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Key facts about Ontario's 24 colleges

Ontario College Technology Graduates and the Economy

Building Ontario's Workforce
for the 21st Century

College technology graduates are critical to Ontario's ability to compete

Technological change and globalization have strongly increased employer requirements for skilled workers across Ontario.

Half of the jobs in the next 15 years will require the ability to use technology not yet invented. Higher engineering and production standards, e-commerce, communications, and quality, safety and environmental regulation are leading to new occupations, and creating new demand for graduates of college technology programs.

College technology graduates are central to technological change, innovation and competitiveness in Ontario's manufacturing, electricity, construction, mining and forest industries – which in turn are key to the growth prospects of communities across Ontario.

These employers have high productivity, pay high wages, and together, account for almost all of Ontario's international exports. But they face challenges - technology change and foreign competition.

"Ontario's top 10 manufacturing export industries enjoy a major labour skills advantage, particularly in college credentials, as about 48 per cent of their workforce have completed postsecondary education (33 per cent college and 14 per cent university). In the United States, only 32 per cent of the workforce in these industries have completed a similar level of education (nine per cent college and 23 per cent university)." ¹

College programs respond quickly to changing workplace requirements because they work closely with their employer advisory committees in each program area. Manufacturers, for example, want graduates with:

- A mix of creative problem-solving capabilities, technical know-how, business skills, and an ability to interact with colleagues and customers;
- A higher degree of technical and technological expertise as production systems become more automated and more interconnected; and
- An ability to adapt easily to constantly changing roles in a constantly changing workplace. ³

During the past three years, colleges introduced 50 new technology programs to respond to changing employer requirements. Where appropriate, college programs have received national accreditation from the Canadian Council of Technicians and Technologists. In addition, colleges now offer about 20 applied degrees in technology subjects.

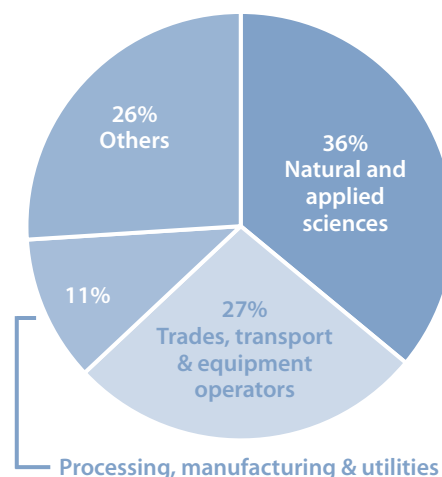
Table 1

2004-05 college graduates

Engineering Technology	10717
Electronics	2866
Mechanical	1830
Resources	953
Civil	1065
Automotive	640
Chemical/Biological	611
Machining	490
Technology Miscellaneous	656
Architectural	506
Aviation (Maintenance)	134
Furniture/Wood Products	229
Instrumentation	154
Power	180
Geology/Mining	100
Aviation (Flight)	90
Welding	98
Other	115

Figure 1

Technology graduates find jobs primarily in the goods sector (2004-05)



"In a world of just-in-time production, businesses need just-in-time skills that contribute to the development, transfer and commercialization of new discoveries." ²

Why Ontario needs more college technology graduates

Each year, 10,000 individuals graduate from technology programs offered by Ontario colleges. Applied science technologists and technicians work in the engineering field with engineers, trades people and scientists. Their learning experiences combine theory and high quality, hands-on training on sophisticated technology. They understand industry standards, including just-in-time processes, safe operating practices, work deadlines, precise work skills and habits, and have the ability to follow directions and work in large multi-disciplinary groups.

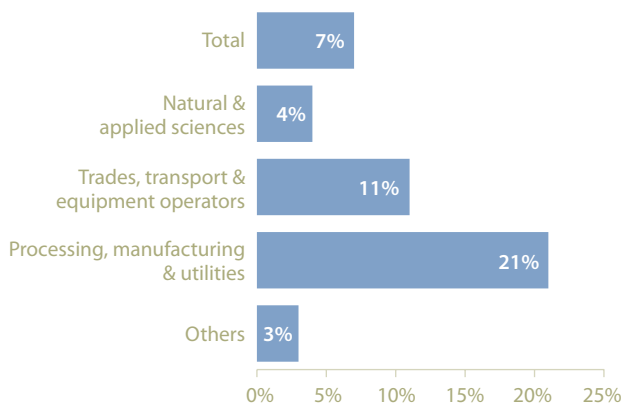
Graduates can improve their opportunities by continuing in postsecondary education either directly after they graduate, or later, after they have joined the workforce. They go on to post-diploma courses in colleges, or to university. They may also apply to the Ontario Association of Certified Engineering Technicians and Technologists (OACETT) to become certified engineering technologists (C.E.T), applied science technologists (A.Sc.T.) or certified technicians (C.Tech.)

