THE STIC PROGRAM

Sector-specific orientation, Terminology training, Information and Counselling

OVERVIEW & ORIENTATION WORKSHOP FOR ENGINEERS

Participant's Workbook

You are a newcomer to Canada and to Ontario.

You have education and experience in engineering but …

- Can you speak knowledgeably about your field in Ontario?
- Do you know where the jobs are and how to find out about openings?
- Do you understand the laws that apply to the engineering profession?
- Do you know if you need a license to practice your profession? Do you know how to get one?
- Do you know if you can you work in a related field?

If the answer to any of these questions is “No”, this Overview & Orientation Workshop is for you.

TABLE OF CONTENTS

WORKSHOP GOALS

In this workshop, you will…

Learn about…

- ❑ The labour market in general, and in industries related to engineering.
- ❑ The requirements for members of your profession in Ontario.
- ❑ The legislation related to your profession in Ontario.
- ❑ The requirements for obtaining a licence.
- ❑ The impact of technology on engineering in Ontario.
- ❑ Opportunities and rules surrounding self-employment for engineers.
- ❑ Opportunities for networking with other members of your profession.
- ❑ Opportunities in related occupations, specifically engineering technologists and technicians.

Practice how to…

- ❑ Market your skills.
- ❑ Discuss issues affecting your profession and the industries that employ engineers.
- ❑ Network with peers.

Create a plan to…

- ❑ Research the labour market.
- ❑ Complete the licensing process for your profession.

REGULATED PROFESSIONS: HOW MUCH DO YOU KNOW?

Circle the correct answer for each question.

1. **A profession is "regulated" when:**

   A) Entry into the profession is controlled by an organization.
   B) There is provincial legislation defining who can practice the profession.
   C) There are standards of practice that members of the profession must meet.
   D) All of the above.
   E) None of the above.

2. **You cannot work as a member of a regulated profession without a license.**

   True False

3. **Professional regulatory bodies have responsibility for:**

   A) Setting entry and training requirements.
   B) Assessing qualifications and credentials.
   C) Disciplining members of the profession.
   D) All of the above.
   E) None of the above.

4. **Professional regulatory bodies are made-up of members of the profession they control.**

   True False

5. **Which of the following occupations are <u>not</u> regulated professions?**

   A) Architect
   B) Lawyer
   C) Computer programmer
   D) Engineering Technologist
   E) Chartered Accountant
   F) Massage Therapist

6. **In most cases, people who have been educated outside of Canada are not permitted to practice their profession in Ontario.**

   True False

7. **Most professional regulatory bodies require new members of the profession to have:**

   A) A degree from a Canadian university or equivalent.
   B) Work experience in Canada.
   C) Acceptable English or French language skills.
   D) All of the above.
   E) None of the above

SECTION ONE:

THE LABOUR MARKET

In this section, you will learn about:

- The labour market in Canada
- Major industries in which engineers are employed
- Issues in the labour market for members of your profession
- Labour market research techniques
- Skills in demand

THE LABOUR MARKET:

OVERVIEW

Canada's economy is experiencing dramatic changes. The recovery from a recession in the early 1990s was rather slow but at the end of 1998, Canada had experienced seven consecutive years of positive economic growth (source: Industry Canada). In the new millennium, the labour market has been rather weak. Canada narrowly avoided a recession in 2001. Employment in the year 2003 got off to a slow start but it surged ahead during the last four months of the year.

Employment is improving, but many people are still unemployed in Canada because they do not have the skills that Canadian businesses need. Changes in the Canadian labour market have taken place so quickly, that many Canadian workers have been left behind. Many jobs have been rendered obsolete because of technology. Increasing global competition has meant some companies have relocated to countries where labour is cheaper. And as emerging industries begin to flourish, others are dying out.

Traditionally, Canada's economy has been based on its vast natural resources -- forestry, fishing, mining, and agriculture, for example. Today, however, technology, globalization and other factors have brought new industries to the forefront – tourism, financial & business services, high technology, for example. What does this mean for you, the job seeker?

Most jobs are no longer advertised. When they are, employers are often flooded with applications. To be successful, you must know where to find the jobs. You must know what your skills are and find employers who need those skills.

You are expected to keep on top of the very latest trends in your profession. Because change – especially technological change – is constant, employers need people who can adapt to change. They need people who are prepared to be "lifelong learners" and will keep their skills up-to-date.

Communication is important in every job. Changes in the way companies and organizations work has meant that virtually every worker needs to communicate with others. There are very few occupations in Canada where speaking, listening and writing in English or French are not critical.

Every worker is like a small business. Not only is self-employment growing rapidly in Canada, but the skill of self-marketing has become vital to all workers. Job seekers need to present their skills and knowledge as if they are selling a product to a consumer.

Successful job seekers, therefore, understand the job market. They know what skills are in demand and where to find the employers. They can articulate to an employer how their skills and knowledge will benefit the employer – now and in the future

LABOUR MARKET TERMS

Draw a line to match the word or phrase on the left with the correct definition on the right.

Attrition	An organization that represents and negotiates on behalf of a group of workers.
Baby Boomers	When an individual markets his or her skills for hire on an "as-needed" basis to companies, organizations.
Benefits	The sharing of labour, production, ideas, knowledge, products and services across borders.
Contract Work	Additional incentives, beyond wages, provided by an employer to its employees.
Downsizing	Usually refers to work secured for a specific period of time or for the completion of a specific project. Often does not include benefits.
Demography	Vacancies due to retirement or death of the workers.
Globalization	The generation of people born between 1945 and 1966; because of its size, this generation has a profound effect on the economy and the labour market.
Industry	Occurs when one company has some of its work done by another company.
Labour Force	The part of the working-age population participating in work or actively job seeking.
Outsourcing	The study of population patterns which provides information such as statistics on birth, death, and age in the community.
Self-Employment	Jobs that offer full-time, full-year work with a single employer. They usually provide benefits and some career prospects.
Standard Jobs	Occurs when an individual works in a job for which he or she is overqualified (i.e. has significantly more education or skills than the job requires).
Under-employment	A specific branch of manufacture and trade. Examples: Forestry, Financial Services.
Union	An attempt to improve efficiency by reducing the size of a company's workforce.

THE LABOUR MARKET: ENGINEERING IN CANADA

The Canadian Council of Professional Engineers (CCPE) projects a massive number of retirements in the next 10 years as baby boomers leave the workforce, creating a shortage of many engineers, technologists and technicians in Canada by the year 2005. Many of you have come here knowing that Canada needs your skills and expertise; yet you have not found work in your field. Finding your place in the Canadian labour market means knowing the answers to three main questions:

- **What kinds of engineers does Canada need?**
- **What industries in Canada need those engineers?**
- **What skills do employers in those industries need?**

The following exercises are intended to help you answer these questions.

THE LABOUR MARKET: ENGINEERING IN CANADA

Based on what you have learned about the labour market in this workshop so far, and what you know already, try to predict whether demand will grow or decline for the following types of engineers. State your reasons for that prediction.

