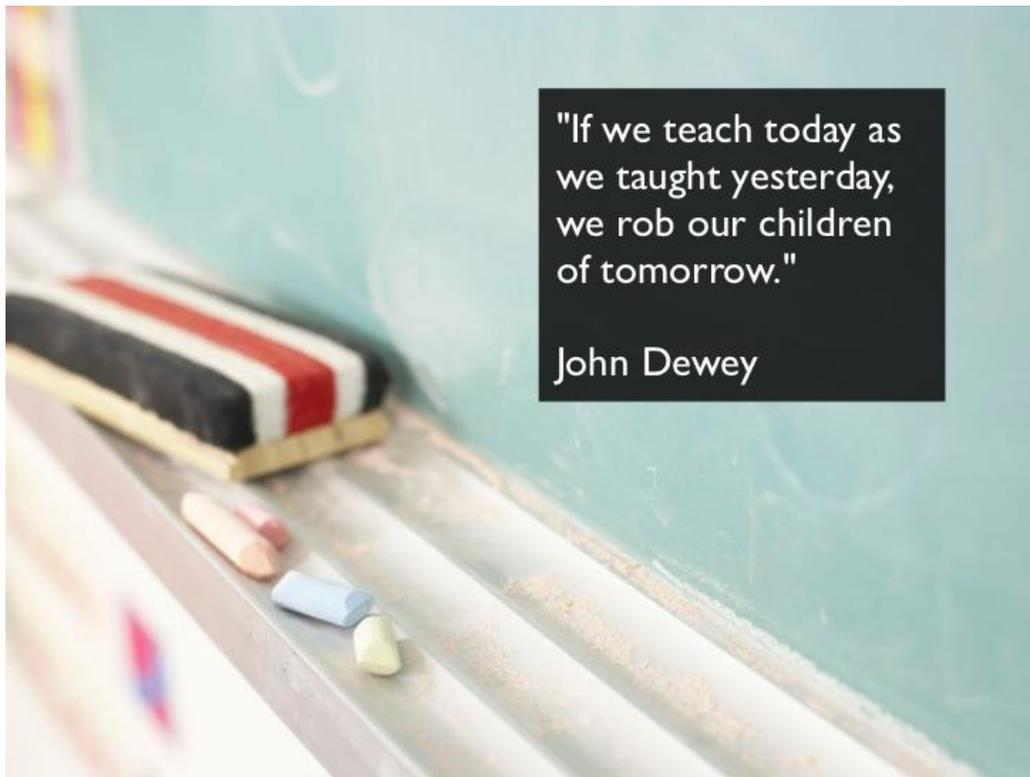


SEIZING OPPORTUNITIES:

Current and future demand for technological education programs



A report submitted by Emptage and Associates Inc. to the Simcoe County District School board as part of the Renewal of Technological Education

March, 2013

INTRODUCTION

This report is intended to present an “evidence-based” context with a spotlight on identifying technological education trends within the Simcoe County and Ontario labour markets.

Section One of the report describes the potential to seize opportunities for technology programs in Ontario’s secondary schools with key and emerging careers in seven (7) sectors: Advanced Manufacturing; Construction; Green Industries; Healthcare; Information Communications Technology; Tourism and Utilities. Understanding the employment prospects in each of these sectors will ensure that the labour force is prepared for emerging opportunities.

Section Two highlights the employment prospects, trends and changing skill requirements for occupations associated with technology programs.

Statistics and trends from three key research publications (*Greening the Economy: Transitioning to New Careers*; *Digging Deeper: Learning from the Local Labour Market in Simcoe and Muskoka*; and *Advantage Ontario*) provided the primary sources of secondary research. Other data sources included *Canadian Business Patterns* (2008 and 2009), Statistics Canada Census (2006 and 2011), survey data from 2009-2010 graduate students from Ontario community colleges and consultations with key business leaders and employers across 20 industry sectors.

This report was prepared by Pat Campbell of ccvassociates for Emptage and Associates in February 2013.

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LITERATURE REVIEW

The *Greening the Economy: Transitioning to New Careers* report, published in 2011 by the three local area planning boards in Peel Halton, Toronto and York regions, examines the existing economic base for business retention and expansion and investigates possibilities for future employment opportunities.¹ The industry analysis utilized Canadian Business Patterns data from 2003 and 2009, Statistics Canada 2006 Census data and Environmental Careers Organization of Canada (ECO). *Greening the Economy* provides a detailed analysis of technological occupations across four (4) key sectors, including Utilities, Construction, Manufacturing and Information Communication Technology.

The *Digging Deeper: Learning from the Local Labour Market in Simcoe and Muskoka* report, released in June 2012, provides the results of a survey of employers in Simcoe County and the District of Muskoka. The survey was undertaken by a collection of Employment Ontario employment service providers for the purpose of better understanding the labour market expectations of the workforce needs of employers across 20 industry sectors. Between April 10 and May 4, 2012, 307 responses were received from a cross-section (by geography, size and industry) of employers. During the *Digging Deeper* research, four sectors have enough responses to warrant isolating and comparing responses. These are Accommodation and Food, Health Care and Social Assistance, Manufacturing and the Knowledge Sector.²

In December 2012, the Jobs and Prosperity Council released *Advantage Ontario*, a report to help improve Ontario's long-term productivity and competitiveness. The 14 authors are experienced leaders from business, labour and other sectors. The ideas and approaches contained within this report took shape following numerous Council meetings, individual committee sessions and during the November 2012 Jobs and Prosperity Summit. *Advantage Ontario* also identifies 11 key tradable sectors in the changing global economy. These include Agri-food, Advanced Manufacturing, Tourism, Healthcare, Education, Housing, Infrastructure, Financial Services, Natural Resources, Information Communications Technology and Life Sciences.³

The *Employment Profile* document summarizes the employment experiences of 2009-2010 college graduates across Ontario approximately six months after their graduation. The *Profile* contains data gathered through a partnership between the Ministry of Training, Colleges and Universities (MTCU) and the college sector and has been used to validate trends cited in the three research publications.⁴

¹ D. Parsons & Associates. (2011). *Greening the Economy: Transitioning to New Careers*.

² Tom Zizys. (2012). *Digging Deeper: Learning from the Local Labour Market in Simcoe and Muskoka*.

³ Jobs and Prosperity Council. (2012). *Advantage Ontario*.

⁴ Ministry of Training, Colleges and Universities. (2011). *Employment Profile: A Summary of Employment Experience of 2009-2010 College Graduates Six Months after Graduation*.

SECTION ONE

CONSTRUCTION

According to *Canadian Business Patterns* data, the Construction sector has been a substantial employer across Simcoe County (17%), which is considerably higher than the provincial average of 11%. In June 2011, the Construction sector was the largest employer in the region. There are some distinctions within the sector. Between December 2008 and June 2010, Specialty Trade Contractors showed an increase of 311 jobs, while Construction of Buildings showed a decrease of 324 jobs.⁵ This shift is a clear demonstration of the growth connected to a move to more advanced technologies and materials.

Between 2011 and 2012, the Construction sector continued its decline by 8.1%, losing 9,000 jobs across Ontario.⁶

With the condo boom and preparations for the Pan American and Parapan American Games facilities in Markham, Toronto and Hamilton, construction activity remains strong in the Toronto area for 2013. However, indicators show construction in the residential sector is weakening across the province, with lower housing starts compared to 2012. This could temper employment growth in construction across Simcoe County over the next year.

The introduction of the Green Energy Act in Ontario is expected to raise the demand for green construction, further validating the Construction sector's significance in terms of the green economy. As of April 2009, Ontario has more Leadership in Energy and Environmental Design (LEED) certified buildings than any other Province.⁷

Research predicts that the sector will respond to a green economy with increasing opportunities. "Green" building is becoming more evident across Canada as sustainable development shifts to the forefront in the Construction sector. Macroeconomic studies show that energy-efficiency measures in the building of new green buildings or the retrofitting and improvement of existing buildings leads to an overall net increase in jobs.⁸ The number of workers employed in environmental aspects of the Construction sector across Canada is anticipated to reach over 43,000 by 2011, an increase of 0.9% from 2006.⁹

Employment Data

According to Statistics Canada 2006 Census, the top ten occupations within the Construction sector across the Greater Toronto Area (based on the number of people employed) are shown in Table 1.

⁵ See Appendix "A".

⁶ Ministry of Training, Colleges and Universities. (2012). *Labour Market Information & Research Bulletin for December 2012*.

⁷ Erin Marchington. (Summer 2012). *2012 Green Provinces Report*.

⁸ United Nations Environment Program. (2008). *Green Jobs: Towards decent work in a sustainable, low carbon world*.