They play key 'enabling' roles that are critical to their employers' ability to compete through quality and innovation, project management, maintenance-engineering supervision, quality analysis, testing and inspection, design engineering, research, manufacturing and high-tech electronics.⁴

"Eight of the top 10 occupations with the more rapid employment growth from 1990 to 2003 required postsecondary qualifications, many of them in the natural and applied sciences."⁵

Figure 2

Strong growth: jobs for technology graduates
(% growth, annual average, 2001-02 to 2004-05)



While employment has been trending down in the manufacturing and resource sectors, the pressures to hire skilled employees are so strong that manufacturing employers have increased the number of college graduates they have hired for the past three years. Moreover, with an average age exceeding 50 in many sub-industries, there is a growing concern among industry groups such as the Electricity Sector Council, the Canadian Automotive Partnerships Council, the Canadian Aerospace Council and the Canadian Steel Partnership about replacing experienced retiring workers in the next few years.

College technology graduates have good jobs and successful careers:

- Six months after graduation, the employment rate for 2004-05 graduates was 88 per cent
- A college technology education provides exceptional value for money:
 - students gain a 15 to 25 per cent annual return on their investment of time and money.
 - In manufacturing, the average annual income for those with trades or other college credentials was \$53,400 in 2004.
 - One third of technology graduates earn over \$70,000 annually, including 5 per cent over \$110,000.

Table 2

Technology sectors - employment & earnings for PSE certificate / diploma holders (2004)

	Number with certificate/diploma	% of total industry employment	Average earnings
Manufacturing	272,000	33%	\$53,400
Construction	118,000	31%	\$39,700
Utilities	20,000	44%	\$81,400

Sources: Statistics Canada, Colleges Ontario

¹ 2005 Ontario Budget. Budget Paper B, "Achieving Our Potential; Progress Towards a New Generation of Economic Growth. p. 102.
² Canadian Council on Learning. Canadian Post-secondary Education: A Positive Record – An Uncertain Future.2006. p. iv.
³ Canadian Manufacturers and Exporters, Manufacturing 20/20: Building Our Vision for the Future, 2005.
⁴ Ontario Association of Certified Engineering Technicians and Technologists (OACETT).
⁵ Canadian Council on Learning. Canadian Post-secondary Education: A Positive Record – An Uncertain Future.2006. p. v.

Ontario's Colleges – Ontario's Strength

Ontario's colleges are learner centred

- We are accessible across a broad range of age groups, backgrounds and needs.
- We provide learners with links to further education and training, including formal accreditation and transfer agreements within colleges and between colleges and universities in support of clear pathways to lifelong learning.
- We offer programs and services in French and in English.
- We are experienced in assessing prior experience, learning and language skills, developing effective bridging programs and providing essential support services from counselling through placement to support individual success.
- We have geographically dispersed delivery networks in 200 communities and a growing array of distance education and online learning courses to enhance access and provide options for learning.
- 96% of college graduates would recommend their college to others.

Ontario's colleges are market driven

- We develop and deliver a broad range of programs and services responsive to shifting labour market needs.
- Our programs and services are based on extensive consultation with industry through a strong network of program advisory committees and labour market surveys.
- We are active in local and regional labour market planning.
- We have a long and successful history of partnership with industry, labour, non-profit community-based groups, the public sector and our communities.
- 89% of graduates who enter the labour force have jobs within 6 months of graduation.

Ontario's colleges deliver results

- We deliver a comprehensive range of programming from pre-literacy and employability skills to continuing, postsecondary and post-graduate education.
- On an annual basis we:
 - Graduate 60,000 students from one to four-year postsecondary programs.
 - Serve 25,000 apprentices, train 11,000 in literacy and basic skills, and place 27,000 young people in jobs through Job Connect.
 - Operate 50 bridging and language training programs for internationally trained individuals.
- We achieve a high employer satisfaction rate:
 - Over 90% of employers were satisfied or very satisfied with our graduates' overall college preparation, quality of work and productivity.
 - 95% of corporate customers reported that college-based training contributed to the success of their organizations.
 - 93 % of employers were satisfied or very satisfied with the services offered by colleges' Job Connect program.



Learner
Centred



Market
Driven



Deliver
Results

Algonquin • Boréal • Cambrian • Canadore • Centennial • Conestoga • Confederation • Durham
Fanshawe • Fleming • George Brown • Georgian • Humber • La Cité Collégiale • Lambton • Loyalist
Mohawk • Niagara • Northern • Sault • Seneca • Sheridan • St. Clair • St. Lawrence

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