Chemical Engineers
Growing or Declining? _____

Why? _____

_____

Civil Engineers
Growing or Declining? _____

Why? _____

_____

Electrical/Electronic Engineers
Growing or Declining? _____

Why? _____

_____

Industrial Engineers
Growing or Declining? _____

Why? _____

_____

Mechanical Engineers
Growing or Declining? _____

Why? _____

_____

Computer Engineers
Growing or Declining? _____

Why? _____

_____

THE LABOUR MARKET: ENGINEERING IN CANADA

Now try to predict whether the following *industries* are likely to experience growth or decline in the next several years. State your reasons (*the first one has been completed for you*).

Manufacturing: (Growing) or Declining?

Why? *Industry is export-driven; free trade and globalization have opened up new markets; automotive industry experience rapid growth.*

Construction: Growing or Declining?

Why? _____

Aerospace: Growing or Declining?

Why? _____

Telecommunications: Growing or Declining?

Why? _____

High Technology/Computing: Growing or Declining?

Why? _____

Environment: Growing or Declining**?**

Why? _____

Agriculture: Growing or Declining**?**

Why? _____

Mining: Growing or Declining**?**

Why? _____

THE LABOUR MARKET: RESEARCH PRACTICE

Read the following article and, as a group, form answers to the questions that follow.

Chip maker buys B.C. software firm (page 1 of 2)

U.S. company's $414-million purchase of HotHaus intended to accelerate development of interactive TV

By WENDY STUECK
The Globe & Mail, British Columbia Bureau
Monday, July 19, 1999

Vancouver -- Broadcom Corp., a U.S. maker of broadband communications chips, is buying a small and little known B.C. software developer in a transaction worth an estimated $414 million.

Based in Irvine, Calif., Broadcom yesterday announced its acquisition of HotHaus Technologies Inc., a five-year-old private company with 70 employees and a 1998 revenue of only about $5-million.

The companies said the transaction is intended to make them market leaders in the race to develop interactive television and other electronic devices.

Under the terms of the agreement, HotHaus shareholders will be able to exchange their HotHaus shares and options for stock in Broadcom, which has reserved two million shares of its class B common stock to close the deal.

Based on the closing price of Broadcom shares on the Nasdaq Stock Market on Friday, the transaction is valued at $280 million (U.S.) or roughly $414 million (Canadian).

The companies said yesterday HotHaus will continue to operate in Vancouver, as a division of Broadcom, under the direction of HotHaus president and founder Ross Mitchell.

Mr. Mitchell said yesterday the acquisition gives HotHaus access to Broadcom's worldwide sales organization and a strong research partner to push forward into new markets.

"I don't see any speed bumps around this deal at all."

In the short term, the winners in the deal include Mr. Mitchell, who founded the company in 1994 and who, along with his employees, owns about one-third of the company.

The deal also means handsome returns for Vancouver-based investment fund Working Opportunity Fund, which first invested in HotHaus in 1996, and Texas Instruments Inc., a long-time customer and strategic partner that now owns about 30 per cent of HotHaus.

GrowthWorks Capital Ltd., manager of the Working Opportunity Fund, said the fund will gain more than $100-million in the deal and called the takeover "the largest high-tech merger transaction in British Columbia's venture capital history."

Founded in 1991, Broadcom has become a leader in developing integrated circuits, or chips, that make high-speed broadband communications available to and within homes and businesses.

HotHaus is a pioneer in voice over Internet Protocol, or voice-over IP,

Chip maker buys B.C. software firm (page 2 of 2)

technology, which is technology that sends voice signals over the Internet. Together, the companies plan to develop chips and components that will make the much-hyped interactive television, along with a host of other applications, a reality.

For the consumer, that means gadgets like video phones, high-speed Web browsers and even E-commerce applications that could allow, say, television watchers to instantly find out more information about, or purchase, an item they see on their favourite program.

Such technologies have, in general, not yet lived up to their hype. But new software and components, like the ones being developed by Broadcom and HotHaus, mean that new devices will be easier and more attractive to use, Broadcom president and chief executive officer Henry T. Nicholas III said yesterday.

The companies have been working together closely for the past year, Mr. Nicholas said. "It's an ideal merger, because we're both working toward the same goal." There is no overlap in technology between the two companies, he added, so there will be no need to streamline staff or operations.

In its brief history, HotHaus has gained a reputation for living up to its name in terms of rapid growth in sales and employees, and through its emphasis on research and development. An engineer himself, Mr. Mitchell built strong development teams that would, on occasion, work around the clock to meet a client deadline or perfect a new application.

Mr. Nicholas said he found that culture appealing, and added that it matches the energy at Broadcom.

"It impressed me that we would make calls in on Saturday at 1 a.m. and a very large percentage of the company was sitting there working."

With HotHaus, its first software acquisition, Broadcom says it is now better positioned to target the growing voice over Internet Protocol market, systems that can ship voice and images, as well as data, over packet-switched systems. (Traditionally, voice transmissions have gone over circuit-switched networks.)

The merger has been approved by the boards of directors of both companies, and is expected to close within 60 days, subject to regulatory and shareholder approvals.

The race for interactive television technology sped up last week when Microsoft Corp. invested $600-million in Rogers Communications Inc. as part of an alliance aimed at getting interactive TV services into Canadian homes.

LABOUR MARKET RESEARCH PRACTICE

Answer the following questions based on the article Chip Maker buys B.C software firm.

1. What kind of company is HotHaus Technologies?

2. Who is the head of HotHaus Technologies?

3. What changes are likely to occur at HotHaus as a result of its takeover by Broadcom Corp.?

4. What skills are HotHaus likely to be looking for?

5. What kind of working environment do you think HotHaus Technologies offers?

6. If you were to submit your resume to the head of Hothaus Technologies, what points might you make in your cover letter?

THE LABOUR MARKET: SKILLS IN DEMAND

From the labour market material in your resource package, select the articles and documents most appropriate to your background. Then complete the following:

What is your engineering discipline (i.e. mechanical, chemical, etc.)?

_____

The tasks and responsibilities associated with this type of engineer are:

_____

_____

_____

Of these duties and responsibilities that you have just listed, put a check mark beside those that you have performed in previous work experience.

List some industries that typically employ members of your engineering discipline:

_____

_____

Of these industries, put a check mark beside those that most interest you in terms of employment. Are these industries experiencing growth?

List some skills that you think are in demand in the industries you have chosen.

_____

_____

List some employers – either from the articles or from other sources – that are operating in the industries you have chosen.

_____

_____

THE LABOUR MARKET: RESEARCHING COMPANIES

Once you have determined what industry you would like to work in and what kind of position you are looking for, you will need to research specific companies that might hire you. Most jobs in Canada are not advertised in major newspapers. Instead, successful job searchers target companies where they would like to work, and they conduct research on a company and know something about it well before the interview.