⁹ Parsons, D. (2011). *Greening the Economy: Transitioning to New Careers*, page 16

Table 1: Top Ten Occupations in Construction by Educational Requirements

National Occupational Classification ¹⁰ by Skill Level	Occupation (NOC Code)
Management Occupations	Construction Managers (0711) Residential Home Builders and Renovators (0712)
Skill Level A – Occupations usually requiring university education	
Skill Level B – Occupations usually requiring college education or apprenticeship training	Carpenters (7271) Electricians (except Industrial and Power System) (7241) Painters and Decorators (7294) Plumbers (7251) Plasterers, Drywall Installers and Finishers and Lathers (7284) Contractors and Supervisors, Other Construction Trades, Installers, Repairers and Servicers (7219) Refrigeration & Air Conditioning Mechanics (7313)
Skill Level C – Occupations usually requiring secondary school and/or occupation-specific training	
Skill Level D – On-the-job training is usually provided for occupations	Construction Trades Helpers and Labourers (7611)

Statistics Canada 2006 Census, National Occupational Classification Matrix

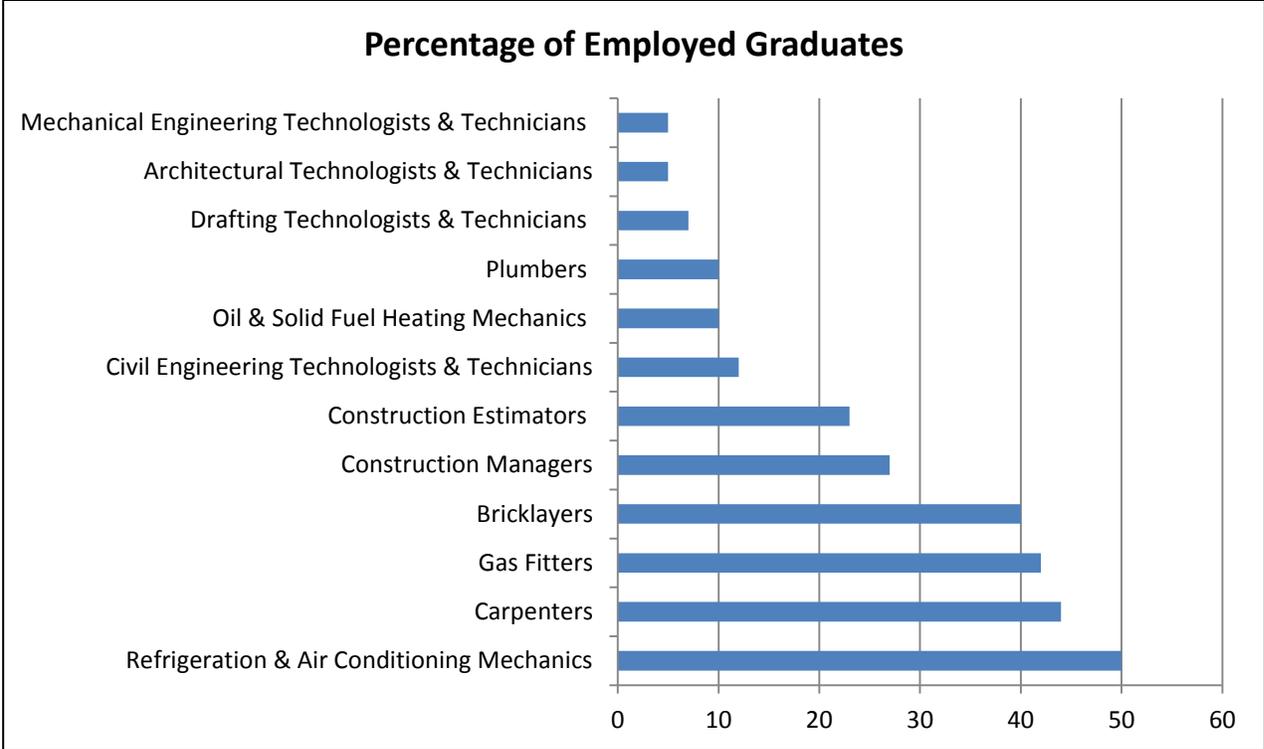
Construction occupations span a wide range of skill and education levels. In the Construction sector, there are opportunities for those who have minimal formal education as well as those with bachelor and master degrees.

Graduate Profiles

Based on the 2009-2010 *Employment Profile* data, the most common jobs secured by graduates from a construction-related program of study were as follows:¹¹

¹⁰ The National Occupational Classification (NOC) 2011 provides a standardized language for describing the work performed by Canadians in the labour market. The NOC code classifies occupations with a four-digit code according to skill type and skill level.

¹¹ Ministry of Training, Colleges & Universities. (2011). *Employment Profile: A Summary of Employment Experience of 2009-2010 College Graduates Six Months After Graduation*.



New or Hybrid Occupations

Evolving occupations related to innovations in construction are:

- External Insulation Mechanic (7293);
- Solar Installer (7441);
- Geothermal Installer;¹²
- Green Roof Specialist;
- Project/Program Coordinator (0711);
- Sustainable Architect; and
- Green Design Consultant - Interior Designer (5242).

¹² If there is no specific National Occupational Classification (NCO) code cited, then one does not currently exist for this occupation.

GREEN INDUSTRIES

Meeting the demand for workers to fill green careers is a labour market challenge that Canada, Ontario and Simcoe must meet to remain competitively positioned.

Green employment exists in a broad range of industries. The creation of green employment in one sector of the economy has the potential to spread to multiple sectors and industries, greening large sections of the total workforce.¹³

Other segments of this report identify new and emerging occupations within the individual sector profiles. There are, however, additional emerging green occupations that may not yet have a strong presence throughout local industry, but may provide future employment opportunities.

ECO Canada has compiled a list of the top fifteen (15) key environmental occupations:

- Environmental Engineer (2131);
- Environmental Technician/Technologist (2231);
- Biologist (2121);
- Agrologist (2123);
- Chemist (2112);
- Civil Engineer (2131);
- Geoscientist (2113);
- Lab Technician/Technologist (3212, 2211, 2212, 3218);
- Project-Program Coordinator (0711, 0211, 0212);
- Project-Program Manager (0711, 0211, 0212);
- Conservation Technician/Technologist (2223);
- Environmental Educator (4121, 4122, 4131);
- Geomatics Technician/Technologist (2254, 2255);
- Hydro-geologist (2113); and
- Land Use Planner (2153, 2231).

Table 2 below shows the top fifteen ECO Canada environmental careers and the number of people employed in the occupation across the Greater Toronto Area. The table also compares employment in the GTA with that of Ontario.

Table 2: ECO Environmental Careers and the Number of People Employed in GTA

Green Careers	Employment (GTA)	Employment (Ontario)	Percent of Ontario Employment in GTA
Environmental Engineer	7,370	14,990	49.2%
Environmental Technician/Technologist	1,135	3,455	32.9%
Biologist	1,965	5,231	37.6%
Agrologist	110	880	12.5%

¹³ Ministry of Economic Development and Trade. (2009). *Powering the Green Economy*.

Chemist	4,805	7,805	61.6%
Civil Engineer	7,370	14,990	49.2%
Geoscientist	680	2,145	31.7%
Lab Technician/Technologist	8,055	20,200	39.9%
Project/Program Coordinator	9,315	21,555	43.2%
Project/Program Manager	5,080	11,475	44.3%
Conservation Technician/Technologist	75	1,245	6.0%
Environmental Educator	30,870	75,340	40.9%
Geomatics Technician/Technologist	835	2,665	31.3%
Hydro-geologist	680	2,145	31.7%
Land Use Planner	2,880	6,970	41.3%

Statistics Canada 2006 Census, National Occupational Classification Matrix

The total number of people employed in the GTA in occupations directly related to the top fifteen (15) green jobs is 81,225.

Determining the labour force needs of these occupations is important to understanding and informing future demand. Since 54% of environmental employees in management position in Canada are 45 years of age or older, this workforce is rapidly aging and planning for new hires is critical.¹⁴

All of the occupations above require some level of post-secondary education. Three of the occupations are considered management level, nine are Skill Level A occupations (occupations usually requiring university education) and eight are Skill Level B occupations (occupations usually requiring college education or apprenticeship training). This emphasizes the importance of increasing the availability of environmentally related education programs to meet the demands of green jobs.

¹⁴ K. Doyle. (February 2008). *How do we define the green-job economy?*

HEALTHCARE

The Healthcare sector in Canada has good long-term growth and stability, much of which is driven by the increasing needs of an ageing population. However, there are some shifting trends.

As healthcare costs continue to rise, work is increasingly being delegated to lower paid workers in order to cut costs. For example, tasks that were previously performed by Doctors, Nurses, Dentists or other healthcare professionals increasingly are being performed by Physician Assistants, Medical Assistants, Dental Hygienists and Physical Therapist Aides.

In addition, patients increasingly are seeking home care as an alternative to costly stays in hospitals or residential care facilities, causing a significant increase in demand for Home Health Aides.

Between 2011 and 2012, Healthcare lost 9,600 jobs across Ontario. To more clearly demonstrate the shift from hospitals to home care, 27.4% of this job loss was within the public sector or hospitals.¹⁵

Employment Data

According to Statistics Canada 2006 Census, the top ten occupations within the Healthcare sector across the Greater Toronto Area (based on the number of people employed) are shown in Table 3.

