>

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5th floor – 213 Notre Dame Avenue
Winnipeg, Manitoba, Canada R3B 1N3

Telephone: 204-945-6300

Fax: 204-948-2148

E-mail: immigratemanitoba@gov.mb.ca

Website: www.immigratemanitoba.com