Steps to Researching Companies

1. **Determine what kind of job you are looking for and in what industry.** You should know what job titles you are qualified for and be prepared to present your skills and experience as they apply to that job title. You should also have a rough idea of what salary to expect.

2. **Find the names of as many companies as possible** that operate in the industry you are interested in. Use newspapers, magazines, the Yellow Pages, business directories and the internet to find the names of companies.

3. **Find out some basic information** about those companies.
   - Do they hire people with your experience and skills?
   - Where is the company located?
   - What kind of working conditions and salaries do they offer for people in your position?

   Use business directories at your local library, the Internet, and newspaper / magazine articles. In some cases, you may have to make a call to the company.

4. **Narrow your list.** Select about 10 companies that you think you are most interested in working for and that might have opportunities suited to you.

5. **Research those companies**. Use the sources described on the following page to find detailed information on your targeted list.
   - How big is the company? Is it growing or downsizing?
   - Are they changing, starting new departments?
   - Are there particular skills they need?
   - In what job titles are people with your skills hired?
   - Who is responsible for hiring them? To whom should you send a resume?
   - Do they post and/or advertise job opportunities?

THE LABOUR MARKET:
USING LIBRARIES FOR LABOUR MARKET RESEARCH

How library material is organized

Most materials in a library are catalogued. Usually, library catalogues are contained in a computer database easily used by library patrons; however, catalogues may also be on microfiche or in card form.

Items in a catalogue are normally organized under three headings:

- Author
- Title
- Subject

Therefore, if you know either the author or the exact title of the item you are looking for, you will be able to use the library catalogue to find it. If you do not know the title or the author, you can search for the item using the subject function. Some library catalogues also have a "keyword" function; this allows you to search for items using a word or phrase.

When you have found the catalogue record for an item you are interested in, note its "call number" and use that number to find it on the shelves.

All libraries use a classification system to catalogue their holdings. In Canada the Dewey decimal system is the most widely used. The Dewey decimal system provides ten major indexing categories that are further divided into subcategories. The major Dewey decimal categories are:

000-099	General knowledge (Encyclopedias, Newspapers)
100-199	Psychology & Philosophy
200-299	Religion
300-399	Social Sciences*
400-499	Language
500-599	Science and Mathematics
600-699	Applied Sciences and Industries*
700-799	Fine Arts and Recreation
800-899	Literature
900-999	History, Geography Travel and Biography

*Most business and engineering information is contained in these sections.

THE LABOUR MARKET: USING LIBRARIES FOR LABOUR MARKET RESEARCH

Some Basic Library Resources for Researching Companies

Directories

Your reference library will likely have some or all of the following business directories:

Blue Book of Canadian Business
Canadian Distribution Directory
Canadian Key Business Directory
Canadian Trade Index
The Dun & Bradstreet National Directory of Canadian Service Companies
Fraser's Canadian Trade Directory
Made in Canada (Business Opportunities Sourcing System) B.O.S.S. Vol. 1 Product; Vol. 2 Company
Ontario Business Directory
Scott's Ontario Manufacturers Directory

Annual Reports and Corporation Files

Some reference libraries hold the annual reports and other information about Canadian companies – usually those that trade on the stock market. Ask a reference librarian if they have this information.

Financial Post Investment Reports

These reports are published for the top 500 Canadian public companies. They provide historical and current data, investment recommendations, latest earnings and performance analysis.

On-Line Databases

Your library may offer access to computer databases. You can use these to find articles and other information about companies.

Glossary of Library Terms

Call number: A group of letters and numbers, given to each book and to each serial in a library that acts like an address.

Circulating/Non-Circulating: Indicates whether material can be borrowed from the library (circulating) or must be used within the library only (non-circulating)

Citation: Information about a publication or other item that will help someone identify and locate that publication. For example, a citation to a magazine article will usually include the author and title of the article, the title of the magazine, the volume number, page numbers and the date of publication.

Holds: A function that allows someone to request a book that is currently signed out to another person, preventing that person from renewing it.

Index: An alphabetical list of topics, names of persons, authors or titles which serves as a guide to finding information in a publication or a group of publications. In the library, you may use journal indexes to find references to journal articles.

On-line database: Information stored in computer files. Examples of databases found in libraries are catalogues of library collections and indexes to journal articles.

Periodicals: Publications that appear at intervals of more than one day, such as weekly, monthly or quarterly. Magazines are an example of a periodical.

A Reference: A citation to an item such as a book or magazine article.

Reference Material: Material that cannot be taken out of the library, such as dictionaries, directories, atlases.

THE LABOUR MARKET:
USING THE INTERNET FOR LABOUR MARKET RESEARCH

To use the Internet, you must have an account on a network that is connected to the Internet. If you do not have a computer with Internet access at home, many libraries and employment resource centres offer access to the Internet on-site.

The Internet provides a variety of services and information of use to job seekers and professionals, such as:

- Company and employer profiles through the World Wide Web
- Discussion groups, offering networking opportunities
- Government documents
- Information about professional associations and licensing bodies
- Email, allowing you to send and receive messages.

The World Wide Web is a network of machines all over the world that provide information and are linked together. Users go from one page to another simply by clicking a linked image, word or phrase within the text of the document.

The World Wide Web has become the foremost information service on the Internet. Virtually anything you can think of is on the Web. Unlike libraries, however, the World Wide Web is not catalogued – that is, it is not organized by any one central source. The best way to find information on the Web, therefore, is by using a "search engine".

A search engine is a program that searches the World Wide Web for sites that meet the criteria you enter. You access search engines on the Web itself. Some search engines offer "subject trees" – a series of categories and sub-categories that you select to find information you are interested in. Some popular search engines include:

www.altavista.com
www.yahoo.ca
http://www.google.ca/
http://groups.google.com/
(for specialty topics)

http://www.alltheweb.com/
www.metacrawler.com
www.hotbot.com
http://www.scirus.com/
(for scientific information)

THE LABOUR MARKET:
USING THE INTERNET FOR LABOUR MARKET RESEARCH

Glossary of Internet Terms

Email: Electronic Mail – messages, usually text, sent from one person to another via computer. Email can also be sent automatically to a large number of addresses; this is called a Mailing List or Listserv.

HTML: Hypertext Markup Language – the coding language used to create Hypertext documents for use on the World Wide Web.

Hypertext Link: Links are pointers to other web pages that make it easy to follow a thread of related information. These links lead you to more information whenever you choose to follow them.

Newsgroup: The name for discussion groups on Usenet.

Query: A search request. A combination of words and symbols that defines the information that the user is seeking. Queries are used to direct the search tool to appropriate databases.

Search Engine: A program that searches for web sites that correspond to parameters you set.

URL: Uniform Resource Locator – a standardized system for describing the location of any resource on the Internet that is part of the World Wide Web; often called a Web-site address. Example: www.gov.on.ca.

Usenet: A world-wide system of discussion groups called Newsgroups.