Table 3: Top Ten Occupations in Healthcare by Educational Requirements

National Occupational Classification – Skill Level	Occupation
Management Occupations	
Skill Level A – Occupations usually requiring university education	Registered Nurses (3152) General Practitioners and Family Physicians (3112) Specialist Physicians (3111) Pharmacists (3131) Dentists (3113)
Skill Level B – Occupations usually requiring college education or apprenticeship training	Medical Laboratory Technicians (3212) Medical Laboratory Technologists and Pathologists’ Assistants (3211) Licensed Practical Nurses (3233)
Skill Level C – Occupations usually requiring secondary school and/or occupation-specific training	Nurses’ Aides and Orderlies (3413) Dental Assistants (3411)
Skill Level D – On-the-job training is usually provided for occupations	

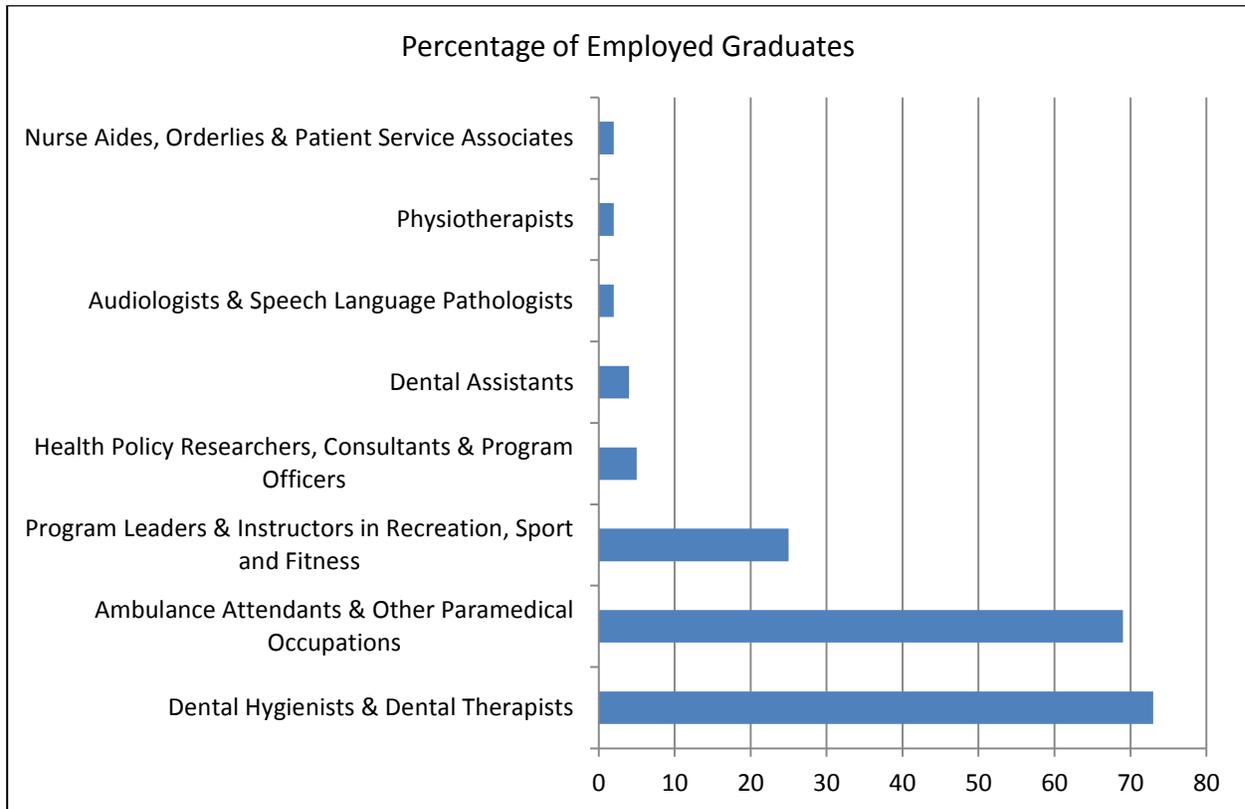
Statistics Canada 2006 Census, National Occupational Classification Matrix

¹⁵ Ministry of Training, Colleges and Universities. (2012). *Labour Market Information & Research Bulletin for December 2012*.

Graduate Profiles

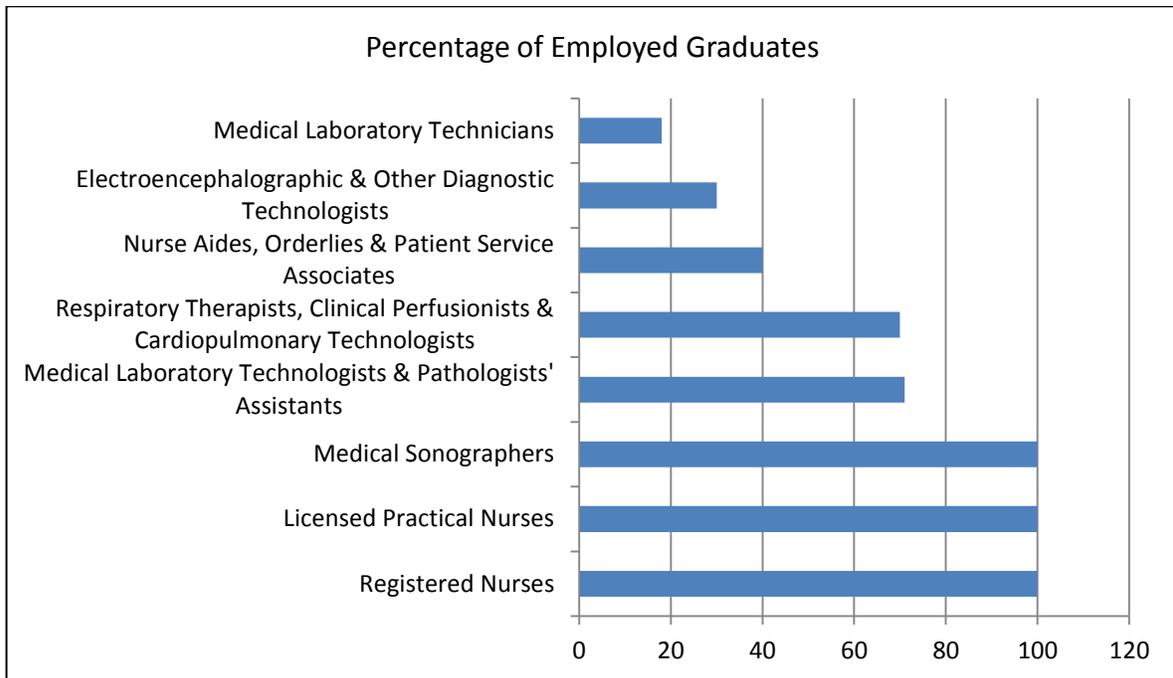
Based on the 2009-2010 *Employment Profile* data, the most common jobs secured by graduates from a health-related program of study are segmented into three groups (Ambulatory Health Care Services, Hospitals and Nursing and Residential Care Facilities).¹⁶

Ambulatory Health Care Services (representative of 12.4% of jobs in this field)

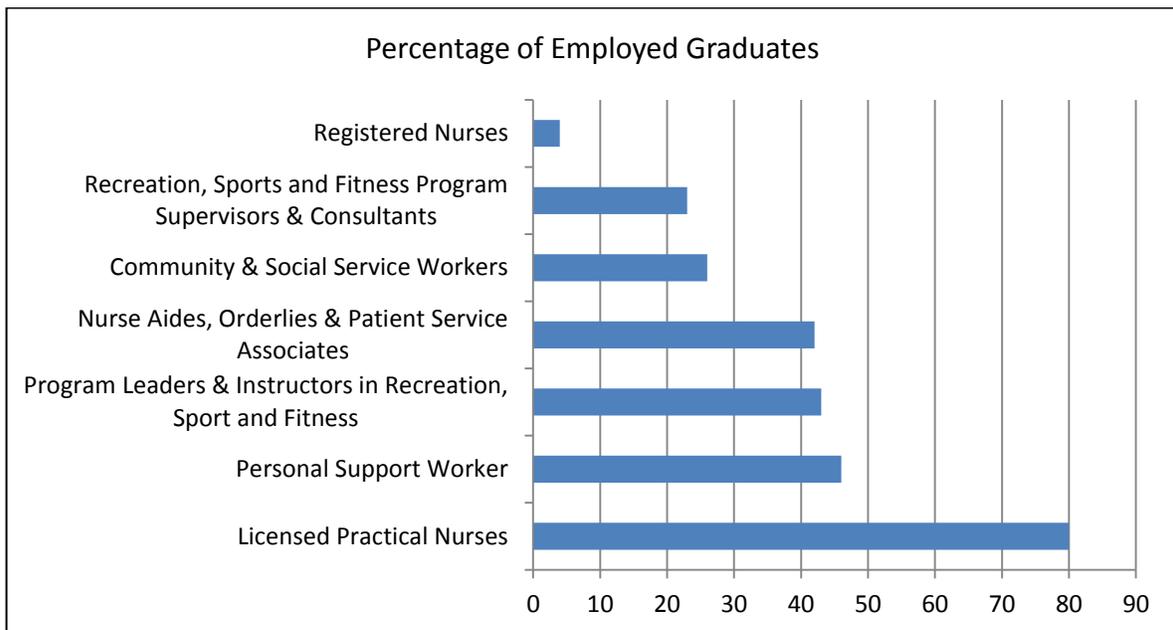


¹⁶ Ministry of Training, Colleges & Universities. (2011). *Employment Profile: A Summary of Employment Experience of 2009-2010 College Graduates Six Months after Graduation*.

Hospitals (representative of 26.1% of jobs in this field)



Nursing and Residential Care Facilities (representative of 40.9% of jobs in this field)



INFORMATION COMMUNICATIONS TECHNOLOGY

The Information Communication Technology (ICT) sector consists of a range of industries and corresponding North American Industry Classification System (NAICS) codes. The key industries fall within the following 2-digit NAICS classifications:

- Manufacturing – 33;
- Wholesale Trade – 41;
- Information and Cultural – 51;
- Real Estate and Rental and Leasing – 53;
- Professional, Scientific and Technical Services – 54; and
- Other Services – 81.