Web Browser: A software program that connects you to sites on the World Wide Web. Examples: Netscape, Internet Explorer.

Web Pages: The World Wide Web consists of web pages, each of which contains information on a particular topic. The main Web page of a web-site is called its Home Page.

Web Site: A specific address or URL in a computer network.

THE LABOUR MARKET: RESEARCH PLAN

Use the following worksheet to create a research plan that will help you stay on top of the trends and issues for members of your profession and increase your understanding of the labour market. If necessary, use the list of labour market resources provided on the following pages.

Identify at least three sources of information you will use to find out about the **skills in demand** for members of your profession. For each source, indicate where you will find the source (e.g. a library, resource centre, Internet, subscription, etc.)

Identify at least three sources of information you will use to locate and learn about **specific employers**:

Identify at least three resources you will use to find out about specific **job opportunities**.

THE LABOUR MARKET: ISOLATING REQUIREMENTS

Use the sample job advertisements provided in your Resource Package to isolate the requirements and assess your own status. Put a check mark beside each requirement you believe you meet.

POSITION #1

JOB TITLE: _____

EDUCATIONAL REQUIREMENTS:

❑ _____

❑ _____

EXPERIENCE REQUIREMENTS:

❑ _____

❑ _____

ADDITIONAL REQUIREMENTS:

❑ _____

❑ _____

❑ _____

OTHER VALUED SKILLS/ASSETS:

❑ _____

❑ _____

POSITION #2

JOB TITLE: _____

EDUCATIONAL REQUIREMENTS:

❑ _____

❑ _____

EXPERIENCE REQUIREMENTS:

❑ _____

❑ _____

ADDITIONAL REQUIREMENTS:

❑ _____

❑ _____

❑ _____

OTHER VALUED SKILLS/ASSETS:

❑ _____

❑ _____

THE LABOUR MARKET:
EFFECTIVE TEAM SKILLS

Use the space provided below to list the qualities you think makes a person an effective team member.

In your group, try to reach a consensus on the top 5 qualities of an effective team member.

1.

2.

3.

4.

5.

BEHAVIOUR DESCRIPTION INTERVIEW QUESTIONS

1. **Describe a recent example of a time when you worked as a member of a team.**

    - What was the purpose of the team?
    - What was your role on the team?
    - What strengths did you bring to the team?
    - What challenges did the team experience?
    - What do you enjoy about working with others?
    - What do you dislike about working with others?

2. **Describe how you have contributed to strong morale and team spirit in an organization.**

    - What was the spirit like before?
    - How did you work to maintain it over time?

3. **Give an example of a situation in which you have successfully built and maintained a good relationship with a team.**

    - What was your approach to team building?
    - What were the obstacles you faced in building/maintaining the rapport?
    - What made your approach successful?

**The Employability Skills 2000+ Profile was created by the Conference Board of Canada*

EMPLOYABILITY SKILLS 2000+ PROFILE*:

Fundamental Skills
The skills needed as a base for further development

Communicate

- read and understand Information presented in a variety of forms (e.g. words, graphs, charts, diagrams)
- write and speak so others pay attention and understand
- listen and ask questions to understand and appreciate the points of view of others
- share information using a range of information and communication technologies (e.g. voice, e-mail, computers)
- use relevant scientific, technological and mathematical knowledge and skills to explain or clarify ideas

Manage Information

- locate, gather and organize information using appropriate technology and information systems
- access, analyze and apply knowledge and skills from various disciplines (e.g. the arts, languages, science, technology, mathematics, social sciences, and the humanities)

Use Numbers

- decide what needs to be measured or calculated
- observe and record data using appropriate methods, tools and technology make estimates and verify calculations

Think & Solve Problems

- assess situations and identify problems
- seek different points of view and evaluate them based on facts recognize the human, interpersonal, technical, scientific and mathematical dimensions of problem
- identify the root cause of a problem
- be creative and innovative in exploring possible solutions readily use science, technology and mathematics as ways to think,
- gain and share knowledge, solve problems and make decisions
- evaluate solutions to make recommendations or decisions
- implement solutions
- check to see if a solution works and act on opportunities for improvement

Personal Management Skills
The personal skills, attitudes and behaviours that drive one's potential for growth

Demonstrate Positive Attitudes & Behaviours

- feel good about yourself and be confident
- deal with people, problems and situations with honesty, integrity and personal ethics
- recognize your own and other people's good efforts
- take care of your personal health show interest, initiative and effort
  - be responsible
- set goals and priorities balancing work and personal life
- plan and manage time, money and other resources to achieve goals
- assess, weigh and manage risk be accountable for your actions and the actions of your group be socially responsible and contribute to your community

Be Adaptable

- work independently or a part of a team
- carry out multiple tasks or projects
- be innovative and resourceful: identify and suggest alternative ways to achieve goals and get the job done
- be open and respond constructively to change
- learn from your mistakes and accept feedback
- cope with uncertainty

Learn Continuously

- be willing to continuously learn and grow
- assess personal strengths and areas for development
- set your won learning goals
- identify and assess learning sources and opportunities
- plan for and achieve your learning goals

Work Safely

- be aware of personal and group health and safety practices and procedures, and act in accordance with these

Teamwork Skills
The skills and attributes needed to contribute productively

Work with Others

- understand and work within the dynamics of a group
- ensure that a team's purpose and objectives are clear
- be flexible: respect, be open to and supportive of the thoughts, opinions and contributions of others in a group
- recognize and respect people's diversity, individual differences and perspectives
- accept and provide feedback in a constructive and considerate manner
- contribute to a team by sharing information and expertise lead or support when appropriate, motivating a group for high performance
- understand the role of conflict in a group to reach solutions
- manage and resolve conflict when appropriate

Participate in Projects & Tasks

- plan, design or carry out a project or task from start to finish with well-defined objectives and outcomes
- develop a plan, seek feedback, test, revise and implement
- work to agreed quality standards and specifications
- select and use appropriate tools and technology for a task or a project
- adapt to changing requirements and information
- continuously monitor the success of a project or task and identify ways to improve

THE LABOUR MARKET: WHAT ARE YOU WORTH?

Use the salary guide on the following pages to determine what salary you should expect. This does not mean that you will necessarily find a position offering you the responsibilities and corresponding salary you deserve. The exercise is simply meant to help you determine your worth in the marketplace.

My level of responsibility: _____

The median salary for my level of responsibility: _____

The lowest starting salary I would accept (my “bottom line”): _____

CLASSIFICATION GUIDE AND SALARY RANGES OF ENGINEERING RESPONSIBILITY LEVELS*

The summaries below are based on information from the 2003 PEO Salary Survey

Level A

Duties: Receives training in the various phases of office, plant, field or laboratory engineering work as classroom instruction or on-the-job assignments. Tasks assigned include: preparation of simple plans, designs, calculations, costs and bills of material in accordance with established codes, standards, drawings or other specifications. May carry out routine technical surveys or inspections and prepare reports.
Recommendations, Decisions and Commitments: Few technical decisions called for and these will be of routine nature with ample precedent or clearly defined procedures as guidance.
Supervision Received: Works under close supervision. Work is reviewed for accuracy and adequacy and conformance with prescribed procedures.
Leadership Authority and/or Supervision Exercised: May assign check work of one to five technicians or helpers.
Guide to Entrance Qualifications: Bachelor's degree in Engineering, or Applied Science, or its equivalent with little or no practical experience.
Salary Range: $41,000-$57,500 **Median:** $50,000

Level B

Duties: Normally regarded as a continuing portion of an engineer's training and development. Receives assignments of limited scope and complexity, usually minor phases of broader assignments. Uses a variety of standard engineering methods and techniques in solving problems. Assists more senior engineers in carrying out technical tasks requiring accuracy in calculations, completeness of data and adherence to prescribed testing, analysis, design or computation methods.
Recommendations, Decisions and Commitments: Recommendations limited to solution of the problem rather than end results. Decisions made are normally within established guidelines.
Supervision Received: Duties are assigned with detailed oral and occasionally written instructions, as to methods and procedures to be followed. Results are usually reviewed in detail and technical guidance is usually available.
Leadership Authority and/or Supervision Exercised: May give technical guidance to one or two junior engineers, or technicians, assigned to work on a common project.
Guide to Entrance Qualifications: Bachelor's degree in Engineering, or Applied Science, or its equivalent, normally with two to three years working experience from the graduation level.
Salary Range: $48,000-$72,000 **Median:** $58,000

Level C

Duties: This is typically regarded as a fully qualified professional engineering level. Carries out responsible and varied engineering assignments requiring general familiarity with a broad field of engineering and knowledge of reciprocal effects of the work upon other fields. Problems usually solved by use of combination of standard procedures, modification of standard procedures, or method developed in previous assignments. Participates in planning to achieve prescribed objectives.
Recommendations, Decisions and Commitments: Makes independent studies, analyses, interpretations and conclusions. Difficult, complex or unusual matters or decisions are usually referred to more senior authority.
Supervision Received: Work is not generally supervised in detail and amount of supervision varied depending upon the assignment. Usually technical guidance is available to review work in programs and advise on unusual features of assignments.
Leadership Authority and/or Supervision Exercised: May give technical guidance to engineers of less standing, or technicians assigned to work on a common project. Supervision over other engineers not usually a regular or continuing responsibility.
Guide to Entrance Qualifications: Bachelor's degree in Engineering, or Applied Science, or its equivalent, normally with minimum three to five years related working experience from the graduation level.
Salary Range: $57,000-$85,000 **Median:** $68,500

Level D

Duties: This is the first level of direct and sustained supervision of other professional engineers OR the first level of full specialization. Requires application of mature engineering knowledge in planning and conducting projects having scope for independent accomplishment and co-ordination of the difficult and responsible assignments. Assigned problems make it necessary to modify established guides, devise new approaches, apply existing criteria in new manners, and draw conclusions from comparative situations.
Recommendations, Decisions and Commitments: Recommendations reviewed for soundness of judgment but usually accepted as technically accurate and feasible.
Supervision Received: Work is assigned in terms of objectives, relative priorities and critical areas that impinge on work of other units. Work is carried out within broad guidelines, but informed guidance is available.
Leadership Authority and/or Supervision Exercised: Assigns and outlines work; advises on technical problems; reviews work for technical accuracy, and adequacy. Supervision may call for recommendations concerning selection, training, rating and discipline of staff.
Guide to Entrance Qualifications: Bachelor's degree in Engineering or Applied Science, or its equivalent, normally with a minimum of five to eight years of experience in the field of specialization from the graduation level.
Salary Range: $67,000-$106,000 **Median**: $83,000

Level E

Duties: Usually requires knowledge of more than one field of engineering OR performance by and engineering specialist in a particular field of engineering. Participates in short/long range planning; makes independent decisions on work methods a procedures within an overall program. Originality and ingenuity are required for devising practical and economical solutions to problems. May supervise large groups containing professional/non-professional staff OR may exercise authority over a small group of highly qualified professional personnel engaged in complex technical applications.
Recommendations, Decisions and Commitments: Makes responsible decisions not usually subject to technical review on all matters assigned except those involving large sums of money or long-range objectives. Takes courses of action necessary to expedite the successful accomplishments of assigned projects.
Supervision Received: Work is assigned only in terms of broad objectives to be accomplished; is reviewed for policy, soundness of approach, general effectiveness.
Leadership Authority and/or Supervision Exercised: Outlines more difficult problems and methods of approach. Coordinates work programs and directs use of equipment and material. Generally makes recommendations as to the selection, training, discipline and remuneration of staff.
Guide to Entrance Qualifications: Bachelor's degree in Engineering, or Applied Science, or its equivalent, normally with a minimum of nine to twelve years of engineering, and/or administrative experience from the graduation level.
Salary Range: $79,000-$125,000 **Median:** $110,000

Level F

Duties: Usually responsible for an engineering administrative function, directing several professional and other groups engaged in inter-related engineering responsibilities; OR as an engineering consultant, achieving recognition as an authority in an engineering field of major importance to the organization. Independently conceives programs and problems to be investigated. Participates in discussions, determining basic operating policies, devising ways of reaching program objectives in the most economical manner and of meeting any unusual conditions affecting work progress.
Recommendations, Decisions and Commitments: Makes responsible decisions on all matters, including the establishment of policies and expenditure of large sums of money and/or implementation of major programs, subject only to overall company policy and financial controls.
Supervision Received: Receives administrative direction based on organization policies and objectives. Work is reviewed to ensure conformity with policy and coordination with other functions.
Leadership Authority and/or Supervision Exercised: Reviews/evaluates technical work; selects, schedules, coordinates to attain program objectives; as an administrator makes decisions concerning selection, training, rating, discipline, remuneration of staff.
Guide to Entrance Qualifications: Bachelor's degree in Engineering, or Applied Science, or its equivalent, with broad engineering experience, including responsible administrative duties.
Salary Range: $92,500-$147,000 **Median:** $94,900

Beyond Level F

Duties: Within the framework of general policy, conceives independent programs and problems to be investigated. Plans or approves projects requiring the expenditure of considerable amount of human resources and financial investment. Determines basic operating policies and solves primary problems or programs to accomplish objectives in the most economical manner to meet any unusual condition.
Recommendations, Decisions and Commitments: Responsible for long range planning, co-ordination, making specific and far-reaching management decisions. Keeps management associates informed of all matters of significant importance.
Supervision Received: Operates with broad management authority, receiving virtually no technical guidance and control; limited only to general objectives and policies of the organization.
Leadership Authority and/or Supervision Exercised: Gives administrative direction to subordinate managers and contact with the work force is normally through such levels rather than direct.
Guide to Entrance Qualifications: Bachelor's degree in Engineering, or Applied Science, or its equivalent with many years of authoritative engineering and administrative experience. The incumbent is expected to possess a high degree of originality, skill and proficiency in the various broad phases.
Salary Range: Not Available
Median: Not Available