From December 2008 to December 2009, the ICT sector grew by 5.7% in employment across Ontario. In December of 2009, when the national unemployment rate reached 8.5%, unemployment across the ICT sector was only 4.5%.¹⁷ These statistics show not only the importance of the ICT workforce, but the strength of the sector generally.

The ICT sector is one of the most dominant industries across the Greater Toronto Area and its workforce represents a substantial portion of the province’s entire ICT sector (51.4%).¹⁸ As industries continue their transition towards increased sustainability, the demand for ICT will naturally follow.

Employment Data

According to Statistics Canada 2006 Census, the top ten occupations within the ICT sector across the Greater Toronto Area (based on the number of people employed) are shown in Table 4.

Table 4: Top Ten Occupations in ICT Sector by Educational Requirements

National Occupational Classification – Skill Level	Occupation
Management Occupations	Sales, Marketing and Advertising Managers (0611)
Skill Level A – Occupations usually requiring university education	Information Systems Analysts and Consultants (2171) Financial Auditors and Accountants (1111) Computer Programmers and Interactive Media Developers (2174) Lawyers and Quebec Notaries (4112) Professional Occupations in Business Services to Management (1122)
Skill Level B – Occupations usually requiring college education or apprenticeship training	Automotive Service Technicians, Truck and Bus Mechanics and Mechanical Repairers (7321)
Skill Level C – Occupations usually requiring secondary school and/or occupation-specific training	General Office Clerks (1411) Retail Salespersons and Sales Clerks (6421) Customer Service, Information and Related Clerks (1453)

¹⁷ Information and Communications Technology Council (ICTC). 2009. *Trends Special Report: ICT Labour Force Weathered the Economic Storm Better than Most Sectors*.

¹⁸ D. Parsons & Associates. (2011). *Greening the Economy: Transitioning to New Careers*.

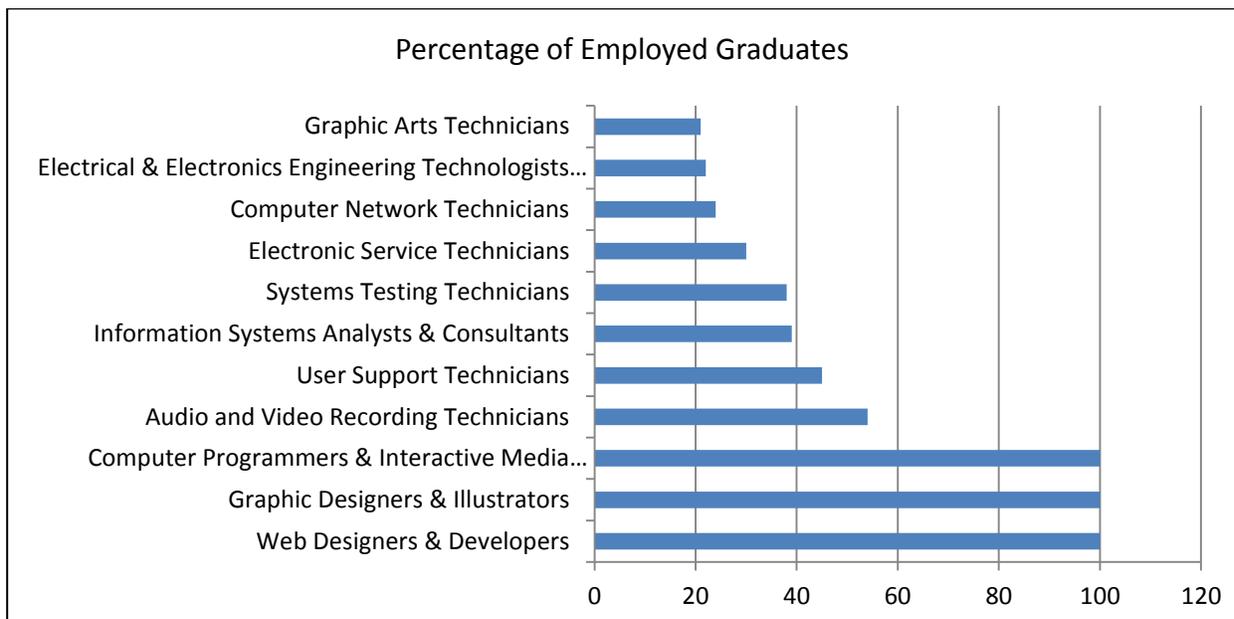
Skill Level D – On-the-job training is usually provided for occupations	
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Statistics Canada 2006 Census, National Occupational Classification Matrix

The ICT workforce tends to be highly educated and the transition to green will not change this. The sector has seen an increase in secondary school and college educated workers. The number of people with college diplomas increased 11.4% and those with bachelor degrees increased 3.6% between 2006 and 2008.¹⁹

Graduate Profiles

Based on the 2009-2010 *Employment Profile* data, the most common jobs secured by graduates from an ICT-related program of study were as follows:²⁰



New or Hybrid Occupations

Evolving occupations related to innovations in ICT are:

- Compliance Promotion Specialist;
- Energy Auditor (9119);
- Environmental Assessment Analyst;
- Environmental Auditor (9119); and
- Environmental Manager.

¹⁹ Statistics Canada. (2006) 2006 Census.

²⁰ Ministry of Training, Colleges & Universities. (2011). *Employment Profile: A Summary of Employment Experience of 2009-2010 College Graduates Six Months after Graduation*.

MANUFACTURING

Manufacturing has long been a pillar of Ontario’s economic strength. However, this sector has seen severe losses in the past two decades and more rapid losses in the recent economic downturn.

Between 2011 and 2012, Manufacturing did rebound by 5.6%, adding 6,000 jobs across Ontario.²¹

The transition from traditional manufacturing to advanced and green manufacturing practices is expected to create more opportunity across various occupations. For example, an increase in alternative energy such as wind energy has an impact on the demand for the manufacture of wind turbines. There are about 8,000 parts needed in the production of a wind turbine tower, the manufacturing of which creates demand for trades’ workers and manufacturers that are knowledgeable about the latest processes used in green manufacturing.

Employment Data

According to Statistics Canada 2006 Census, the top ten occupations within the Manufacturing sector across the Greater Toronto Area (based on the number of people employed) are shown in Table 5.

Table 5: Top Ten Occupations in Manufacturing by Educational Requirements

National Occupational Classification – Skill Level	Occupation
Management Occupations	Manufacturing Managers (0911) Sales, Marketing and Advertising Managers (0611)
Skill Level A – Occupations usually requiring university education	Professional Engineers
Skill Level B – Occupations usually requiring college education or apprenticeship training	Various trades such as Machinist and Industrial Electrician; Technician and Technologists
Skill Level C – Occupations usually requiring secondary school and/or occupation-specific training	Motor Vehicle Assemblers, Inspectors and Testers (9482) Plastics Processing Machine Operators (9422) Material Handlers (7452) Shippers and Receivers (1471) Sewing Machine Operators (9451) Machining Tool Operators (9511)
Skill Level D – On-the-job training is usually provided for occupations	Other labourers in Processing, Manufacturing and Utilities (9619) Labourers in Food, Beverage and Tobacco Processing (9617)

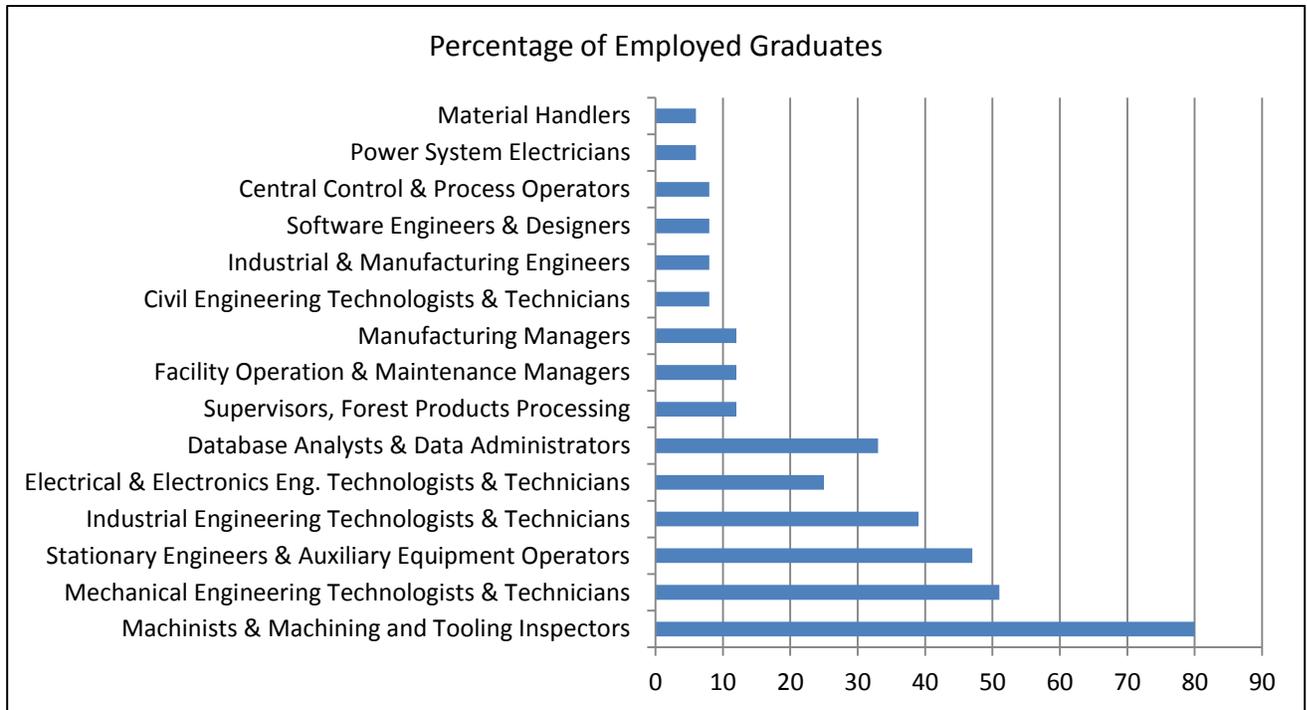
Statistics Canada 2006 Census, National Occupational Classification Matrix

In the Manufacturing sector, the majority of occupations are Skill Level C. However, the presence of management level occupations provides the opportunity for internal progression.

²¹ Ministry of Training, Colleges and Universities. (2012). *Labour Market Information & Research Bulletin for December 2012*.

Graduate Profiles

Based on the 2009-2010 *Employment Profile* data, the most common jobs secured by graduates from a manufacturing-related program of study were as follows:²²



New or Hybrid Occupations

Evolving occupations related to innovations in manufacturing are:

- Air Quality Engineer (5416);
- Biochemist (2112);
- Chemical Technician (2211);
- Environmental Engineer (2131);
- Hazardous Materials Specialist;
- Industrial Designer (2252);
- Process Engineer - Electrical (2133); and
- Process Engineer - Chemical (2134).

Special Note

It should be noted that two Machining occupations were not included in the top ten occupations under Employment Data or the Graduate Profiles. These are Tool and Die Makers and Construction

²² Ministry of Training, Colleges & Universities. (2011). *Employment Profile: A Summary of Employment Experience of 2009-2010 College Graduates Six Months after Graduation*.

Millwrights and Industrial Mechanics (Except Textile). Welders and Related Machine Operators were also not included.

TOURISM

Tourism in Ontario has been facing challenges in both the short and long term including a strong Canadian dollar, a slowing U.S. economy, changing demographics and greater global competition.

Ontario firms must seize the opportunities presented by emerging markets, especially in light of diminished prospects for the level of growth that we have been accustomed to in our traditional markets. Emerging markets, for example, present an opportunity for Ontario to benefit from the rising global demand for unique tourism destinations and experiences.²³

According to an Ontario government report on the future of tourism, “Ontario should work to become an international leader in tourism training and education”.²⁴

Employment Data

According to Statistics Canada 2006 Census, the top ten occupations within the tourism sector across the Greater Toronto Area (based on the number of people employed) are shown in the Table 6.

Table 6: Top Ten Occupations in Tourism by Educational Requirements

National Occupational Classification – Skill Level	Occupation
Management Occupations	Restaurant and Food Service Managers (0631)
Skill Level A – Occupations usually requiring university education	Support professions such as Accountants
Skill Level B – Occupations usually requiring college education or apprenticeship training	Chefs (6321) Program Leaders and Instructors in Recreation, Sport and Fitness (5254) Cooks (6242)
Skill Level C – Occupations usually requiring secondary school and/or occupation-specific training	Bartenders (6512) Bus Drivers, Subway Operators and other Transit Operators (7412) Food and Beverage Servers (6513)
Skill Level D – On-the-job training is usually provided for occupations	Light-duty Cleaners (6662) Cashiers (6611) Food counter attendants, kitchen helpers and related occupations (6641)

Statistics Canada 2006 Census, National Occupational Classification Matrix

Key tourism occupations are shown to have a workforce with lower educational requirements. Only a few occupations had education levels that exceeded the mean.

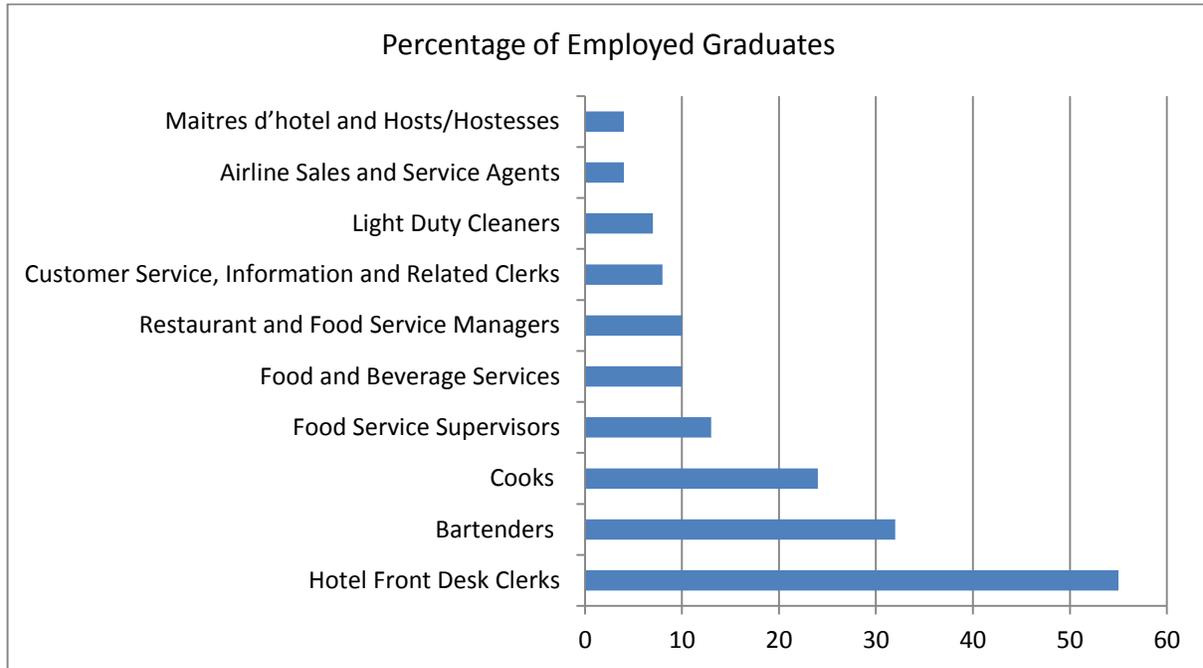
Graduate Profiles

Based on the 2009-2010 *Employment Profile* data, the most common jobs secured by graduates from

²³ Jobs and Prosperity Council (December 2012) *Advantage Ontario* page 4

²⁴ Ontario Tourism Competitive Study (February 2009) *Discovering Ontario – A report on the future of tourism*

a tourism-related program of study were as follows:²⁵



New or Hybrid Occupations

Many tasks and activities in the sector are changing in line with technological, economic and social change, with new and hybrid occupations appearing that demand completely new sets of skills.

Emerging occupations reflect the trend for new types of tourism products and services that are more complex and sophisticated in nature. These include:

- Travel and Event Designer;
- Tour and Travel Services Representatives for people with restricted mobility;
- Guest Relations;
- Business Travel Managers; and
- Agency Consultant for travel agent support.

Special Note

It should be noted that two Travel/Tourism occupations were not included in the top ten occupations under Employment Data or the Graduate Profiles. These are Travel Counsellors and Conference and Event Planners.

²⁵ Ministry of Training, Colleges & Universities. (2011). *Employment Profile: A Summary of Employment Experience of 2009-2010 College Graduates Six Months after Graduation*.

UTILITIES

Investments in public infrastructure (including transportation and public transit) create jobs and boost productivity performance, thereby advancing the long-term fiscal health of the economy. The most noticeable change is occurring in the Utilities sector. This sector is showing strong growth across Ontario and providing promising opportunities as the green economy emerges, putting pressure on the traditional Utilities sector that mainly utilizes fossil fuels.

In 2009, the Ministry of Economic Development and Trade predicted that total possible employment for the renewable energy sector could reach over 20 million jobs globally by 2030. The Ontario Green Energy Act, 2009, proposes to make Ontario a global leader in the development of renewable energy, clean energy distribution and energy conservation. Experts estimate that 50,000 jobs will be created in Ontario over the next three years as a result of projects related to the Act.²⁶

The Ontario Power Authority (OPA) plans to invest up to \$30 million over five years on a new industrial energy efficiency program to reduce both electricity and gas consumption in the Greater Toronto Area (GTA).²⁷ Investment creates employment. It is estimated that for every \$1 million invested in green energy generation and conservation, eight direct and seven indirect jobs will be created.²⁸

Home Energy audits in Canada are currently at 25,000 – 30,000 per year. This is expected to increase to 200,000 per year increasing the energy auditing jobs from 150 to 800 across Canada²⁹.

Employment Data

According to Statistics Canada 2006 Census, the top ten occupations within the utilities sector across the Greater Toronto Area (based on the number of people employed) are shown in Table 7.

Table 7: Top Ten Occupations in Utilities by Educational Requirements

National Occupational Classification – Skill Level	Occupation
Management Occupations	Utilities Manager (0912)
Skill Level A – Occupations usually requiring university education	Electrical and Electronics Engineers (2133) Mechanical Engineers (2132) Information Systems Analysts and Consultants (2171)
Skill Level B – Occupations usually requiring college education or apprenticeship training	Electrical Power Line and Cable Workers (7244) Electrical and Electronics Engineering Technologists and Technicians (2241)

²⁶ Ministry of Economic Development and Trade. (September 2009). *Powering the Green Economy. Ontario, Canada.*

²⁷ Ministry of Energy and Infrastructure. (September 2009). *Ontario Unveils Plan to Improve Air Quality in Southwest GTA, Ontario.*

²⁸ Robert Pollin and Heidi Garrett-Peltier. (May 2009). *Building the Green Economy: Employment effects of green energy investments for Ontario.*

²⁹ Robert Pollin and Heidi Garrett-Peltier. (May 2009). *Building the Green Economy: Employment effects of green energy investments for Ontario.*

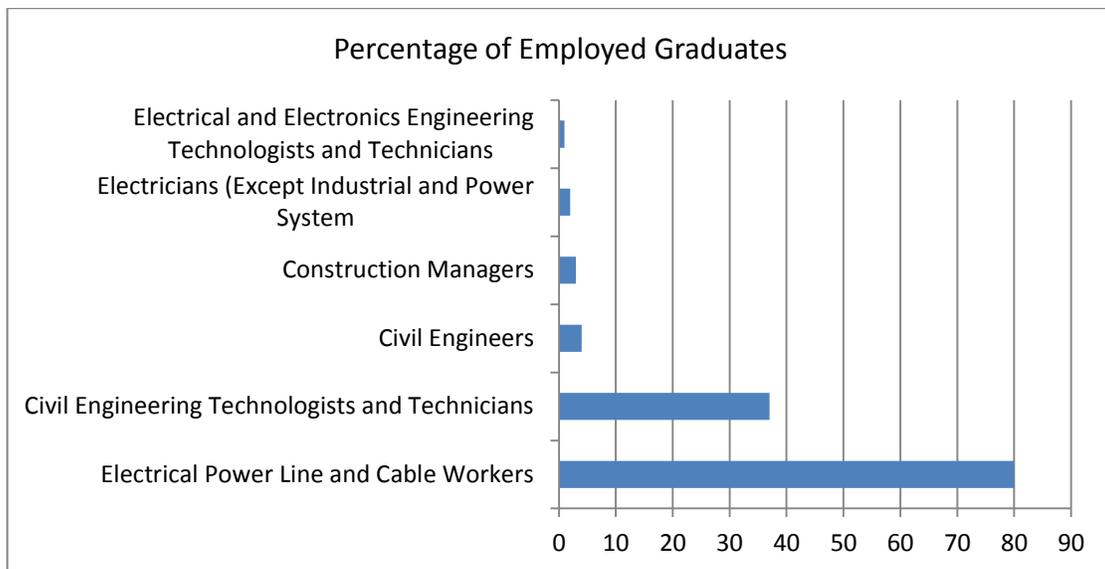
	Supervisors, Petroleum, Gas and Chemical Processing and Utilities (9212)
Skill Level C – Occupations usually requiring secondary school and/or occupation-specific training	General Office Clerks (1411) Customer Service, Information and Related Clerks (1453) Accounting and Related Clerks (1431)

Statistics Canada 2006 Census, National Occupational Classification Matrix

Utilities occupations span a wide range of skill and education levels. In the Utilities sector, there are opportunities for those who have minimal formal education as well as those with bachelor and master degrees.

Graduate Profiles

Based on the 2009-2010 *Employment Profile* data, the most common jobs secured by graduates from a utilities-related program of study were as follows.³⁰



New or Hybrid Occupations

Evolving occupations related to innovations in the Utilities sector are:

- Civil Engineer (2131);
- Emerging Energy Researcher;
- Energy Auditor (9119);
- Wastewater Collection and Treatment Operator (9243); and
- Wind Energy Analyst (4161).

³⁰ Ministry of Training, Colleges & Universities. (2011). *Employment Profile: A Summary of Employment Experience of 2009-2010 College Graduates Six Months after Graduation*.

SECTION TWO

CONSTRUCTION TECHNOLOGY

Cabinetmakers

Advances in technology have raised worker productivity, precision and reliability and decreased the need for employee labour. While computerization is still entering the cabinet making trade, CAD programs and CNC trimmers and routers are becoming more common.

The market for made-to-order cabinets and furniture has become a specialty market, with room for only the most highly skilled Cabinetmakers.

Carpentry

Employment for Carpenters is dependent to a large degree on construction activity. New materials and construction techniques are transforming carpentry and making Carpenters more productive.

Civil Engineering

Employment for these workers often moves in tandem with the Construction sector, which is vulnerable to labour market conditions. Occupational overlap between Civil Engineers and Civil Engineering Technologists and Technicians in process control and project management will increase the demand for technologists and technicians in the long run. Employers place significant emphasis on solid managerial abilities as they regard this skill to be the predominant function of technologists.

Heating and Cooling

As the population expands and the supply of buildings grows, the demand for this occupation will increase due to the installation of new, more efficient air conditioning and refrigeration systems. Residential HVACR systems are typically replaced every 10 to 15 years, which means that the large number of homes built in the last decade will enter this replacement timeframe. In addition, more jobs will be created as a result of the growing demand to retrofit old systems with more energy efficient, eco-friendly heating and cooling systems. Much of the work for these mechanics will also be in maintenance and repair which usually remains relatively stable even during economic slowdowns.

There is an increasing need for computer literacy and the ability to operate computer-controlled equipment.

Plumbing

This occupation is less vulnerable to the economic cycle, compared to other construction jobs. In an economic downturn, Plumbers are still required to maintain, replace and restore piping systems. In addition, the residential renovation stimulus is likely to create short term demand for Plumbers.

Jobs in the plumbing trades are determined primarily by the existing stock of piping that must be maintained and the amount of new construction and renovation work. The plumbing trade is changing through increased installation of integrated plumbing systems in home construction, an increase in prefabrication, and new plastics and joining technologies in gas and water piping. Licensed Plumbers who also hold a Gas Fitter's certificate will have better job prospects.

Technological advances in plumbing are creating the need for higher skills. Computer literacy is becoming more important as the use of computers in drawing, estimating, coordination and cost reporting related to plumbing expands. Increasingly, computer-controlled equipment is being utilized on the job.

Steamfitters, Pipefitters and Sprinkler System Installers

Employment in the piping trades is determined by the volume of new construction requiring piping installation and by the existing stock of piping that must be maintained. The growing use of plastic pipe and fittings, which are much easier to install and repair than other types, may limit job growth for this occupation in some applications.

There is growing demand for fitting sprinkler systems to meet changes in fire code regulations. The increasing installation of fire installation systems will provide many job opportunities for this trade. The nature of these jobs is essentially rehabilitative, maintenance and replacement driven, which makes them less sensitive to changes in the economic cycle compared to other construction related occupations.

Computer literacy is becoming essential, as sprinklers are increasingly electronically controlled.

COMMUNICATIONS TECHNOLOGY

Audio and Video Recording Technicians

While these individuals are employed to set up audio and video equipment, job opportunities also arise to repair and maintain the equipment. The restructuring in television stations to expand the range of products and quality of audio and video service will contribute to good employment growth for these workers. The film industry will also continue to attract and absorb many of these professionals. However, competition will be keen as there are many more potential employees than there are job openings.

Graphic Designers and Illustrators

This profession attracts more talented individuals than there are available job openings.

Demand will continue to come from advertisers, publishers and computer design firms. Expansion in video entertainment will present new opportunities for these workers and new requirements to keep up with the latest trends in technology. Designers with web-site design and animation experience will be in high demand for interactive design projects using video games, cellular phones, personal digital assistants and other technology.

COMPUTER TECHNOLOGY

Computer and Information Systems

In an economic downturn, employment in the High-tech sector can fall below the forecasted rate. However, companies across all sectors will continue to invest in information technologies. Consulting and freelance work are other areas of growth within this occupation.

Most positions require skills in e-commerce, network administration, programming languages, database software and computer security. In addition, employers look for individuals with strong communication and project management skills.

Computer and Network Operators

Most medium and large workplaces have computer network and websites leading to a large number of potential employers. However, information technology is maturing and becoming more standardized, allowing businesses to manage their networks and websites more efficiently. Workers in this field are expected to perform a variety of functions not typically covered by a single work description.

Computer Programmers and Interactive Media Developers

Compared to other computer-related occupations, employment for Computer Programmers is expected to grow more slowly. New technology and sophisticated software now have the ability to write basic software code, eliminating the need for programmers. Because they can transmit their programs digitally, Computer Programmers are at greater risk than other IT related occupations for off-shoring or contracting out.

Consulting and freelance work are areas of growth within this occupation.

GREEN INDUSTRIES

Biological Technologists and Technicians

Ontario has a vibrant Biotechnology sector with strengths in the bio-medical, pharmaceutical, medical devices, agricultural-biotechnology and biomaterials fields.

Forestry Technologists and Technicians

Increased mechanization of logging operations, particularly in harvesting and site preparation, and improvements in logging equipment will continue to depress demand for this occupation. However, demand for Forestry Technologists and Technicians may increase in the areas of forest conservation as more land is set aside to protect natural resources or wildlife habitats.

Landscaping and Grounds Maintenance Contractors and Managers

The existence and continued construction of commercial and industrial buildings, homes and highways will contribute to the demand for these workers. In an economic downturn, residential landscape may be adversely affected as people reduce household expenses. However, many businesses and major institutions will still require landscape maintenance as this tends to attract clients and clientele.

Nursery and Greenhouse Operators and Managers

Greenhouses and nurseries are becoming large scale, automated operations with the adoption of biotechnology and computerized systems applied to agriculture. Technology will replace manual labour and result in fewer workers required to do this work.

HEALTHCARE

Dental Assistants

The demand for dental services is influenced by population growth, improvements in oral hygiene and public awareness of the importance of dental health. As Dentists' workloads increase, more Dental Assistants will be hired to perform routine tasks, which will enable Dentists to focus on more complex procedures.

An increased use of computers for recording and accessing patient information will lead to new computer training needs for Dental Assistants. Dental Assistants often upgrade to Hygienists, who usually earn substantially more.

Medical Laboratory Technicians

While there have been major breakthroughs in diagnostic techniques over the past several decades, the increased use of portable laboratory instruments and testing kits, combined with the growth of shared laboratory services among health care providers, will moderate future employment growth. Private clinics/laboratories will provide the best employment prospects.

Pharmacy Services

Employment of Pharmacists will be greatly influenced by an ageing population, which will increase the demand for prescription drugs. However, discount chains, mail order pharmacies and substitution of Pharmacy Technicians for Pharmacists should, over the longer term, moderate the current strong demand for Pharmacists.

In the future, pharmacy services will require experts in drug therapy management, public health outreach and teamwork skills which will enable them to work collaboratively with other healthcare professionals.

Registered Nurses

The employment of nurses will not grow at the same pace in every industry. Employment in hospitals is expected to be stable as inpatients are discharged earlier and many treatments are performed on an outpatient basis. However, employment in outpatient care facilities, nursing homes and home health care will continue to spur demand for these professionals.

Nurses' roles will change as new technology continues to be introduced at the bedside and as Nurses are allowed to perform more advanced procedures. Restructuring of the health care system, including specialization and the shift from institutional to home care, is also changing the locations of work, skills and requirements for Nurses.

Nurse Practitioners are Registered Nurses who have a master's degree. They provide basic primary health care that complements that provided by Physicians, such as diagnosing and treating common acute illnesses and injuries and prescribing medicine.

HOSPITALITY AND TOURISM

Culinary Arts and Management

Employment in this occupation is concentrated in the accommodation and food industries, which are sensitive to general economic conditions as well as subject to seasonal variations, especially in resort areas. However, the best trained Chefs and Cooks are in high demand. As well, increased travel by Ontarians and a more multicultural society have increased the demand for Chefs specializing in foreign cuisine.

Changing technology in the workplace will add to the complexity of a Chef's job. For example, retrieval and inventory control will require these workers to have the appropriate computer skills. Executive Chefs must also have managerial skills and may progress to senior positions in the food services industry.

Tourism and Travel Planning

Demand for travel services is vulnerable to the economic cycle, international political crises and pandemics. Business-related travel may be impacted as business activity declines. In addition, new communications systems are allowing the consumer to arrange many aspects of travel packages over the internet.

Travel Counselors will need to position themselves to meet the unique needs of niche markets by developing services that appeal to senior citizens, remote destination travelers, families and other groups willing to pay for specialized assistance.

Individuals entering this profession should have strong marketing and computer technology skills and should specialize in destination travel to secure good employment prospects.

MANUFACTURING TECHNOLOGY

Construction Millwrights and Industrial Mechanics

Millwrights and Industrial Mechanics are likely to face good employment prospects because of their versatility and employment in a variety of industries, including power generation, mining and paper mills manufacturing. During an economic downturn, they can shift employment to another industry. In order to remain competitive, firms will continually need to hire these workers to maintain and repair existing machinery, dismantle old machinery and install new equipment.

New technologies like hydraulic torque wrenches, ultrasonic measuring tools and laser shaft alignment will affect the work of Millwrights, and they must acquire the skills to use these devices. Job prospects are expected to be especially good for those who have experience in machining, welding and mechanical work.

Electrical and Electronics Engineers

As companies continue to introduce new technologies, employment opportunities for these workers will improve. However, international competition and the use of engineering services performed in other countries will limit employment growth.

There are likely to be significant new opportunities for these engineers in setting up computerized production systems. This may require Electrical and Electronic Engineers to work more closely with Mechanical Engineers.

Electrical and Electronics Engineering Technologists and Technicians

Continued expansion of electrical and electronic products and systems into all areas of industry and manufacturing processes will continue to generate employment opportunities. Manufacturing, business services and utilities account for most of the employment for this occupational group.

As companies begin to modernize and update manufacturing facilities processes and product designs in order to become more competitive globally, employment opportunities may increase as these initiatives often depend upon the services of Electrical and Electronics Engineering Technicians and Technologists.

Machinists and Machining and Tooling Inspectors

Employment in this occupation is impacted directly by technology, foreign competition in the manufacture of goods and the economic cycle. The work of Machinists continues to be transformed by the increasing use of sophisticated computerized numeric control (CNC) machines, autoloaders and robotics. Technology has resulted in fewer Machinists being required to do the same amount of work.

Those who perform maintenance work on the automated systems will experience more employment stability, as these machines still need to be serviced and repaired despite a drop in production levels.

Tool and Die Makers

Over 95 percent of Tool and Die Makers are employed in the Manufacturing sector. CNC machine tools have made Tool and Die Makers more productive, while CAD and CAM have allowed some functions previously performed by these workers to be carried out by a Computer and Tool Programmer. In addition, Tool and Die Makers are essential to the maintenance and building of advanced automated systems, which makes them less susceptible, in an economic downturn, to job loss than other workers. The skills of this trade are portable and can be transferred to the machining trades.

Welders and Related Machine Operators

Employment opportunities for Welders and Soldering Machine Operators are dependent upon activity in the Construction, Manufacturing, and Oil and Gas sectors. An increase in the use of automated and robotic welding techniques in manufacturing will result in a slower employment growth. However, those with a wide variety of high-level skills will still be required for sophisticated fabrication tasks, repair work or custom jobs that cannot be easily automated.

New technologies and techniques have enhanced the opportunities for Welders. For instance, laser beam welding, electron beam welding and new fluxes are improving the results of welding, making it applicable to a wider assortment of jobs and industries.

The skills of Welders are easily transferable across industries, which mean that they are less vulnerable to economic slowdowns occurring in a particular sector. Significant investments in infrastructure projects will provide excellent opportunities for Welders in the future.

TECHNOLOGICAL DESIGN

Architectural Technologists and Technicians

Employment levels for Architectural Technologists and Technicians are heavily dependent on activity in the construction sector. The use of computer-aided design technology is blurring the boundary between the work of Engineers, Architects and Technologists. Many young engineers and architects are now doing conception design and production tasks once done by technicians and technologists. This trend may limit future employment growth.

Architects, engineers and draftspersons will use more effective computer-aided design equipment. Employment prospects will be better for more highly skilled individuals with knowledge of computer-assisted design (CAD) and computer assisted manufacturing (CAM) software and good communications skills. Supply of Drafting Technologists and Technicians should meet demand.

Mechanical Engineers

Employment of Mechanical Engineers is concentrated in manufacturing and tends to change in tandem with the general level of economic activity of the sector. Emerging technologies in information technology, biotechnology and nanotechnology may generate new job opportunities for Mechanical Engineers.

Growth in the use of electronics in machinery and process control will lead to increasing overlaps between mechanical and electrical and electronics engineering. The increased emphasis on quality control in production environments will require new skills in this area.

Mechanical Engineering Technologists and Technicians

Slower growth in manufacturing activities should moderate demand for Mechanical Engineering Technologists and Technicians. In an economic downturn, technologists and technicians are more dispersed across occupational categories and could look for work in fields other than engineering or technology, such as general science. The growing use of advance technologies, such as computer-assisted design and drafting and computer simulation, will continue to moderate employment growth.

TRANSPORTATION TECHNOLOGY

Automotive Service Technicians, Truck Mechanics and Mechanical Repairers

Increasingly complex motor vehicle systems, the use of propane and diesel vehicles, the introduction of hybrid and electric vehicle technologies and other innovations are increasing the educational and skill requirements in this occupation. A shift to team-based repair operations also requires new skills. As new computer applications for locating problems appear on the market, Automotive Service Technicians will be called upon to update their skills in the computerized diagnostics area.

Demand for Motor Vehicle Body Repairers will increase as the number of motor vehicles in operation continues to grow. Lighter weight vehicles are more susceptible to collision damage and, therefore, will require more repairs. At the same time, however, automobile bodies can be repaired with less labour than before. Technological innovations have resulted in better corrosion resistance vehicles due to the use of new body materials. All of these factors will moderate future employment growth for this occupation.

An increased focus on truck and trailer safety, promoted through roadside inspections, has helped to sustain the demand for Truck Mechanics.

Technological advancements have improved the quality and durability of motorcycles and other small engine equipment. There is a constrained demand for servicing and repairs.

APPENDIX “A”

Table 8 offers the number of employers present in Simcoe in June 2011 and breaks down the figures by industry and firm size ranges.

The second to last column provides the percentage distribution of all firms by industry. The Construction sector accounts for the largest proportion of employers at 17%. Professional, Scientific and Technical Services and Retail Trade come in second at 11%.

Table 8: Number of Employers by Firm Size Range for June 2011

Industry Sector (2-Digit NAICS)	0	1-19	20-49	50-99	100+	Total	%	Rank
11 Agriculture	794	296	16	4	2	1112	4%	11
21 Mining	16	36	4	1	0	57	0%	18
22 Utilities	11	17	6	0	1	35	0%	19
23 Construction	2781	1741	87	12	7	4628	17%	1
31-33 Manufacturing	451	451	58	33	43	1036	4%	13
41 Wholesale Trade	528	539	53	16	2	1138	4%	10
44-45 Retail Trade	1060	1569	158	63	44	2894	11%	3
48-49 Transportation/Warehousing	841	379	27	14	8	1269	5%	9
51 Information and Cultural	161	92	15	6	5	279	1%	17
52 Finance and Insurance	845	367	73	2	0	1287	5%	8
53 Real Estate	2305	414	27	2	1	2749	10%	4
54 Professional, Scientific & Technical	1993	1082	32	6	3	3116	11%	2
55 Management of Companies	720	86	6	4	0	816	3%	14
56 Administrative Support	797	595	42	9	10	1453	5%	7
61 Educational Services	181	119	5	0	4	309	1%	16
62 Health Care & Social Assistance	363	1034	65	9	30	1501	5%	6
71 Arts, Entertainment & Recreation	274	153	25	13	5	470	2%	15
72 Accommodation & Food	288	573	153	42	24	1080	4%	12
81 Other Services	997	1201	37	3	4	2242	8%	5
91 Public Administration	7	2	2	6	17	34	0%	20
TOTAL	15413	10746	891	245	210	27505		
SIMCOE percentage of all employers	56%	39%	3%	1%	1%	100%		
ONTARIO percentage of all employers	56%	38%	4%	1%	1%	100%		

Statistics Canada, *Canadian Business Pattern*, June 2011

Number of Small Firms

Businesses are by far made up of small establishments. 56% of the firms in Simcoe have no employees.³¹ However, this distribution is not unusual; the last row shows the Ontario percentage distribution of employers by size of firm and the Simcoe figures almost exactly match those numbers.

Change in Number of Firms by Industry

The *Canadian Business Pattern* data can be used to make estimates about employment trends. Changes in employment among small and medium-sized firms may indicate the health of that industry as a whole. Table 9 highlights the changes in the number of firms between June 2010 and June 2011. The table also lists the total number of firms in each industry in June 2011 to provide a context.

Table 9: Change in the Number of Employers by Industry and Firm Size, June 2010 to June 2011

Industry Sector	0	Small 1-19	Medium 20-99	Large 100+	Total number of firms June 2011
11 Agriculture	32	6	0	0	1112
21 Mining	-2	8	0	0	57
22 Utilities	-1	0	-1	0	35
23 Construction	143	3	9	-2	4628
31-33 Manufacturing	-6	-11	0	-8	1036
41 Wholesale Trade	-8	-14	-5	-1	1138
44-45 Retail Trade	22	18	16	-1	2894
48-49 Transportation/Warehousing	-5	15	2	0	1269
51 Information and Cultural	13	-1 ³²	1	2	279
52 Finance and Insurance	21	-1	3	0	1287
53 Real Estate	261	17	4	-1	2749
54 Professional, Scientific & Technical	22	47	0	1	3116
55 Management of Companies	-5	-2	1	0	816
56 Administrative Support	0	1	0	1	1453
61 Educational Services	2	-4	-3	0	309
62 Health Care & Social Assistance	67	34	-2	-1	1501
71 Arts, Entertainment & Recreation	7	-9	0	0	470
72 Accommodation & Food	-24	26	-1	1	1080
81 Other Services	-5 ³³	23	1	0	2242
91 Public Administration	1	0	2	-1	34

Statistics Canada, *Canadian Business Patterns*, June 2010 and June 2011

³¹ This actually undercounts the number of self-employed individuals. The Canadian Business Patterns database does not include unincorporated businesses that are owner-operated (have no payroll employees) and that earn less than \$30,000 in a given year.

³² Photographic and Film Processors (NOC Code 9474) is one example of this decrease in employment.

³³ Motor Vehicle Body Repairers falls within the Other Services (NAICS 81) classification. Many of these businesses are sole proprietorships and may be reflected here.

Changes in the number of firms by industry between June 2010 and June 2011 indicate that Manufacturing and Wholesale Trade have seen notable declines in the number of employers and that there have been small declines in Educational Services.

However, the region has seen increases in Construction, Retail Trade, Real Estate and Health Care and Social Assistance. Simcoe also appears to have experienced increases in Transportation and Warehousing; Information and Cultural industries; Finance and Insurance; Professional, Scientific and Technical Services and Other Services.

Change in Employment among Small and Medium-Sized Firms

The Canadian Business Pattern data can be used to make estimates about employment trends. Changes in employment numbers among small and medium-sized firms (SMEs) may indicate the health of that industry as a whole.

The following table provides the change in employment among SMEs in Simcoe by industry between December 2008 (the start of the recession) and June 2011.

Table 10: Change in SME Employment by Industry Sector between December 2008 and June 2010

Industry Sector	Total Employment 2008	Total Employment 2011	Absolute Change	Percent Change
11 Agriculture	2,693	2,802	109	4%
21 Mining	457	492	35	8%
22 Utilities	343	304	-39	-11%
23 Construction	13,565	13,480	-85	-1%
31-33 Manufacturing	8,259	7,026	-1,233	-15%
41 Wholesale Trade	7,140	5,999	-1,141	-16%
44-45 Retail Trade	18,654	19,436	782	4%
48-49 Transportation/Warehousing	4,114	4,095	-19	0%
51 Information and Cultural	1,269	1,392	123	10%
52 Finance and Insurance	4,677	4,833	156	3%
53 Real Estate	4,403	4,762	360	8%
54 Professional, Scientific & Technical	6,847	6,923	75	1%
55 Management of Companies	1,613	1,445	-167	-10%
56 Administrative Support	5,863	5,267	-596	-10%
61 Educational Services	1,088	973	-116	-11%
62 Health Care & Social Assistance	7,334	8,157	823	11%
71 Arts, Entertainment & Recreation	3,145	2,852	-292	-9%
72 Accommodation & Food	12,013	11,839	-174	-1%

81 Other Services	6,383	6,797	414	6%
91 Public Administration	585	489	-96	-16%
TOTAL	110,445	109,364	-1,081	-1%

Statistics Canada, *Canadian Business Patterns*, June 2008 and June 2011

When estimating changes in employment among small and medium-sized firms between December 2008 and June 2011, Simcoe experienced large decreases in Wholesale Trade, Public Administration and Manufacturing, and large increases in Health Care & Social Assistance and Information and Cultural.

The next two tables look at three-digit industry sub-sectors. The top ten industries showing the largest increases and the largest decreases in employment among SMEs are highlighted.

Table 11: Top 10 Industry Sub-Sectors with Increases in SME Employment between December 2008 and June 2011

Industry Sector	Total Employment 2008	Total Employment 2011	Absolute Change	Percent Change
623 – Nursing and Residential Care Facilities	1,378	2,139	760	55%
531 – Real Estate	3,518	3,967	449	13%
813 – Religious, Grant-Making, Civic & Professional Organizations	1,921	2,251	330	17%
238 – Specialty Trade Contractors	8,560	8,871	311	4%
453 – Miscellaneous Store Retailers	1,420	1,725	305	21%
443 – Electronics and Appliance Stores	631	845	213	34%
446 – Health and Personal Care Stores	1,830	2,019	189	10%
523 – Securities and Other Financial Investment Activities	1,231	1,418	187	15%
445 – Food and Beverage Stores	3,717	3,900	183	5%
621 – Ambulatory Health Care Services	4,408	4,591	183	4%

Statistics Canada, *Canadian Business Patterns*, June 2008 and June 2011

Table 12: Top 10 Industry Sub-Sectors with Decreases in SME Employment between December 2008 and June 2011

Industry Sector	Total Employment 2008	Total Employment 2011	Absolute Change	Percent Change
561 - Administrative and Support Services	5,411	4,819	-592	-11%
336 – Transportation Equipment Manufacturing	793	399	-394	-50%
236 – Construction of Buildings	3,772	3,448	-324	-9%
418 – Miscellaneous Wholesale Distributors	970	681	-289	-30%
417 – Machinery, Equipment and Supplies Wholesale Distributor	1,540	1,253	-287	-19%
713 – Amusement, Gambling and Recreation Industries	2,595	2,351	-244	-9%
441 – Motor Vehicle and Parts Dealers	2,520	2,302	-218	-9%
484 – Truck Transportation	2,379	2,211	-168	-7%
551- Management of Companies	1,613	1,445	-167	-10%
413- Food, Beverage and Tobacco Wholesale Distributors	1,238	1,081	-157	-13%

Statistics Canada, *Canadian Business Patterns*, June 2008 and June 2011

When examined in greater detail, it is apparent that in a number of instances, changes in employment for an industry as a whole are often accounted for by large changes within one sub-sector of that industry. For example,

- The increase in employment in the Health Care & Social Assistance is largely due to an over 50% increase in employment in the Nursing & Residential Care Facilities sub-sector.
- The entire loss in the Administrative Support industry is as a result of losses in Administrative and Support Services with almost no losses Waste Management and Remediation Services.

There can also be contrary trends within an industry:

- In Construction, Specialty Trade Contractors show an increase of 311 jobs, while Construction of Buildings shows a decrease of 324 jobs.
- In Retail Trade, several sub-sectors show increase while Motor Vehicle & Parts Dealers experienced a decrease.

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