THE LABOUR MARKET: FOR MORE INFORMATION

GENERAL

Newspapers:
The Globe & Mail
www.theglobeandmail.com
The National Post
www.nationalpost.com
The Toronto Star
www.thestar.com
The Toronto Sun
www.canoe.ca/TorontoSun/home.html

Books:
Beck, Nuala. *Shifting Gears: Thriving in the New Economy*. (Harper Collins, 1995)

Bridges, *William. JobShift: How to Prosper in a Workplace without Jobs*. Addison Wesley, 1994)

Campbell, Colin. *Jobscape: Career Survival in the New Global Economy* (JIST Works, Inc., 1998)

Campbell, Colin. *Where the Jobs Are: Career Survival for Canadians in the New Global Economy* (MacFarlane Walter & Ross, 1994)

Feather, *Frank. Canada's Best Careers Guide* (Warwick Publishing, 1996)

Human Resources and Skills Development. *Career Handbook*.
HRSD *Job Futures*
Volume 1: Occupational Outlooks
Volume 2: Career Outlooks for Graduates **http://jobfutures.ca**

O'Reilly, Elain and Diane Alfred. *Making Career Sense of Labour Market Information* (Canadian Career Development Foundation)

Employment:
Human Resources and Skills Development Job Bank
http://www.jobbank.gc.ca/

www.workinfonet.ca – Advice, resources and employment information.
www.ele-spe.org – electronic job matching site
Engineering Central
www.engcen.ca/
Workopolis www.workopolis.com
Monster www.monster.ca
Yahoo Hot Jobs www.hotjobs.ca
Job Bus www.jobbus.com/
All star jobs
www.allstarjobs.ca/jobs/
Job Search www.jobsearch.ca/
Employment News
www.employmentnews.com/
Canadian Employment Search Network www.canjobs.com/
Career Builder
www.careerbuilder.com/
Career Magazine
www.careermag.com/
Canadian Technical Employment Network www.cten.ca/
New Canadian Program
www.newcanadians.org/

ENGINEERING

Aerospace Industries Association: www.aiac.ca

The Canadian Advanced Technology Association (613) 236-6550 www.cata.ca

Canadian Aeronautics and Space Institute: www.casi.ca

Canadian Coalition of Women in Engineering http://www.ccwest.org

Canadian Council of Professional Engineers: www.ccpe.ca

Canadian Institute of Mining, Metallurgy and Petroleum

http://www.cim.org

Canadian Geotechnical Society www.cgs.ca

Canadian Nuclear Association www.cna.ca

Canadian Plastics Industry Association www.cpia.ca

Consulting Engineers of Ontario: www.ceo.on.ca

Canadian Society for Chemical Engineering: www.chemeng.ca

Canadian Society for Civil Engineering: www.csce.ca

Canadian Society for Mechanical Engineering: www.csme.ca

Society of Manufacturing Engineers-Canadian Chapters http://www.sme.org/cgi-bin/membhtml.pl?/memb/canada2.htm

Chemical Institute of Canada www.chem-inst-can.org

Engineering Dimensions, published by Professional Engineers Ontario http://peo.on.ca

Engineering Institute of Canada www.eic-ici.ca

Geomatics Industry Association of Canada: (416) 232-8770 www.giac.ca

The Information Technology Association of Canada: (905) 602-8345 www.itac.ca

International Electical and Electronic Engineers- Canada http://ieee.ca

The Canadian Academy of Engineering (613) 235-9056 http://www.acad-eng-gen.ca/

EDUCATION/TRAINING

Universities

University of Toronto, Continuing Engineering Education: (416) 978-3119 or toll free 1-888-233-8638 http://www.pdc.utoronto.ca/

Ryerson Polytechnic University: Information Centre (416) 979-5036 www.ryerson.ca

Continuing Engineering Education

Educational Program Innovations Centre (EPIC) (1-888-374-2338) http://www.epic-edu.com/

SECTION TWO:

THE LEGISLATIVE FRAMEWORK

In this section, you will learn about:

- The laws that affect engineers
- The *Professional Engineers Act*

THE LEGISLATIVE FRAMEWORK
PROFESSIONAL ENGINEERS ACT

1. Find definitions for the following:
   - "practice of professional engineering"

   - "professional engineer"

2. According to the Act, what is the purpose of the Association of Professional Engineers Ontario (PEO)?

3. To achieve this purpose, the PEO establishes, maintains and develops standards of:

4. Who is eligible for membership in the PEO?

5. The Council of the Association may make regulations governing many issues, including:

6. Outline the roles and duties of the following committees:

a. Complaints

b. Discipline

c. Fees Mediation

d. Academic Requirements Committee

e. Experience Requirements Committee

7. Look at Regulation 941 sections 71(1) and 72(2). What is considered:
    - "negligence": _____
    - "professional misconduct": _____

8. Are any of the precepts stated in the Code of Ethics (Section 77) different from those governing your profession in your homeland?

_____

9. See Regulation 941, Sections 56 to 71, for information about designation as a Consulting Engineer.

    i. What are the eligibility criteria for designation as a Consulting Engineer?

    _____

    ii. How long is the period of designation?

    _____

    iii. Under what conditions may an applicant person be redesignated?

    _____

10. In Regulation 741, In Sections 47-50, look up the procedures for the issuance of a Certificate of Authorization (C of A)

_____

_____

11. What documentation is required when applying for a C of A?

_____

12. How long is a C of A valid? _____

13. Is a holder of a C of A allowed to use the designation "consulting engineer" when offering engineering services to the public?

_____

SECTION THREE:

LICENSING

In this section, you will learn about:

- The terminology associated with licensing
- The requirements and process for becoming a licensed professional engineer

---

LICENSING: TERMINOLOGY

Match the term on the left with the correct definition on the right.

Accreditation	A process of reviewing and evaluating academic credentials and other forms of qualification to determine whether an applicant has met entry requirements for education or occupational purposes.
Appeal	Documented evidence of competency based on completion of a recognized program of study or training.
Assessment	Occupations for which the standards of practice and competence are established by provincial law.
Credential	A formal document that provides the holder the exclusive right to practice certain legally-defined functions.
Equivalency	Recognition that a program or course or certificate from one country or institution is the same in content as a program or course or certificate from another country or institution.
Licence	The process of identifying and measuring skills and knowledge for the purpose of recognizing and giving credit for learning that has been acquired from formal and informal education, training, work or other life experience.
Prior Learning Assessment	Minimum guideline for certain tasks that are recommended, but not legally required, for a profession.
Protected Title	Restricts the use on occupational title to those who are registered with the appropriate occupational body.
Registration	Right of an unsuccessful applicant to challenge a decision of an occupational regulatory body in the occupational licensing/certification process.
Regulated Profession	Process by which an agency or association grants public recognition to a training institution, program of study or service which meets certain pre-set standards.
Standards of Practice	A formal recognition that a person has attained a standard of proficiency in the skills and knowledge required to practice in a profession. Often used interchangeably with “certification” or “licensing”, particularly in the regulated health professions.

LICENSING:
ACRONYMS

During the licensing process, you will encounter many acronyms – abbreviations for organizations and terms. Using the resource materials provided, complete the Acronym table.

Acronym	Meaning	Role/Purpose
ARC		
C of A		
CCPE		
CEQB		
CEAB		
EIT		
ERC		
MRA		
OACETT		
PEO		
P.Eng		
PPE		

PROFESSIONAL REGISTRATION: SELF-ASSESSMENT

Using the registration information for your profession, complete the following plan.

What are the **requirements** for a license for engineering? Indicate which requirements you believe you meet.

Have Need

❑ ❑ _____

❑ ❑ _____

❑ ❑ _____

❑ ❑ _____

❑ ❑ _____

❑ ❑ _____

❑ ❑ _____

What documents will you have to submit in order to have your credentials assessed?

1. _____
2. _____
3. _____
4. _____
5. _____

Do you meet the experience requirements as set out by the PEO? Why or why not?

_____

_____

What are some strategies that would be helpful towards obtaining Canadian experience? Which one is best suited for your situation?

Outline the **steps** you will need to follow to complete the registration process. The first step has already been entered for you. List any fees you expect to pay for each step and indicate which steps, if any, you have already completed

	STEPS	FEES	COMPLETED?
1.	Contact PEO and request registration application package.	N/A	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Estimate how much it will cost you to complete the licensing process: $_____.

Estimate how long it will take you to complete the licensing process: _____.

PROFESSIONAL REGISTRATION: FOR MORE INFORMATION

Translation Services

To request an official translator in your area:

Association of Translators and Interpreters of Ontario (ATIO)
1 Nicholas Street, Suite 1202
Ottawa, ON K1N 7B7
Tel: (613) 241-2846
Fax: (613) 241-4098
Toll-free: 1-800-234-5030
Email: atio@fox.nstn.ca
Website: www.atio.on.ca

Regulatory Bodies

Professional Engineers of Ontario (PEO) Provincial Organization
25 Sheppard Avenue, Ste. 1000
North York, ON M2N 6S9
(416) 224-1100
http://www.peo.on.ca

Canadian Council of Professional Engineers (CCPE)-National Organization
180 Elgin St., Suite 1100
Ottawa, ON K2P 2K3
Telephone: (613) 232-2474
Fax: (613) 230-5759

Ontario Association of Certified Engineering Technicians and Technologists-Provincial Organization
10-Four Seasons Place, Ste. 404
Etobicoke, ON M9B 6H7
(416) 621-9621
www.oacett.org

Canadian Council of Technicians and Technologists-National Organization
285 McLeod Street, Ottawa, ON K2P 1A1
Tel: (613) 238-8822
http://www.cctt.ca/english/about/index.html

SECTION FOUR:

THE WORKPLACE

In this section, you will learn about:

- Workplace expectations
- The impact of technology on your profession
- Opportunities for self-employment in your profession

THE WORKPLACE:
PREPARATION FOR GUEST SPEAKER

Create at least five questions you would like answered by the guest speaker in this workshop. If they are answered during the presentation, fill in the answers. If not, ask at least one of your questions during the Question-Answer session.

Question: _____

_____

Answer: _____

_____

Question: _____

_____

Answer: _____

_____

Question: _____

_____

Answer: _____

_____

Question: _____

_____

Answer: _____

_____

Question: _____

_____

Answer: _____

_____

THE WORKPLACE:
IMPACT OF TECHNOLOGY

Using the articles from the Resource Package for your profession, answer the following questions.

1. Identify all types of technology referred to in the articles. For each type of technology, indicate whether it is something you are familiar with.

TYPE OF TECHNOLOGY	FAMILIAR?
	Y / N
	Y / N
	Y / N
	Y / N

2. What technological changes are affecting members of your profession? Are they affecting them in a positive way, a negative way, or both?

3. How do you think technology will change the work of engineers in the future?

THE WORKPLACE: SELF-EMPLOYMENT

1) QUIZ*

Give yourself a mark for each item on the right. Use the following values:

4 = always
3 = usually
2 = sometimes
1 = never

Count up your whole score. If you got a score of 30 or more, maybe you should start your own business!

	1. I am not bothered by stress.
	2. I enjoy solving problems.
	3. I am healthy.
	4. Hard work doesn't bother me.
	5. I like to work independently.
	6. I don't leave things until tomorrow.
	7. I am practical and logical.
	8. I don't give up.
	9. I am optimistic.
	10. I can adapt to new situations.
	11. I am willing to listen to people's comments.
	12. I am good at understanding other people.
	13. I like trying new ideas.
	14. I can set long-term goals for myself.
	15. I accept responsibility for my actions
	TOTAL

* Source: STEPS to Employment, a program created for the Ministry of Citizenship, Culture & Recreation.

2) Imagine you are starting your own business. You have decided to advertise your services in a community newspaper. Use the space below to write your advertisement.

THE WORKPLACE: SELF-EMPLOYMENT

The following information will be of use to individuals wishing to pursue self-employment:

Business Name Registration

Ontario businesses may register a business name as a sole proprietor, a partnership or a limited company. A sole proprietorship is not required to be registered if the business is carried on under the owner's own name. If the business uses a name other than the owner's, the *Business Names Act* requires that your register the business name before you start using it.

Incorporating a Business in Ontario

Incorporation means that your business is a distinct, legal entity. Incorporation offers a number of advantages to your business. Some examples are: the transferability of business ownership, limited liability and possible tax advantages.

Licences

Each municipal government issues its own business licenses within its jurisdiction. Since each municipality in Ontario has different rules about licences for businesses, you should consult a local official for information about local regulations, licences, municipal business tax or zoning requirements.

THE WORKPLACE:
SELF-EMPLOYMENT

Using what you have learned about non-traditional work relationships – self-employment, contract work and consulting engineering - answer the following questions:

1. What are the requirements for self-employed engineers?

2. How does one obtain a Certificate of Authorization?

3. What are the advantages of self-employment?

4. The disadvantages?

5. What are the advantages of contract work?

6. The disadvantages?

THE WORKPLACE:
FOR MORE INFORMATION

Workplace Standards

Employment Standards Act (416) 326-7160 or 1-800-531-5551
http://www.e-laws.gov.on.ca

Occupational Health and Safety (416)-326-7770 or 1-800-268-8013 (416) 314-5421
http://www.e-laws.gov.on.ca

Workplace Safety and Insurance Board (416) 344-1000 or 1-800-387-5540
www.wsib.on.ca

Ontario Ministry of Labour web-site www.gov.on.ca/LAB/main.htm

Training and Upgrading

Ontario Ministry of Education and Training, Training Hotline 1-800-387-5656 or visit their web-site at www.edu.gov.on.ca.

Self-Employment

The Ministry of Economic Development, Trade and Tourism provides counselling and assistance programs to small business.

Small Business Self-help Offices offer information and advice to people wanting to start their own businesses. Each office is a first-stop source of information with access to resource materials and personal advice on preparing a business plan, managing a new business and government assistance to entrepreneurs.

For the location of the office nearest you, contact the Canada-Ontario Business Call Centre at (416) 775-3456 or (toll-free) 1-800-567-2345 or
http://www.cbsc.org/ontario/

Self-help publications are available by visiting your nearest Self-help Office or at Publications Ontario, at 880 Bay Street, Toronto or through telephone mail order. In Toronto call (416) 326-5300. Elsewhere in Ontario call (toll-free) 1-800-668-9938 or http://www.gov.on.ca/MBS/english/publications/

Publications available include:

- *How to Start a Business in Ontario*
- *Marketing for Small Business*
- Record Keeping Made Easy

SECTION FIVE:

NETWORKING

In this section, you will learn about:

- Opportunities for networking in your profession
- The skills associated with networking

NETWORKING: OVERVIEW

Networking – simply talking to people in your field -- is one of the most effective methods of finding employment. But networking is a subtle art. Not every contact you make will result in a job offer. It may lead to a tip about an opportunity elsewhere, some valuable information, or another contact.

To be successful in networking, you should:

- Do some research on the labour market in your field.
- Keep a record of your contacts.
- Keep in touch with your contacts.
- Analyze information provided by contacts.
- Provide your business card at the appropriate time.

But don't:

- Act desperate.
- Ask for favours.
- Be pushy.

Use the space below to list some networking opportunities you are aware of.

NETWORKING:
ROLE-PLAYING

Each of the following situations involves a "networker" – someone looking to get established in their field – and a "networkee" – someone already established who might be able to provide information or further contacts. Try to carry on a conversation making up any information necessary. All members of the group should evaluate the interaction and provide feedback.

Situation #1

Roles:

- A foreign-trained mechanical engineer who is temporarily driving a cab but would like to find work in his field.
- A vice-president at the Ford Motor Company.

Situation:

You are driving your cab and pick up a customer. The well-dressed businessman directs you to take him to the headquarters of the Ford Motor Company.

Situation #2

Roles:

- A foreign-trained electronic engineer who is taking upgrading courses through a university continuing education program.
- The instructor of an engineering continuing education program, who also works in the telecommunications industry.

Situation:

The instructor of your course has asked you to stay briefly after class to discuss an assignment you need some help with. You know that she works in telecommunications – precisely where you'd like to be. When you have finished talking about the assignment, you have the opportunity to ask her about her work.

Evaluation

Did the "networker" make good use of this contact?
Did s/he seem desperate? Did s/he ask the right questions?
Did s/he give the contact her business card? Should s/he have?
Should the "networker" follow-up with this contact? When?

NETWORKING:
FOR MORE INFORMATION

COMMUNITY-BASED ASSOCIATIONS

Association of Sri Lankan Graduates of Canada
(416) 267-6712
http://www.asgc.ca/

Association of Polish Engineers
(416) 497-9810
http://www.polisheng.ca/

Canadian Society of Iranian Engineers and Architects
(416) 771-7147
http://www.mohandes.com/

Coalition for Access to Professional Engineering (CAPE)
c/o Skills for Change
(416) 658-3101
http://www.skillsforchange.org

COSTI-IIAS Immigrant Services
(416) 244-0480
http://www.costi.org/

Ontario Network for Internationally Trained Professionals Online
http://www.onip.ca/

The Chinese Canadian Engineering Society
(905) 890-3235
http://www.ccvolunteer.org/partners/cces/about.html

See also the list of associations on pages 29-30.

SECTION SIX:

RELATED OCCUPATIONS

In this section, you will learn about:

- The occupations of Engineering Technologist and Technician.

RELATED OCCUPATIONS: SUMMARY

Many foreign-trained engineers who come to Canada choose to register as Engineering Technicians and Technologists, rather than go through the licensing process for professional engineering. Engineering Technicians and Technologists are normally graduates of at least a community college program and are registered with the Ontario Association of Engineering Technicians and Technologists.

There are benefits and drawbacks in choosing to become a Technician or Technologist:

The Advantages

- You may qualify for a license quicker than you would for an engineering license (and it will cost less).

- Employment in these occupations is growing, partly because they are taking over from the work of engineers.

The Disadvantages

- The pay is lower (The median salary, in 2002, for associate members and graduate technicians was $46,000; for technicians with two or more years experience the median salary was $57,200; for technologists: $60,890)

- Once you are working as a technician or technologist, it will be difficult to gain the work experience you need to be gain your professional engineering license.

RELATED OCCUPATIONS: REGISTRATION

Using the registration information from OACETT, complete the following plan.

Based on the information provided, I believe I would be most suited to becoming an:

- Engineering Technician (C.Tech)
- Engineering Technologist (C.E.T.)
- Applied Science Technologist (A.Sc.T)

Outline the requirements for the occupation you have chosen and indicate those that you believe you already possess and those that you would need to gain.

Have	Need	
❑	❑	_____
❑	❑	_____
❑	❑	_____
❑	❑	_____
❑	❑	_____
❑	❑	_____

What documents will you have to submit in order to have your credentials assessed?

_____

_____

_____

_____

_____

RELATED OCCUPATIONS: REGISTRATION

Outline the **steps** you will need to follow to complete the registration process. List any fees you expect to pay for each step and indicate which steps, if any, you have already completed.

	STEPS	FEES	COMPLETED?
1.			
2.			
3.			
4.			
5.			
6.			
7.			

Estimate how much it will cost you to complete the licensing process: $_____.

Estimate how long it will take you to complete the licensing process: _____.

WRAP-UP:
WHO DOES WHAT

By now, you should have a good understanding of the roles and responsibilities of the various bodies involved in engineering profession. Draw a line to match the organization or government agency on the left with the responsibilities on the right.

Attorney General of Ontario	Sets national policies for immigration.
Professional Engineers of Ontario	Provides non-binding assessments of academic credentials.
Professional Association	Sets standards for skills, knowledge and behaviour for their members.
Citizenship and Immigration Canada	Provides labour market information on all occupations.
Human Resources and Skills Development Canada	Provides upgrading and training opportunities.
Universities & Community Colleges	Administers the laws that set out the requirements for becoming a professional engineer.
Community-based Agencies	Provides opportunities for English language and other training, as well as employment support.
Comparative Education Service	Provides networking and professional development opportunities.

WRAP-UP:
GOAL-SETTING

Using what you now know about your profession in Ontario, use the following space to create a specific, measurable goal statement for yourself.

Sample goal statement:

My objective is to become employed with a small to medium-sized software development company and to complete the licensing process for engineering within two years.

Your goal statement: