

TRENDS IN
ENGINEERING
ENROLMENT AND
DEGREES AWARDED
2009-2013

CANADIAN ENGINEERS FOR TOMORROW

The road to a

P.ENG.*

begins with the right education

Canadian Engineers for Tomorrow: Trends in Engineering Enrolment and Degrees Awarded is produced and published by Engineers Canada.

With the objective of monitoring the availability of engineering resources, Engineers Canada has collected national data on enrolment and degrees awarded since the 1970s, and has published the research findings through various documents, technical reports and research papers.

Canadian Engineers for Tomorrow: Trends in Engineering Enrolment and Degrees Awarded contains data collected from universities on accredited engineering programs across Canada, as well as analysis and interpretation of this data.

Engineers Canada strives to ensure accuracy and consistency of all information presented. However, due to variations in survey methodology, interpretation and student classifications at universities across the country, the volunteers and staff of Engineers Canada cannot guarantee the accuracy of data provided by the universities.

The reader is advised that the information presented herein, including the analyses and assessments of the data, does not represent an endorsement by Engineers Canada of any particular university, or the likelihood of a person obtaining employment in any particular engineering discipline.

Students of engineering are reminded that the accumulation of skills within a particular field of engineering, along with strong communications, organizational, and leadership abilities are essential to a progressive career in engineering.

Canadian Engineers for Tomorrow:

Trends in Engineering Enrolment and Degrees Awarded 2009-2013

Engineers Canada is the national organization of the 12 provincial and territorial associations that regulate the profession of engineering in Canada and license the country's more than 270,000 members of the engineering profession. Together, we advance the profession in the public interest.

Engineers Canada advances the competency, integrity, and public accountability of the profession.

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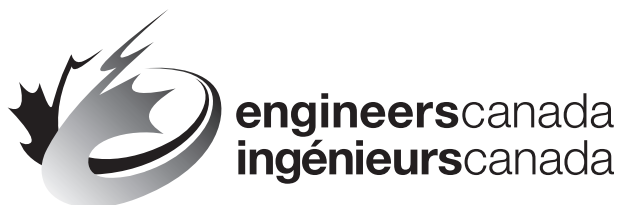
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Canadian Engineers for Tomorrow:

Trends in Engineering Enrolment
and Degrees Awarded 2009-2013



PRISM
ECONOMICS AND ANALYSIS

Prepared by:

Prism Economics and Analysis
October 2014

Message from the Chief Executive Officer

Engineers Canada is pleased to publish its summary of trends in engineering education in Canada. The report includes results for all academic terms from the calendar year 2009 through 2013.

Enrolment in engineering programs continues to grow, enrolment in accredited undergraduate programs reached 73,035 in 2013, an increase of 4.0% from 2012 and 24.1% since 2009. In 2013, there were 23,486 post-graduate students in engineering, an increase of 27.5% since 2009. Visa students accounted for more than 90% of this increase.



Canadian engineering programs continue to be a popular choice for international students. From 2009 to 2013 the share of visa students in undergraduate enrolment rose from 11.8% to 14.7%. For post-graduate visa students, the share is considerably larger, growing from 36.6% in 2009 to 47.3% in 2013.

The share of women in undergraduate enrolments peaked in 1999 at 20.6% and declined thereafter to 17.1% in 2008. Since then, female representation has increased each year accounting for 18.9% of total enrolments in 2013. The proportion of women in post-graduate enrolment is slightly higher, reaching 23.4% in 2013.

A total of 13,363 undergraduate degrees in engineering were awarded in 2013. This was an increase of 7.9% from 2012. Since 2009, degrees awarded have increased by 23.9%. For post-graduate degrees awarded, master's degrees awarded have increased by 45.6% compared to 13.1% percent of PhD's awarded during that same period.

In 2013, 16.5% of PhD's were awarded to women. Over the previous five years, however, women accounted for an average of 21.3% of enrolments in PhD programs. The divergence suggests that women may be experiencing somewhat greater challenges in completing their doctoral programmes.

Altogether, the report highlights another stable year.

A handwritten signature in black ink, appearing to read 'Kim Allen', written over a white background.

Kim Allen, FEC, P.Eng.

CHIEF EXECUTIVE OFFICER
ENGINEERS CANADA

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Acknowledgements

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Foreword

Each year, Engineers Canada gathers data on student enrolments and graduations from Canada's universities. This report analyzes trends in engineering student enrolment within accredited engineering programs across the nation.

Understanding these trends enables Engineers Canada and other members of the profession to:

- Compare patterns in the changing number of students who enroll in and graduate from the various engineering programs offered in the provinces,
- Assess the number of women and visa students who are pursuing engineering education, and
- Exchange pertinent information about similar and distinctly different trends across disciplines and institutions.

Highlights

Undergraduate Enrolment Trends:

- Undergraduate enrolments increased by 4.0% in 2013. Since 2009, undergraduate enrolments have increased by 24.1%. See Table U.1.1.
- Since 2009, the most rapidly growing engineering disciplines have been: mining or mineral (51.6%), environmental (46.6%), software (41.8%), biosystems (41.6%) and geological (31.3%). The fields which have grown mostly slowly have been: materials or metallurgical (-0.3%), computer (11.5%), industrial or manufacturing (12.5%) and electrical (13.4%). See Table U.1.1.
- In 2013, mechanical engineering accounted for 21.2% of total undergraduate enrolments, followed by civil engineering (16.6%) and electrical engineering (14.6%). See Table U.1.1.
- Over the period 2009 to 2013, undergraduate enrolments increased most rapidly in British Columbia (55.1%) and Nova Scotia (40.3%). The slowest increase in enrolments were in Alberta (11.0%) and Quebec (16.7%). See Table U.2.1.
- Ontario accounted for 42.2% of 2013 undergraduate enrolments, followed by Quebec (25.5%) and Alberta (10.0%). See Table U.2.1.

Share of Women in Undergraduate Enrolments:

- The share of women in undergraduate enrolments increased from 17.3% in 2009 to 18.9% in 2013. The share of women in undergraduate enrolments peaked in 1999 at 20.6% and declined thereafter to 17.1% in 2008. Since 2008, the share of women in undergraduate enrolments has increased. See Table U.1.2.
- Compared to men, women are significantly more likely to enrol in biosystems and environmental engineering than mechanical engineering or computer engineering.
- There are differences across provinces in the share of women in undergraduate enrolments. In 2013, Newfoundland and Labrador had the highest share of women in undergraduate enrolments (25.9%), followed by Alberta (21.8%) and Saskatchewan (21.2%). The lowest shares were in New Brunswick (15.8%) and Prince Edward Island (14.3%). See Table U.2.3.

Visa Students (Undergraduate):

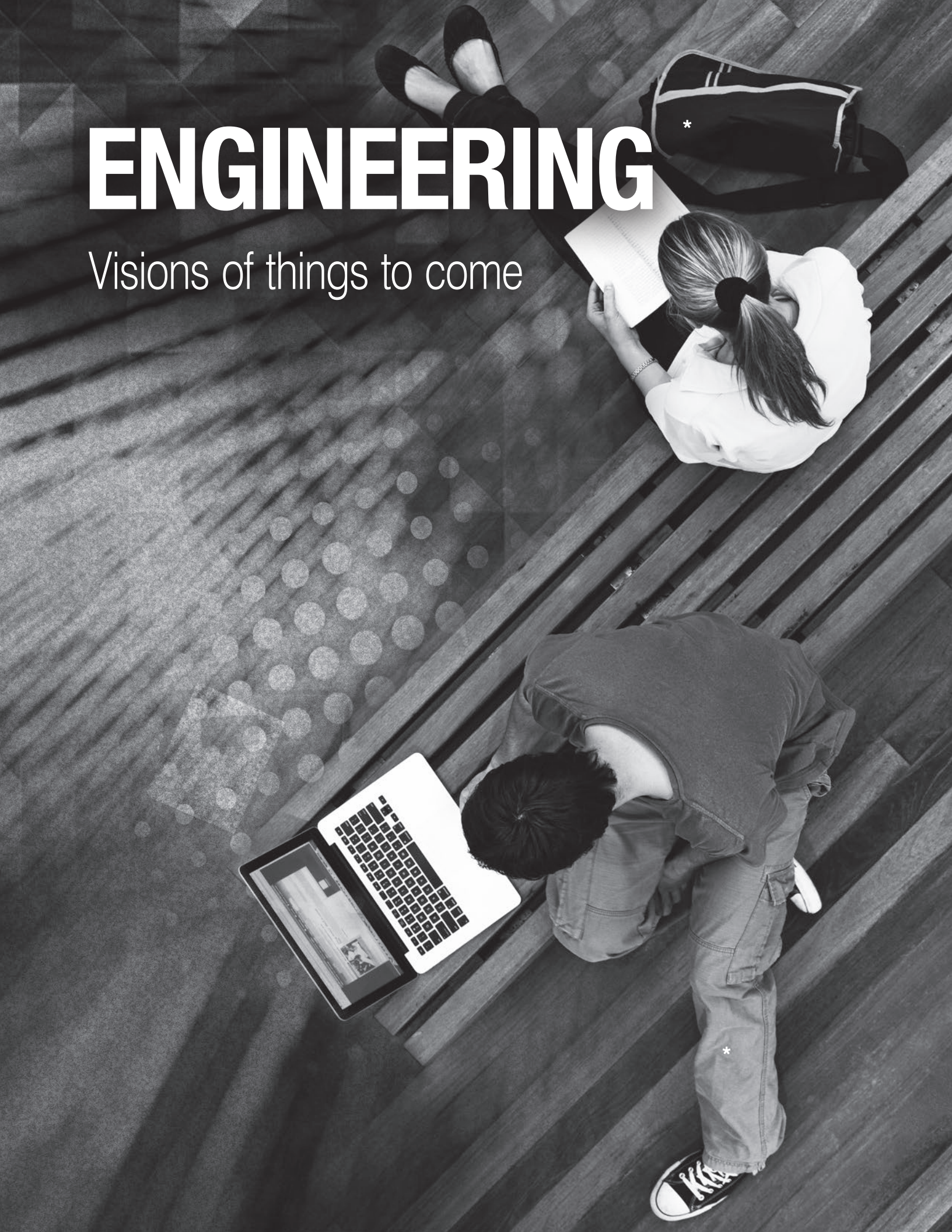
- In 2013, visa students accounted for 14.7% of undergraduate enrolments. This compares with 11.8% in 2009. See Chart 1.12.

Post-Graduate Enrolment Trends:

- In 2013, there were 23,486 full-time and part-time post-graduate students in engineering programs. This was an increase of 27.5% compared with 2009. Visa students accounted for more than 90% of this increase.
- Visa students represented 47.3% of post-graduate enrolments in 2013. This compares with 36.6% in 2009.
- In 2012, the share of women in post-graduate enrolments was 23.4%. This compares with 21.3% in 2009 and exceeds the proportion of women in undergraduate programs.

ENGINEERING

Visions of things to come



Undergraduate Student Enrolment and Degrees Awarded

UNDERGRADUATE STUDENT ENROLMENT

In 2013, 49 universities provided information on their enrolment, programs and degrees awarded.¹

Enrolment in accredited undergraduate engineering programs across Canada reached 73,035 in 2013.² This was an increase of 4.0% from 2012 and 24.1% since 2009. Chart 1.1 illustrates the growth in undergraduate enrolment for accredited programs and the year-to-year percentage changes from 2009 to 2013. Appendix A provides more detailed data.

CHART 1.1 – UNDERGRADUATE ENROLMENT (ACCREDITED PROGRAMS ONLY) (FTE)

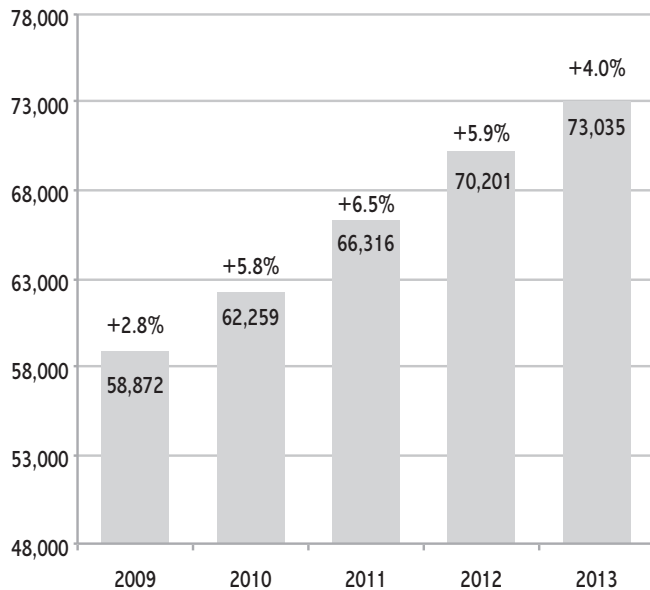
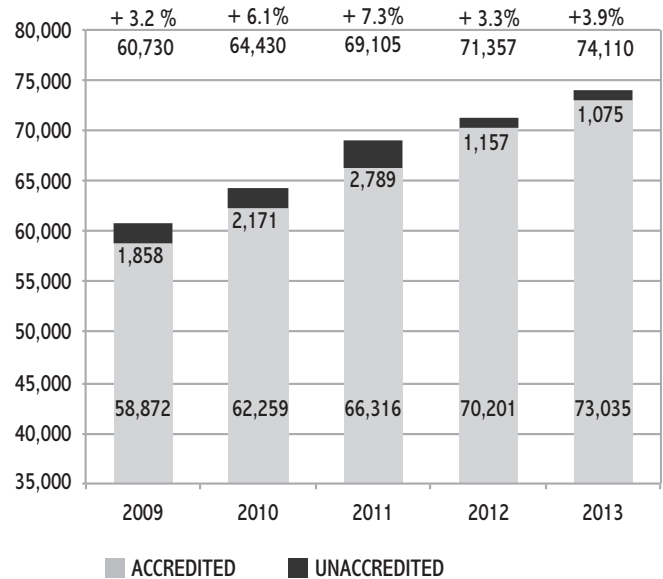


Chart 1.2 adds enrolment in undergraduate engineering programs that have not as yet been accredited. When enrolment in these programs is combined with accredited programs, the total number of undergraduate engineering students (on an FTE basis) in 2013 was 74,110.

CHART 1.2 – UNDERGRADUATE ENROLMENT (ALL PROGRAMS) (FTE)



¹ The method for determining enrolment changed in 2006 in the following ways: (1) Prior to 2006, universities provided the fall enrolment numbers for full-time students only. Starting in 2006, faculties were asked to calculate average enrolment levels that took into account registrations in all three terms of the year (fall, winter and summer). This change caused an increase in reported enrolment for some institutions and a decrease in reported enrolment for others, while some institutions showed no significant change in enrolment numbers as a result of the change. (2) Figures from 2006 onward are expressed in full-time equivalents (FTEs). For example, if the full-time course load is six courses, then a student taking only two courses is included as 0.33 FTE. In the past, students taking a partial course load were not included in the enrolment figures. This second change caused reported enrolment numbers to increase for the average institution. It is not possible to quantify the relative impacts of these changes and, as a consequence, it is not possible to determine the net impact on measured enrolment between 2005-2006.

² 'Accredited programs' are programs that are recognized by the Canadian Engineering Accreditation Board as meeting the educational standard required by candidates for P.Eng. designation.

UNDERGRADUATE STUDENT ENROLMENT BY PROGRAM³

The disciplines attracting the greatest share of enrolments continue to be mechanical, civil and electrical engineering. In 2013, these three disciplines accounted for 52.4% of undergraduate enrolments. This is down marginally from the 54.0% share of enrolments in 2009.

Enrolments in environmental engineering increased by 46.6% since 2009 (compared to 24.1% in overall enrolments). Enrolments in software engineering also increased significantly, having grown by 41.8% since 2009. By contrast, enrolments in industrial or manufacturing engineering, computer engineering and materials or metallurgical engineering increased by less than half the overall trend. In the case of materials or metallurgical engineering, enrolments in 2013 were marginally lower than in 2009.

Charts 1.3 to 1.5 illustrate the trends in undergraduate enrolments by program.

CHART 1.3 – UNDERGRADUATE ENROLMENT BY PROGRAM (1) (FTE)

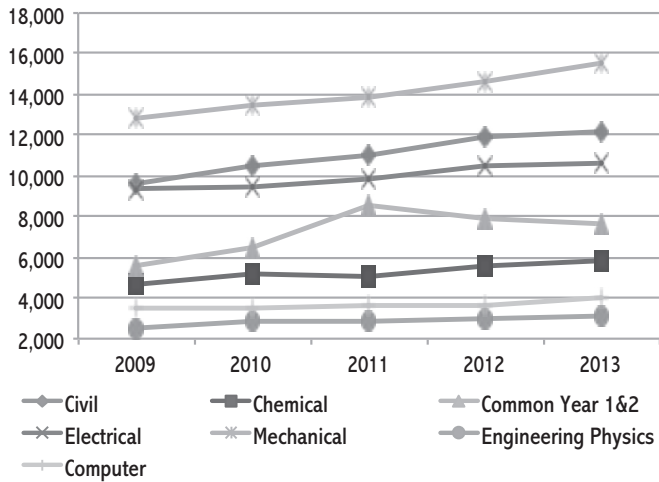


CHART 1.4 – UNDERGRADUATE ENROLMENT BY PROGRAM (2) (FTE)

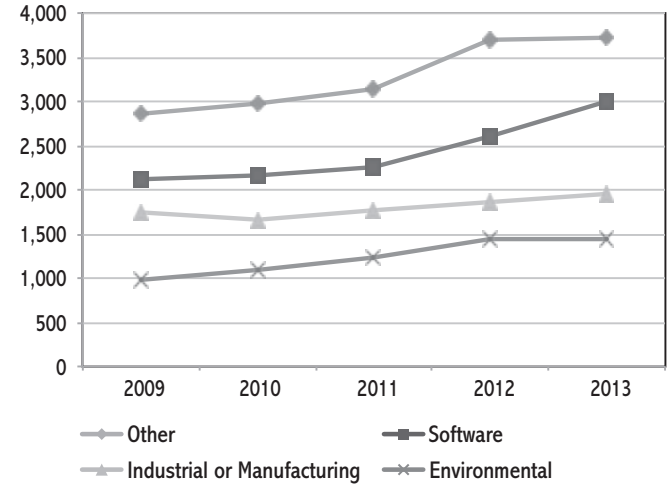
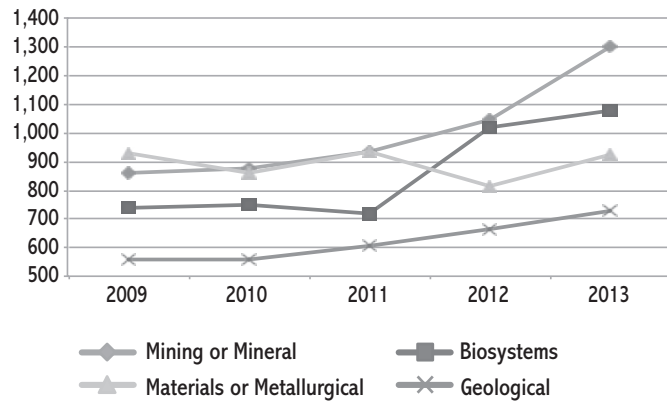


CHART 1.5 – UNDERGRADUATE ENROLMENT BY PROGRAM (3) (FTE)



³ This section and all following sections refer only to enrolment in currently accredited programs.

TRENDS IN UNDERGRADUATE STUDENT ENROLMENT BY PROVINCE

The provinces with the largest proportion of undergraduate enrolments continue to be Ontario and Quebec with 42.4% and 25.5% of total enrolments for 2013. Alberta and British Columbia accounted for 10.0% and 9.5% respectively. Although British Columbia posted the largest cumulative gains since 2009 (55.1%), the province experienced a large decline (15.1%) in 2013. Nova Scotia, Manitoba and Saskatchewan also experienced above average increases since 2009.

Charts 1.6 and 1.7 show trends in undergraduate enrolments by province.

CHART 1.6 – UNDERGRADUATE ENROLMENT BY PROVINCE (1) (FTE)

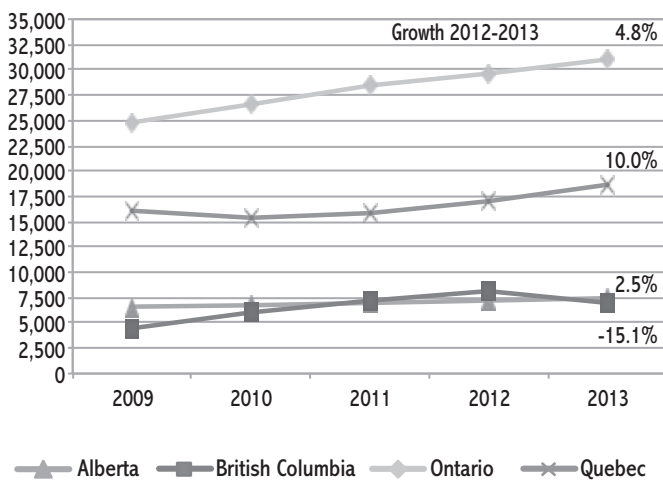
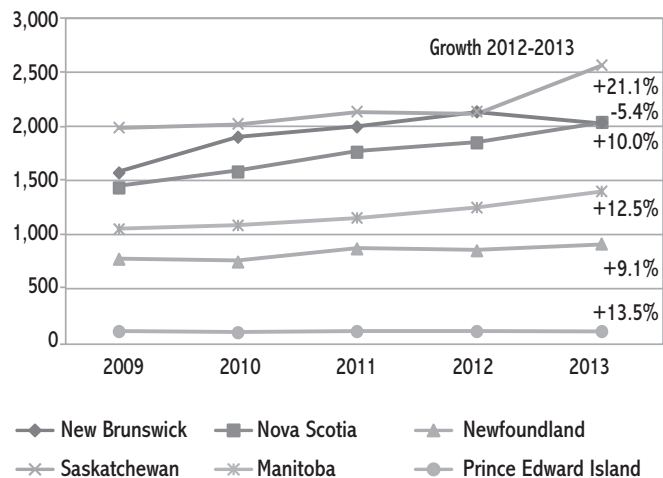


CHART 1.7 – UNDERGRADUATE ENROLMENT BY PROVINCE (2) (FTE)

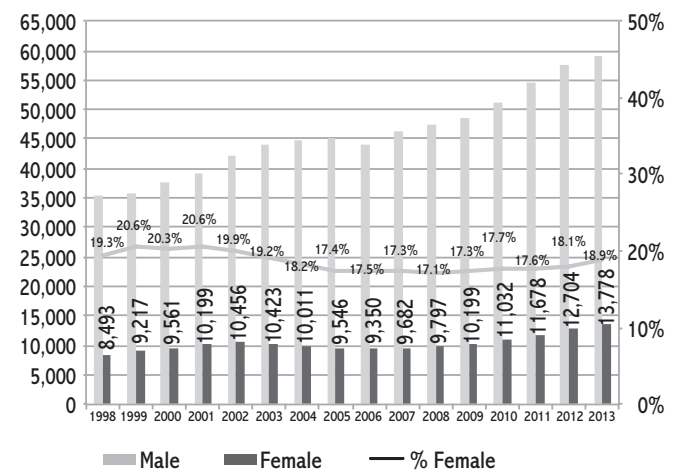


FEMALE UNDERGRADUATE ENROLMENT

In 2013, 13,778 female undergraduates were studying engineering in accredited Canadian programs. This was 18.9% of total enrolments.

The share of women in undergraduate enrolments peaked in 1999 at 20.6%. Thereafter the share of women in undergraduate enrolments declined until reaching 17.1% in 2008. Since 2008, the share of women in undergraduate enrolments has increased each year. Chart 1.8 illustrates the trend since 1998.

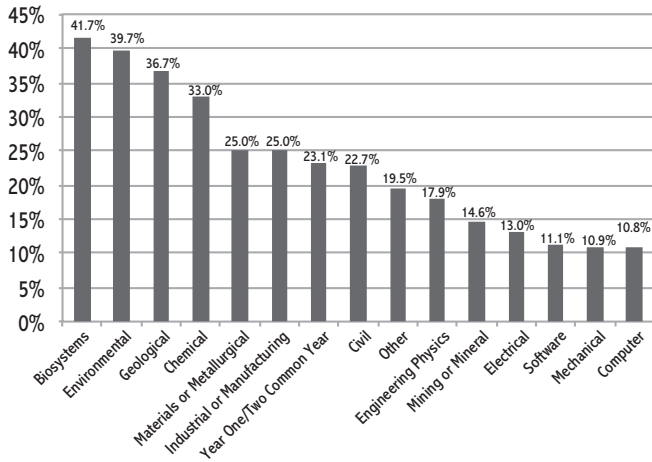
CHART 1.8 – UNDERGRADUATE ENROLMENT BY GENDER (FTE)*



* FTEs are reported since 2006 and full-time students only prior to 2006.

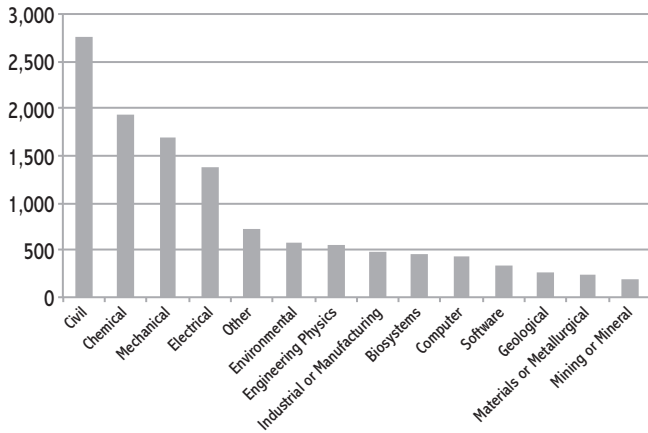
There are notable differences in enrolment patterns by gender across programs. As Chart 1.9 illustrates, the share of female enrolment in biosystems (41.7%) and in environmental engineering (39.7%) is quite high, compared to mechanical (10.9%) or computer engineering (10.8%), where female representation is much lower.

CHART 1.9 – UNDERGRADUATE ENROLMENT OF FEMALES BY PROGRAM, 2013 (FTE)



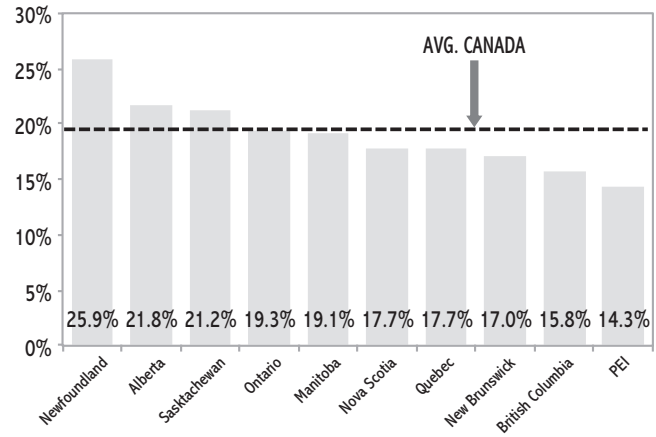
In 2013, 13,778 females enrolled in undergraduate engineering programs. When examining the distribution of female undergraduate enrolment, Chart 1.10 reveals that enrolment in civil (2,756) and chemical engineering (1,944) was most popular⁴.

CHART 1.10 – FEMALE UNDERGRADUATE ENROLMENT, 2013 (FTE)



There were also differences across provinces in the share of women in their undergraduate enrolment. In 2013, Newfoundland and Labrador had the highest share of women in undergraduate enrolments (25.9%), followed by Alberta (21.8%) and Saskatchewan (21.2%). The lowest share was in New Brunswick (15.8%) and Prince Edward Island (14.3%).

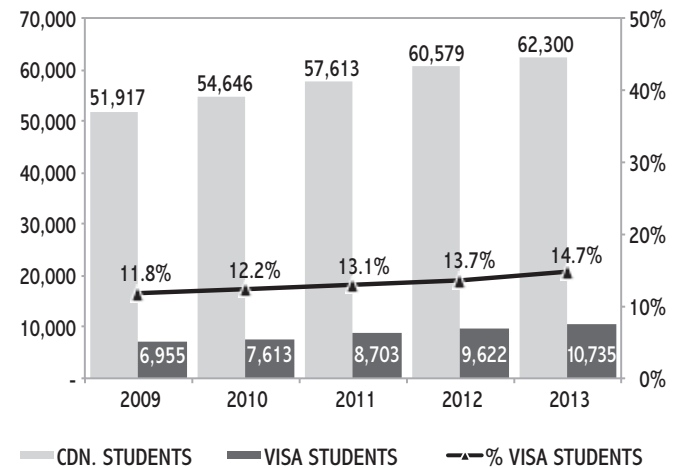
CHART 1.11 – FEMALE SHARE OF UNDERGRADUATE ENROLMENT BY PROVINCE, 2013 (FTE)



UNDERGRADUATE ENROLMENT OF INTERNATIONAL (VISA) STUDENTS

The proportion of international students attending accredited engineering programs continues to rise. Chart 1.12 shows the number of visa students⁵ in 2013 and their share in undergraduate enrolment. From 2009 to 2013, the share of visa students in undergraduate enrolment has increased from 11.8% to 14.7%. Visa students accounted for more than a quarter of the increase in undergraduates between 2009 and 2013.

CHART 1.12 – UNDERGRADUATE ENROLMENT OF VISA STUDENTS (FTE)



There are significant differences across provinces in the share of visa students in total undergraduate enrolment. New Brunswick, Nova Scotia and Saskatchewan have notably higher shares of visa students than the national average: 33.3%, 23.4% and 22.2% respectively. Newfoundland and Labrador and Alberta have the lowest shares: 10.1% and 10.8% respectively.

⁴ Year One/Two Common Year enrolments were excluded in this chart as it does not assist in understanding the preferences of undergraduate female engineering students.

⁵ Visa students are defined as individuals who enter Canada under the "Student Visa" category.

UNDERGRADUATE DEGREES AWARDED

A total of 13,363 undergraduate degrees in engineering were awarded in 2013. This was an increase of 7.9% from 2012. Since 2009, degrees awarded have increased by 23.9%. This is in line with the increase in undergraduate enrolment over the same period (24.1%).

CHART 1.13 – UNDERGRADUATE ENROLMENT (FTE) AND DEGREES AWARDED (ACCREDITED PROGRAMS ONLY)

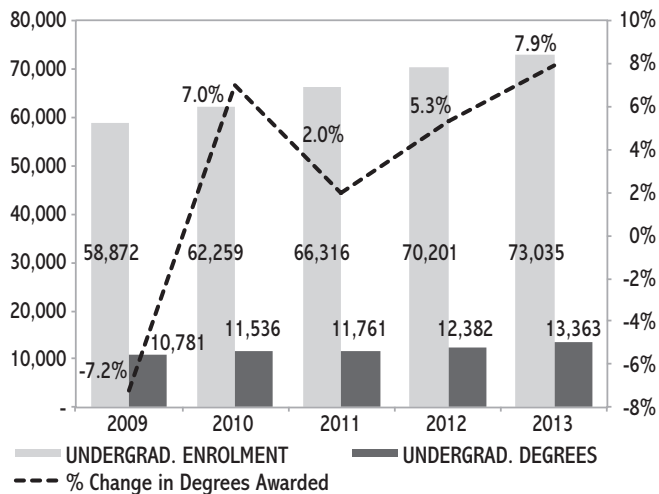
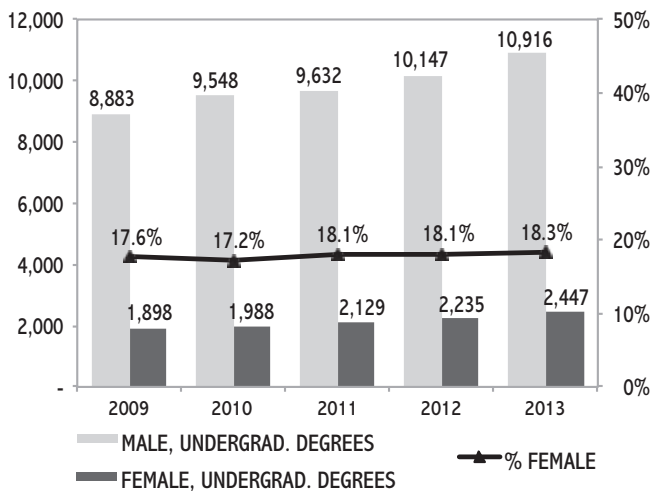


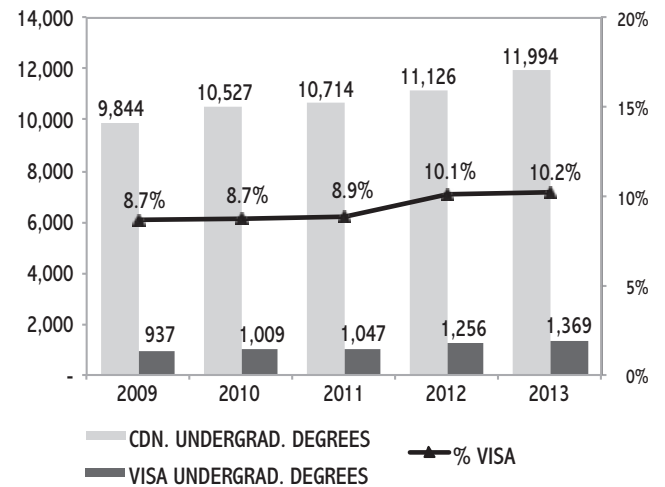
Chart 1.14 shows the trends in degrees awarded by gender. These are broadly consistent with enrolment patterns and are not suggestive of any significant gender differences in completion rates.

CHART 1.14 – UNDERGRADUATE ENROLMENT AND DEGREES AWARDED BY GENDER (ACCREDITED PROGRAMS ONLY)



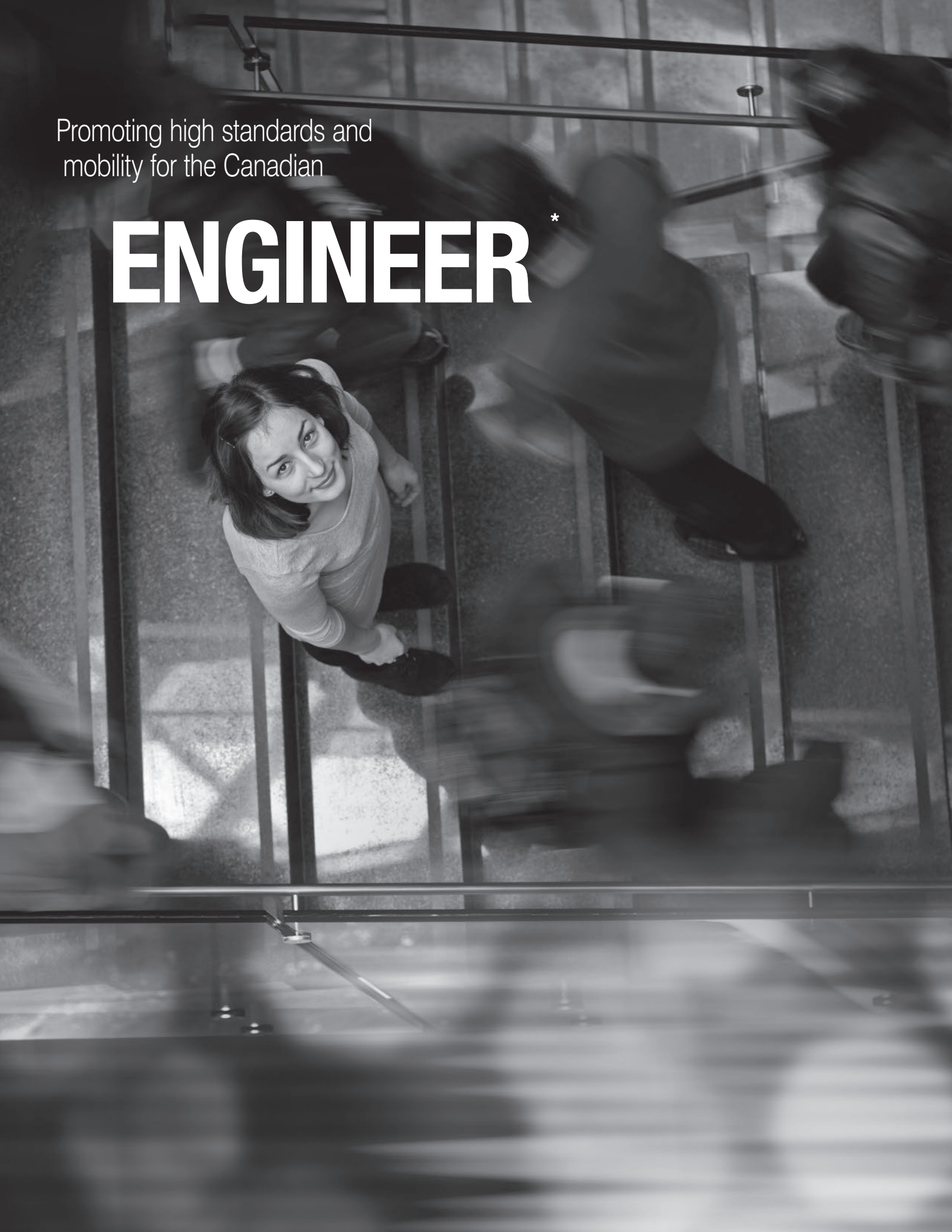
In 2013, there were 1,369 undergraduate degrees awarded to visa students. This was an increase of 46.1% compared to 2009. Visa students accounted 10.2% of the degrees awarded in 2013, compared to 8.7% in 2009. Visa students have a lower share of degrees awarded than their share of enrolments (10.2% compared to 14.7%). This may reflect differences in successful completion rates. Alternatively the divergence may be the result of a greater concentration of visa students in earlier program years.

CHART 1.15 – UNDERGRADUATE ENROLMENT (FTE) AND DEGREES AWARDED BY VISA STUDENTS (ACCREDITED PROGRAMS ONLY)



Promoting high standards and
mobility for the Canadian

ENGINEER*



Post-Graduate Enrolment and Degrees Awarded

FOREWORD

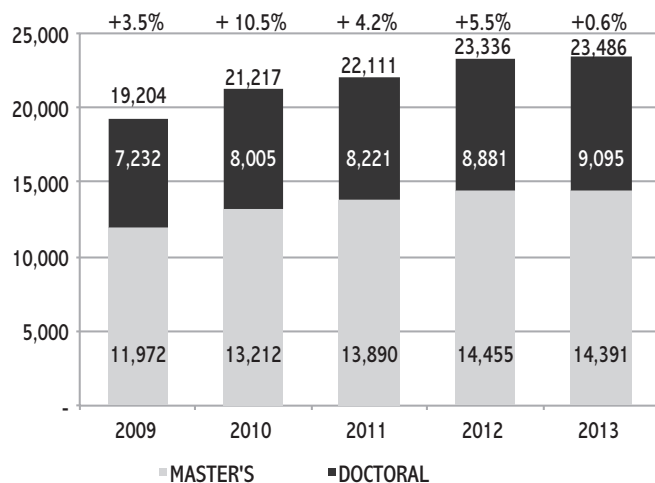
In 2013, there were 20,561 full-time post-graduate students in engineering programs and 2,925 part-time students, for a total of 23,486 students. This was an increase of 27.5% when compared with 2009. Visa students accounted for more than 90% of this increase.

The proportion of women in post-graduate programs increased from 21.3% in 2008 to 23.4% in 2013.

NUMBER OF GRADUATE STUDENTS

There were 23,486 graduate students enrolled part-time or full-time in masters or doctoral programs in engineering across Canada in 2013. As shown in Chart 2.1, enrolment growth in graduate programs levelled off in 2013.

CHART 2.1 – NUMBER OF GRADUATE STUDENTS BY LEVEL

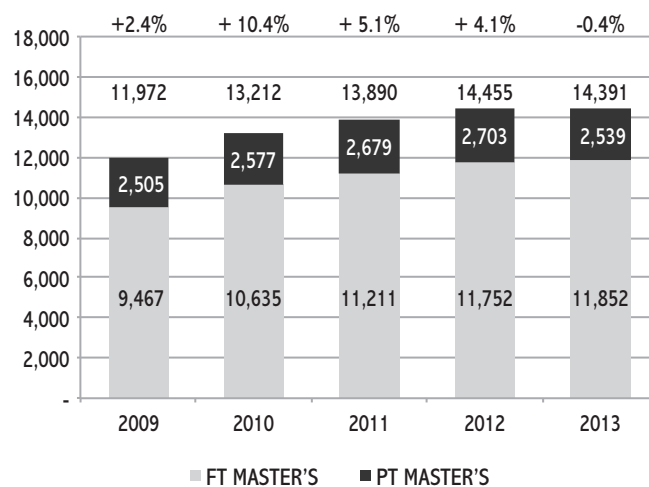


MASTER'S STUDENTS

Enrolment in master's programs increased each year until 2013 when enrolment declined marginally.

In 2013, 17.6% of students enrolled in master's programmes were enrolled on a part-time basis. This is down from 20.9% in 2009. This may reflect the decision of some students to defer entry into the labour market owing to weaker employment prospects in some fields. (The part-time share of master's students peaked in 2006 at 22.5%).

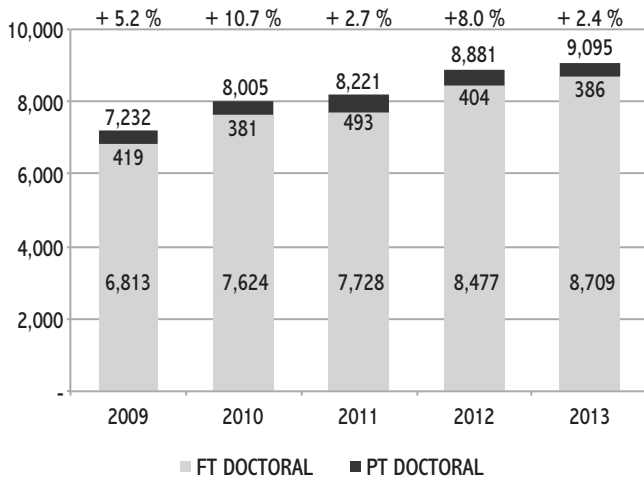
CHART 2.2 – NUMBER OF MASTER'S STUDENTS BY COURSE LOAD



DOCTORAL STUDENTS

In 2013, there were 9,095 students enrolled in doctoral programs. Over the past five years, 4.0 to 5.0% of doctoral students have been enrolled on a part-time basis.

CHART 2.3 – NUMBER OF DOCTORAL STUDENTS BY COURSE LOAD



POST-GRADUATE ENROLMENT BY DISCIPLINE

There are differences between the discipline enrolment patterns of post-graduate students compared to undergraduate students. As noted earlier, mechanical engineering was the predominant choice of undergraduates over the period 2009 to 2013, averaging 21.3% of undergraduate program enrolments. At the post-graduate level, electrical engineering predominates. In 2013, enrolments in master's programs in electrical engineering accounted for 26.7% of total enrolments in master's programs (on an FTE basis).

Charts 2.4 and 2.5 show enrolment trends in master's programs by discipline.

CHART 2.4 – MASTER'S ENROLMENT BY DISCIPLINE (1) (FTE)

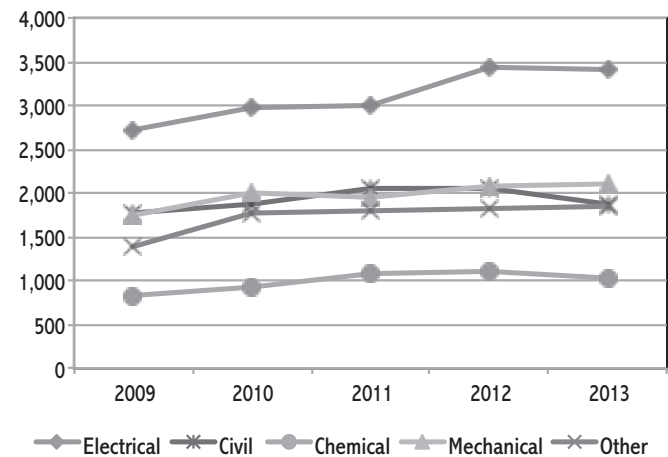
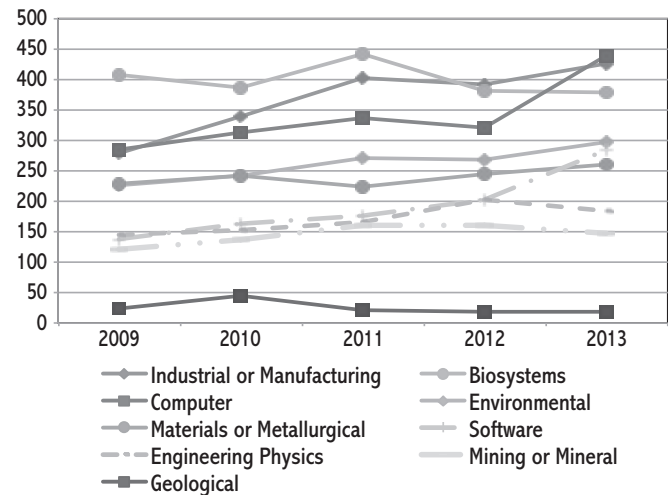
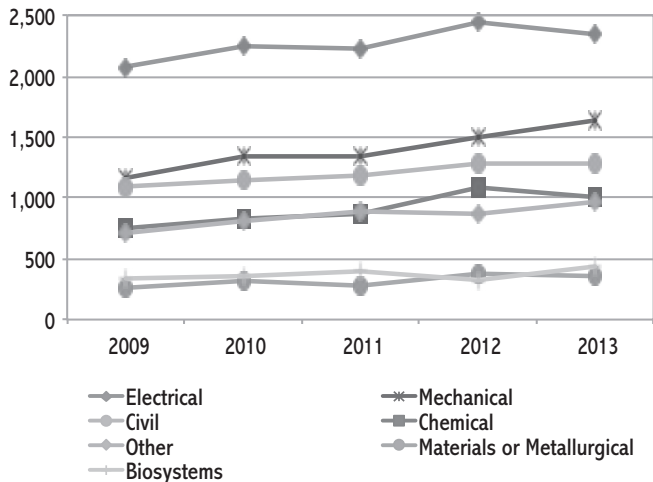


CHART 2.5 – MASTER'S ENROLMENT BY DISCIPLINE (2) (FTE)



Doctoral enrolment patterns by discipline are similar to those for master's programmes. These trends are illustrated in chart 2.6.

CHART 2.6 – DOCTORAL ENROLMENT: MAJOR DISCIPLINES (FTE)



POST-GRADUATE ENROLMENT OF INTERNATIONAL (VISA) STUDENTS

Visa students accounted for just under half (47.3%) of graduate student enrolment in engineering in 2013. As chart 2.7 shows, both the number of visa students and their share of post-graduate enrolment has increased each year since 2009. Visa students accounted for more than 90% of the increase post-graduate enrolment over the period 2009 to 2013. Charts 2.7, 2.8 and 2.9 show the trends in visa student enrolment post-graduate programs.

CHART 2.7 – POST GRADUATE ENROLMENT OF CANADIAN AND VISA STUDENTS (FTE)

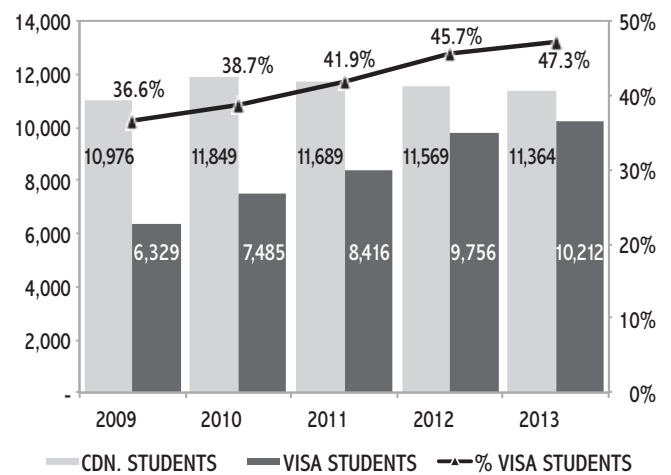


CHART 2.8 – MASTER'S ENROLMENT OF CANADIAN AND VISA STUDENTS (FTE)

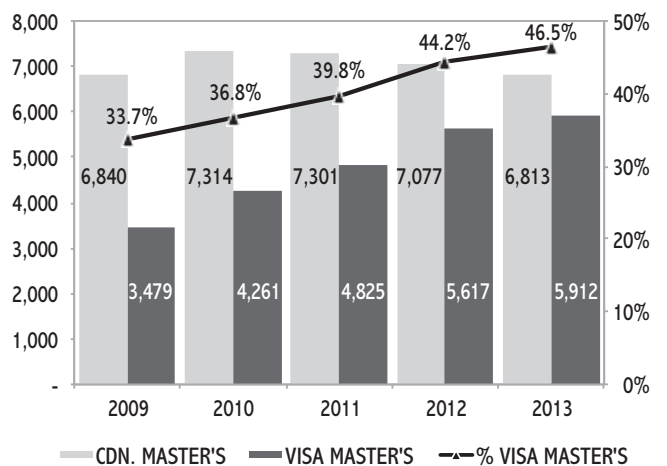
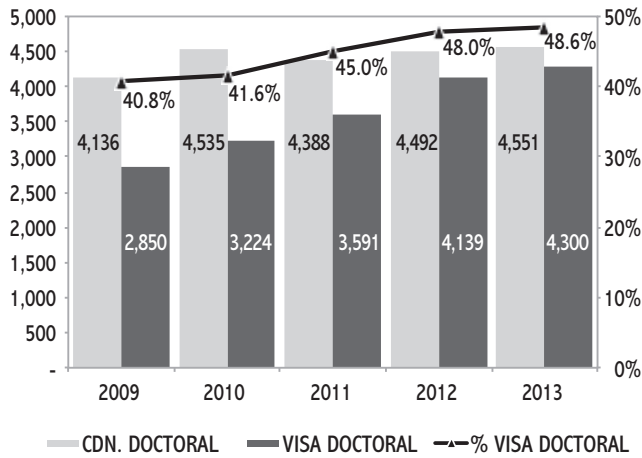


CHART 2.9 – DOCTORAL ENROLMENT OF CANADIAN AND VISA STUDENTS (FTE)



POST-GRADUATE ENROLMENT BY GENDER

From 2009 to 2011, the share of women in post-graduate enrolment was approximately 21.0%. In 2012, that proportion increased to 22.4% and in 2013 to 23.4%. In 2013, there was virtually no difference in the gender pattern of enrolment in post graduate programs between visa students and Canadian students. Charts 2.10, 2.11 and 2.12 show the trend in post-graduate enrolments by gender.

CHART 2.10 – POST GRADUATE ENROLMENT BY GENDER (FTE)

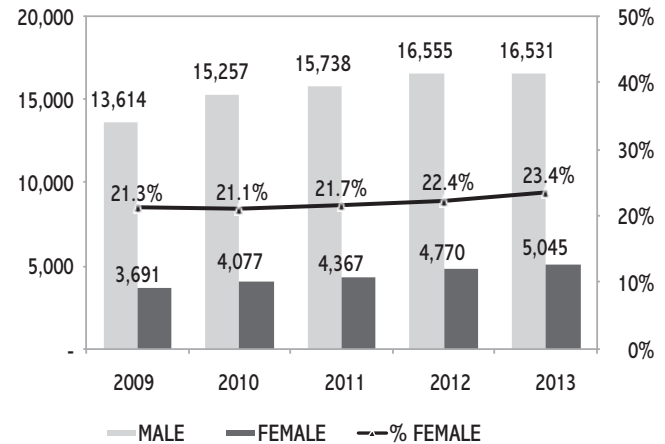


CHART 2.11 – MASTER'S ENROLMENT BY GENDER (FTE)

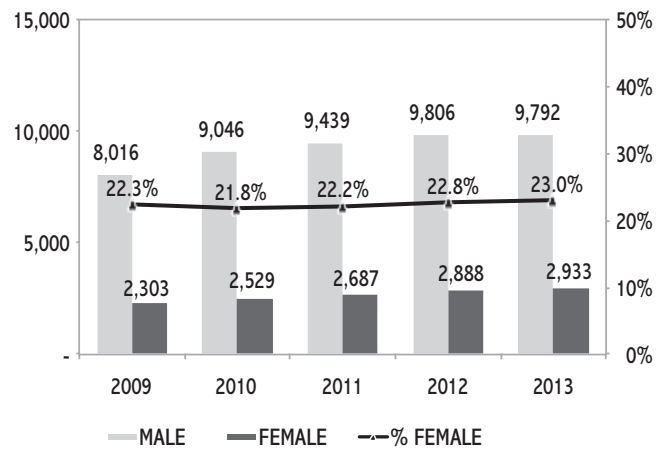
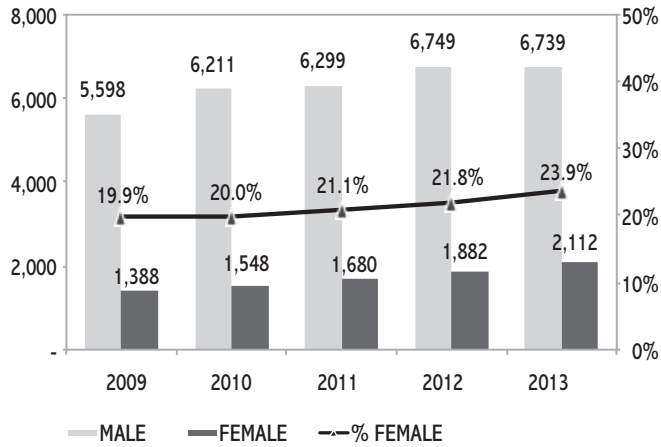


CHART 2.12 – DOCTORAL ENROLMENT BY GENDER (FTE)



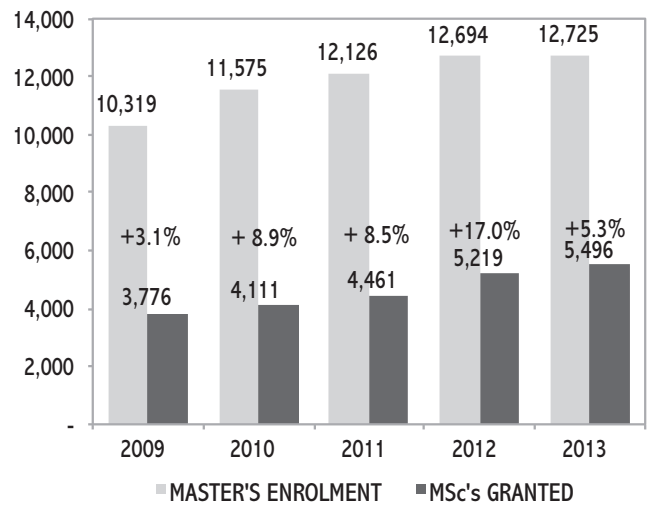
There were notable differences in the gender pattern of enrolment by discipline. In 2013, almost half (45.3% on an FTE basis) of all environmental engineering students in post-graduate programs were women. Other programs with a high proportion of women enrolled included: biosystems engineering (40.2%), geological engineering (38.9%), and chemical engineering (34.9%).

There were also differences in the gender pattern of enrolment by province. In 2013, the three provinces with the greatest proportion of women enrolled in master's programs were: Alberta (27.5%), Saskatchewan (also 27.6%) and Newfoundland and Labrador (27.0%).

POST-GRADUATE DEGREES AWARDED

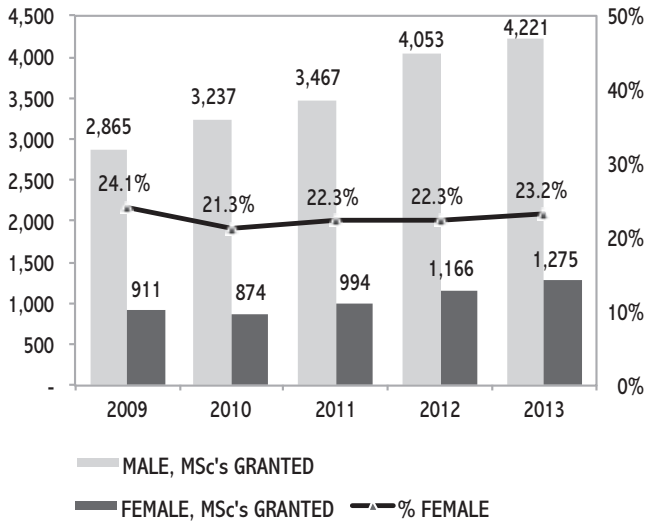
In 2013, 5,496 master's degrees were awarded. This was an increase of 5.3% from 2012. Since 2009, master's degrees awarded have increased by 45.6%.

CHART 2.13 – MASTER'S ENROLMENT AND DEGREES AWARDED (FTE)



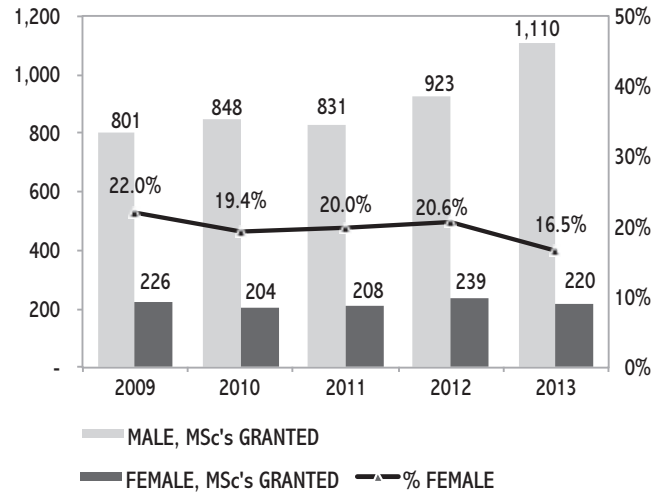
Master's degrees awarded by gender reflect the same pattern as enrolments.

CHART 2.14 – MASTER'S ENROLMENT AND DEGREES AWARDED BY GENDER (FTE)



In 2013, 16.5% of PhD's were awarded to women. Over the previous five years, however, women accounted for an average of 21.3% of enrolments in PhD programs. The divergence suggests that women may be experiencing somewhat greater challenges in completing their doctoral programmes.

CHART 2.16 – DOCTORAL ENROLMENT AND DEGREES AWARDED BY GENDER (FTE)



In 2013, 1,162 PhD's were awarded. This was an increase of 13.1% when compared to 2009.

Chart 2.17 shows that the number of PhD's awarded to visa students has increased in tandem with the strong increase in visa student enrolment.

CHART 2.15 – DOCTORAL ENROLMENT AND DEGREES AWARDED (FTE)

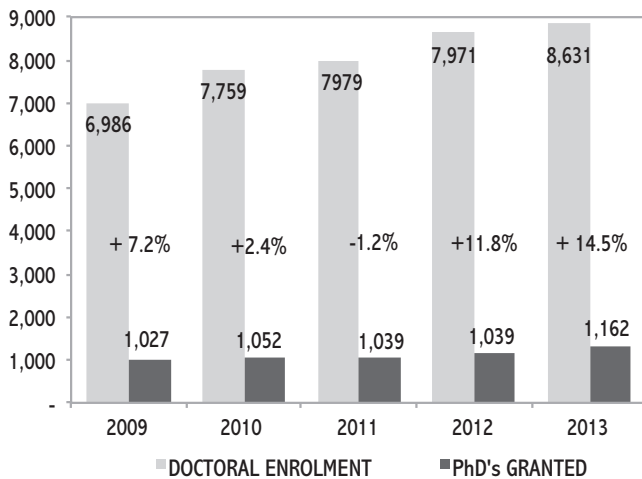
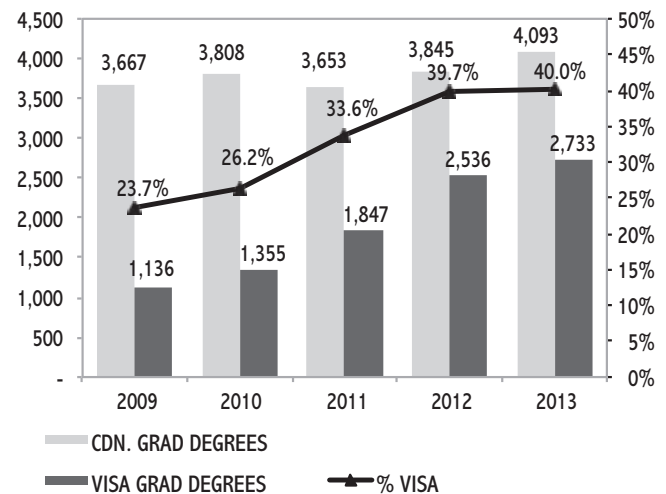


CHART 2.17 – POST-GRADUATE ENROLMENT (FTE) AND DEGREES AWARDED BY VISA STUDENTS (ACCREDITED PROGRAMS ONLY)



APPENDICES



Appendix A

DATA TABULATIONS – ENGINEERING ENROLMENT AND DEGREES AWARDED

The following chart sets out the structure of the data tabulations.

Undergraduate Enrolment (U)

- U.1. National
- U.2. Provincial
- U.3. Institutional

Undergraduate Degrees Awarded (UD)

- UD.1. National
- UD.2. Provincial
- UD.3. Institutional

Postgraduate Student Enrolment (G)

- G.1. National
- G.2. Provincial
- G.3. Institutional

Postgraduate Degrees Awarded (GD)

- GD.1. National
- GD.2. Provincial
- GD.3. Institutional

Faculty Members by Institution (F)

- F.1. Faculty Composition

Co-op, Internship and Professional Experience Programs (C)

- C.1. Industry Experience Options by Institutions

For 2007 and onwards, data are based on the average number of students enrolled over the fall, winter and summer terms.

SCHOOL NAME AND ACRONYMS

In the *Appendix* section of this report, all university names, where appropriate, have been abbreviated. The chart shown below lists the complete name of the school and the abbreviated name that is used.

COMPLETE SCHOOL NAME	ACRONYM
Acadia University	Acadia
Alberta, University of	Alberta
British Columbia Institute of Technology	BCIT
British Columbia, University of	UBC

COMPLETE SCHOOL NAME	ACRONYM
British Columbia at Okanagan, University of	UBCO
Calgary, The University of	Calgary
Cape Breton, University College of	Cape Breton
Carleton University	Carleton
Concordia University	Concordia
Conestoga College	Conestoga
Dalhousie University	Dal
École de technologie supérieure	ETS
Guelph, University of	Guelph
Lakehead University	Lakehead
Laurentian University	Laurentian
Laval, Université	Laval
Manitoba, The University of	Manitoba
McGill University	McGill
McMaster University	McMaster
Memorial University of Newfoundland	MUN
Moncton, Université de	Moncton
New Brunswick, University of	UNB
Northern British Columbia, University of	UNBC
Nova Scotia Agricultural College	NSAC
Ottawa, University of	Ottawa
Prince Edward Island, University of	UPEI
Polytechnique, École	Polytechnique
Québec à Chicoutimi, Université du	UQAC
Québec à Montréal, Université du	UQAM
Québec à Rimouski, Université du	UQAR
Québec à Trois-Rivières, Université du	UQTR
Québec en Abitibi-Témiscamingue, Université du	UQAT
Québec en Outaouais, Université du	UQO
Queen's University	Queen's
Regina, University of	Regina
Royal Military College of Canada	RMC
Ryerson University	Ryerson
Saint Mary's University	SMU
Saskatchewan, University of	Saskatchewan
Sherbrooke, Université de	Sherbrooke
Simon Fraser University	SFU
St. Francis Xavier University	StFX
Toronto, University of	Toronto
University of Ontario, Institute of Technology	UOIT
Victoria, University of	Uvic

COMPLETE SCHOOL NAME	ACRONYM
Waterloo, University of	Waterloo
Western Ontario, University of	Western
Windsor, University of	Windsor
York University	York

PROVINCE NAME AND ABBREVIATION

The names of provinces have also been abbreviated.
The chart shown below lists the abbreviations.

PROVINCE NAME	ABBREVIATION
Alberta	AB
British Columbia	BC
Manitoba	MB
New Brunswick	NB
Newfoundland and Labrador	NL
Nova Scotia	NS
Ontario	ON
Prince Edward Island	PE
Québec	QC
Saskatchewan	SK

A.1. UNDERGRADUATE ENROLMENT

U.1. National

TABLE U.1.1.

Total undergraduate enrolment in accredited engineering programs by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	739	750	719	1,023	1,080
Chemical	4,618	5,163	5,059	5,572	5,887
Civil	9,614	10,543	10,949	11,853	12,118
Computer	3,546	3,439	3,604	3,595	3,955
Electrical	9,375	9,485	9,803	10,535	10,630
Engineering Physics	2,519	2,790	2,838	2,929	3,118
Environmental	982	1,085	1,229	1,440	1,440
Geological	556	560	604	667	730
Industrial or Manufacturing	1,742	1,662	1,766	1,857	1,959
Materials or Metallurgical	930	859	933	815	927
Mechanical	12,828	13,443	13,878	14,639	15,506
Mining or Mineral	860	876	936	1,046	1,304
Software	2,120	2,165	2,249	2,598	3,007
Other	2,856	2,969	3,143	3,706	3,731
Year One/Two Common Year	5,587	6,472	8,605	7,926	7,642
TOTAL	58,872	62,259	66,316	70,201	73,035

TABLE U.1.2.

Total female undergraduate enrolment in accredited engineering programs: 1991 to 2013.

YEAR	TOTAL ENROLMENT	WOMEN	PERCENT OF TOTAL
1991	37,147	5,979	16.1
1992	40,307	6,689	16.6
1993	41,562	7,376	17.7
1994	40,958	7,466	18.2
1995	40,068	7,541	18.8
1996	40,997	7,736	18.9
1997	42,048	8,099	19.3
1998	43,898	8,493	19.3
1999	44,840	9,217	20.6
2000	47,066	9,561	20.3
2001	49,422	10,199	20.6
2002	52,585	10,456	19.9
2003	54,301	10,423	19.2
2004	54,991	10,011	18.2
2005	54,713	9,546	17.4
2006	53,287	9,350	17.5
2007	55,958	9,682	17.3
2008	57,255	9,797	17.1
2009	58,872	10,199	17.3
2010	62,259	11,032	17.7
2011	66,316	11,678	17.6
2012	70,201	12,704	18.1
2013	73,035	13,778	18.9

TABLE U.1.3.

Total female undergraduate enrolment in accredited engineering programs: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	281	287	277	439	450
Chemical	1,619	1,728	1,702	1,842	1,944
Civil	2,064	2,249	2,403	2,593	2,756
Computer	342	358	371	363	429
Electrical	1,147	1,208	1,190	1,303	1,380

DISCIPLINE	2009	2010	2011	2012	2013
Engineering Physics	415	452	469	502	559
Environmental	380	427	504	565	571
Geological	188	198	221	245	268
Industrial or Manufacturing	377	382	412	441	489
Materials or Metallurgical	214	204	209	190	232
Mechanical	1,240	1,383	1,382	1,514	1,684
Mining or Mineral	129	143	168	186	191
Software	203	209	220	257	333
Other	482	499	520	662	729
Year One/Two Common Year	1,117	1,305	1,630	1,600	1,764
TOTAL	10,199	11,032	11,678	12,704	13,778

TABLE U.1.4.

Total 2013 undergraduate enrolment in engineering programs, which will be seeking accreditation.

INSTITUTION	PROGRAM	2013
BCIT	Mechanical Engineering	262
Carleton	Architectural Conservation and Sustainability	130
Guelph	Biomedical Engineering	216
Guelph	Computer Engineering	54
Laval	Génie industriel	76
McGill	General Engineering	85
UOIT	Energy Systems Engineering	45
UVic	Biomedical Engineering	34
UVic	Civil Engineering	21
Western	Mechatronic Systems Engineering	58
York	Electrical Engineering	28
York	Software Engineering	41
York	Undeclared Major Engineering	26
TOTAL		1,075

U.2. Provincial

TABLE U.2.1.

Total undergraduate enrolment in accredited engineering programs by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	6,606	6,798	6,897	7,154	7,334
BC	4,470	5,948	7,158	8,168	6,935
MB	1,064	1,088	1,154	1,255	1,412
NB	1,592	1,910	2,018	2,141	2,025
NL	787	762	873	859	937
NS	1,460	1,605	1,777	1,863	2,049
ON	24,806	26,652	28,369	29,556	30,984
PE	102	100	103	111	126
QC	15,985	15,359	15,814	16,969	18,659
SK	1,999	2,038	2,152	2,126	2,574
TOTAL	58,872	62,259	66,316	70,201	73,035

TABLE U.2.2.

Total female undergraduate enrolment in accredited engineering programs by province: 2013.

PROVINCE	TOTAL ENROLMENT	FEMALE ENROLMENT	PERCENT FEMALE ENROLMENT
AB	7,334	1,600	21.80%
BC	6,935	1,182	17.00%
MB	1,412	250	17.70%
NB	2,025	320	15.80%
NL	937	243	25.90%
NS	2,049	395	19.30%
ON	30,984	5,930	19.10%
PE	126	18	14.30%
QC	18,659	3,295	17.70%
SK	2,574	545	21.20%
TOTAL	73,035	13,778	18.90%

TABLE U.2.3.

Total undergraduate foreign student enrolment in accredited engineering programs by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	495	584	655	738	795
BC	446	669	829	1,014	1,018
MB	132	129	149	185	245
NB	282	344	611	659	674
NL	101	73	89	86	95
NS	180	284	318	440	479
ON	2,644	3,058	3,498	3,795	4,212
PE	-	14	12	12	20
QC	2,399	2,125	2,157	2,290	2,623
SK	277	334	385	405	573
TOTAL	6,955	7,613	8,703	9,622	10,735

TABLE U.2.4.

Total undergraduate enrolment in accredited engineering programs by discipline and province: 2013.

DISCIPLINE	AB	BC	MB	NB	NL	NS	ON	PE	QC	SK	TOTAL
Biosystems		78	101	3		3	656		218	20	1,080
Chemical	860	194		222		95	3,304		1,035	178	5,887
Civil	951	746	248	609	148	130	4,277		4,820	191	12,118
Computer	183	443	82	55	46	6	2,159		840	140	3,955
Electrical	1,042	1,244	254	346	88	132	4,422		2,992	110	10,630
Engineering Physics	64	942				297	1,422		352	41	3,118
Environmental		149				62	936		77	216	1,440
Geological		124		60			240		237	69	730
Industrial or Manufacturing			-			104	653		1,043	160	1,959
Materials or Metallurgical	169	138				24	373		222		927
Mechanical	1,375	1,253	430	531	242	189	6,560		4,692	235	15,506
Mining or Mineral	203	158				83	454		407		1,304
Software	159	149		56			1,185		1,403	56	3,007
Other	511	139		85	135	514	1,750		323	275	3,731
Year One/ Two Common Year	1,818	1,177	297	61	280	409	2,592	126		885	7,642
TOTAL	7,334	6,935	1,412	2,025	937	2,049	30,984	126	18,659	2,574	73,035

TABLE U.2.5.

Total female undergraduate enrolment in accredited engineering programs by discipline and province: 2013.

DISCIPLINE	AB	BC	MB	NB	NL	NS	ON	PE	QC	SK	TOTAL
Biosystems		35	45	1		2	263		99	5	450
Chemical	262	62		57		24	1,047		444	47	1,944
Civil	283	139	50	134	50	25	903		1,129	43	2,756
Computer	22	57	11	4	5	1	242		75	14	429
Electrical	166	150	42	29	15	20	604		339	15	1,380
Engineering Physics	8	145				42	306		54	4	559
Environmental		69				34	343		40	85	571
Geological		44		18			100		91	16	268
Industrial or Manufacturing			-			19	205		247	18	489
Materials or Metallurgical	42	25				4	111		50		232
Mechanical	194	149	47	44	42	25	667		495	24	1,684
Mining or Mineral	24	20				11	85		51		191
Software	26	13		7			141		133	13	333
Other	129	25		14	49	99	327		49	39	729
Year One/Two Common Year	445	250	56	13	84	91	586	18		222	1,764
TOTAL	1,600	1,182	250	320	243	395	5,930	18	3,295	545	13,778

U.3. Institutional

TABLE U.3.1.

Total undergraduate enrolment in accredited engineering programs by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Acadia	86	91	101	207	171
Alberta	3892	3919	3904	4021	4145
BCIT ⁶		186	465	469	486
Calgary	2714	2879	2993	3133	3189
Cape Breton		81	84	118	83
Carleton	2251	2542	2698	3186	3228
Concordia	2784	2795	2787	2610	3090
Conestoga		55	80	80	98
Dal	1090	1108	1273	1208	1343
ETS	3221	3342	3654	3921	4382
Guelph	496	539	528	530	942
Lakehead	747	798	796	806	798
Laurentian	161	256	442	279	382
Laval	2470	1616	1683	1841	1987
Manitoba	1064	1088	1154	1255	1412
McGill	2540	2443	2257	2259	2649
McMaster	2946	3049	3579	2991	3434
Moncton	325	325	338	367	358
MUN	787	762	873	859	937
NSAC	47	56	59	31	65
Ottawa	1595	1757	1805	2030	2340
Polytechnique	3295	3519	3644	4197	4305
Queen's	2531	2575	2687	2734	2745
Regina	751	824	878	876	1157
RMC	355	395	431	440	513
Ryerson	2310	2433	2569	3036	3193
Saskatchewan	1249	1215	1274	1251	1418
SFU	565	634	945	990	1120
Sherbrooke	1036	1053	1248	1248	1339
SMU	157	189	167	214	297
StFX	79	80	93	85	90
Toronto	4222	4294	4386	4488	4560
UBC	2734	3818	3800	3873	3699
UBCO ⁷		311	884	1650	262
UNB	1267	1585	1680	1774	1667
UNBC	56	69	73	89	84
UOIT	1023	1112	1243	1370	763
UPEI	102	100	103	111	126
UQAC	255	217	208	365	358
UQAM	53	20	27	42	42
UQAR	83	81	86	81	89
UQAT	52	68	54	55	62
UQO	32	34	3	35	30
UQTR	165	170	163	314	327
UVic	1114	930	992	1098	1284
Waterloo	3903	4457	4622	5047	5182
Western	1111	1115	1324	1260	1321
Windsor	991	974	985	1064	1245
York	165	181	195	218	241
TOTAL	58872	62259	66316	70201	73035

⁶ BCIT reported new programs.

⁷ UBCO reported new programs.

TABLE U.3.2.

Total female undergraduate enrolment in accredited engineering programs by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Acadia	14	19	23	27	38
Alberta	800	806	774	800	827
BCIT		22	37	39	42
Calgary	659	692	701	747	773
Cape Breton		15	14	16	18
Carleton	271	368	370	446	450
Concordia	445	451	471	490	606
Conestoga		5	9	5	5
Dal	207	215	241	229	262
ETS	272	306	325	353	385
Guelph	137	151	160	167	228
Lakehead	63	69	64	77	88
Laurentian	28	51	74	41	52
Laval	428	284	311	336	361
Manitoba	153	174	194	217	250
McGill	486	502	510	496	604
McMaster	471	539	549	513	639
Moncton	44	44	60	63	65
MUN	202	160	183	188	243
NSAC	3	3	6	5	9
Ottawa	273	351	325	409	445
Polytechnique	699	734	755	914	992
Queen's	597	632	687	741	775
Regina	151	170	184	168	266
RMC	42	49	46	60	71
Ryerson	337	356	377	522	539
Saskatchewan	226	218	247	243	279
SFU	73	80	120	133	155
Sherbrooke	175	163	194	190	213
SMU	19	25	20	25	42
StFX	25	24	23	20	26
Toronto	918	957	1,024	1,068	1,116
UBC	511	725	732	760	783
UBCO		40	98	205	32
UNB	223	259	278	278	255
UNBC	25	31	33	43	38
UOIT	87	87	90	100	66
UPEI	20	15	25	12	18
UQAC	28	25	27	45	53
UQAM	1	1	2	3	3
UQAR	8	5	7	15	13
UQAT	4	10	10	12	13
UQO	4	5	1	4	3
UQTR	16	18	18	43	50
UVic	101	82	90	98	133
Waterloo	605	730	777	915	975
Western	214	215	250	242	261
Windsor	118	120	130	145	178
York	22	33	33	38	42
TOTAL	10,199	11,032	11,678	12,704	13,778

TABLE U.3.3.

Total undergraduate enrolment in accredited engineering programs by institution and discipline: 2013.

INSTITUTION	BIOSYSTEMS	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING & PHYSICS	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL OR MANUFACTURING	MATERIALS OR METALLURGICAL	MECHANICAL	MINING OR MINERAL	SOFTWARE	OTHER	YEAR ONE/TWO COMMON YEAR
Acadia															171
Alberta		504	566	178	486	64				169	724	203		195	1,056
BCIT			194		293										
Calgary		356	385	5	556						651		159	316	762
Cape Breton															83
Carleton	121		594	214	725	79	332				524		174	465	
Concordia			1,035	148	360				252		966		329		
Conestoga											98				
Dal	3	95	130	6	132		62		104	24	189	83		514	
ETS			1,388		1,066				348		1,103		477		
Guelph	77			65			353				391				57
Lakehead		86	332		144						213		23		
Laurentian		94									152	136			
Laval	74	94	590	93	133	128	77	90		62	338	136	105	67	
Manitoba	101		248	82	254				-		430				297
McGill		390	396	126	559					160	706	121	191		
McMaster		478	338	265	428	124				174	438		168	70	950
Moncton			197		75						87				
MUN			148	46	88						242			135	280
NSAC															65
Ottawa	202	409	584	121	378						479		166		
Polytechnique	144	316	993	259	372	224		117	347		849	150	301	234	
Queen's		293	305	91	166	349		164			519	191			667
Regina				100			169		160				56	275	397
RMC		42	109	50	43						66			70	133
Ryerson	257	321	572	237	563				178		572			387	105
Saskatchewan	20	178	191	40	110	41	47	69			235				488
SFU						729					390				
Sherbrooke		204	278	164	240						453				
SMU						297									
StFX															90
Toronto		471	497	397	775	869			354	199	681	126			190
UBC	78	194	436	379	572	213	65	124		138	413	158		139	790
UBCO			117		37						108				
UNB	3	222	413	55	271			60			445		56	85	61
UNBC							84								
UOIT					175				27		362		67	133	
UPEI															126
UQAC			140	20	57			31			110				
UQAM					42										
UQAR					28						40			22	
UQAT					33						29				
UQO				30											
UQTR		31			101				96		99				
UVic				64	343						342		149		387
Waterloo		954	482	582	665		191	76			1,231		452	552	
Western		155	215	20	114						222		136	43	415
Windsor			249		246		61		95		520				74
York				117							93			31	
TOTAL	1,080	5,887	12,118	3,955	10,630	3,118	1,440	730	1,959	927	15,506	1,304	3,007	3,731	7,642

TABLE U.3.4.

Total female undergraduate enrolment in accredited engineering programs by institution and discipline: 2013.

INSTITUTION	BIOSYSTEMS	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING PHYSICS	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL OR MANUFACTURING	MATERIALS OR METALLURGICAL	MECHANICAL	MINING OR MINERAL	SOFTWARE	OTHER	YEAR ONE/TWO COMMON YEAR
Acadia															38
Alberta		146	173	21	63	8				42	83	24		33	234
BCIT			25		17										
Calgary		116	110	1	103						111		26	96	211
Cape Breton															18
Carleton	39		86	12	104	10	91				34		13	61	
Concordia			295	16	56				82		109		48		
Conestoga											5				
Dal	2	24	25	1	20		34		19	4	25	11		99	
ETS			236		77				13		46		13		
Guelph	39			6			128				41				15
Lakehead		30	37		5						15		1		
Laurentian		22									14	16			
Laval	29	29	121	7	11	18	40	29		11	26	15	11	14	
Manitoba	45		50	11	42						47				56
McGill		160	138	14	89					39	115	17	32		
McMaster		159	65	22	77	10				49	44		15	7	192
Moncton			44		11						11				
MUN			50	5	15						42			49	84
NSAC															9
Ottawa	84	110	117	17	42						50		25		
Polytechnique	70	164	257	27	56	36		53	130		122	19	29	30	
Queen's		123	109	16	25	80		82			96	43			200
Regina				11			62		18				13	39	123
RMC		13	16	6	6						7			5	18
Ryerson	101	98	115	13	64				52		35			46	14
Saskatchewan	5	47	43	3	15	4	23	16			24				99
SFU						122					33				
Sherbrooke		84	54	7	16						52				
SMU						42									
StFX															26
Toronto		179	149	68	140	205			129	63	102	25			56
UBC	35	62	96	55	101	23	31	44		25	74	20		25	192
UBCO			18		7						8				
UNB	1	57	91	4	19			18			33		7	14	13
UNBC							38								
UOIT					27				1		15		7	16	
UPEI															18
UQAC			28	1	7			9			8				
UQAM					3										
UQAR					5						3			5	
UQAT					3						10				
UQO				3											
UQTR		8			15				23		4				
UVic				2	26						34		13		58
Waterloo		258	120	57	71		96	18			124		62	171	
Western		56	53	4	12						28		18	11	78
Windsor			37		31		29		22		46				14
York				21							12			9	
TOTAL	450	1,944	2,756	429	1,380	559	571	268	489	232	1,684	191	333	729	1,764

A.2. UNDERGRADUATE DEGREES AWARDED

UD.1. National

TABLE UD.1.1.

Total undergraduate degrees awarded by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	159	162	153	152	194
Chemical	987	1,148	1,161	1,278	1,307
Civil	1,853	1,962	2,235	2,325	2,751
Computer	728	667	568	630	686
Electrical	2,099	2,103	2,041	2,055	2,137
Engineering Physics	499	549	453	515	548
Environmental	135	181	229	258	300
Geological	100	127	128	121	164
Industrial or Manufacturing	341	391	350	369	361
Materials or Metallurgical	177	221	211	207	216
Mechanical	2,728	2,984	2,966	3,153	3,255
Mining or Mineral	139	209	222	237	220
Software	337	367	366	413	434
Other	499	465	678	669	790
TOTAL	10,781	11,536	11,761	12,382	13,363

TABLE UD.1.2.

Total undergraduate degrees awarded to female students by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	49	52	51	76	87
Chemical	375	397	399	444	427
Civil	429	426	491	500	605
Computer	64	55	57	69	71
Electrical	270	276	248	259	283
Engineering Physics	96	103	86	76	92
Environmental	48	61	95	116	121
Geological	32	41	42	44	58
Industrial or Manufacturing	63	88	89	94	73
Materials or Metallurgical	35	43	51	58	43
Mechanical	303	307	282	324	344
Mining or Mineral	29	30	46	35	38
Software	26	33	42	39	43
Other	79	76	150	101	162
TOTAL	1,898	1,988	2,129	2,235	2,447

UD.2. Provincial

TABLE UD.2.1.

Total undergraduate degrees awarded by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	1,147	1,187	1,298	1,246	1,282
BC	884	1,065	1,126	1,161	1,278
MB	165	223	197	172	188
NB	292	256	240	270	320
NL	157	166	151	166	270
NS	266	291	469	397	477
ON	4,752	5,101	5,075	5,508	5,927
QC	2,780	2,896	2,850	3,043	3,202
SK	338	351	355	419	419
TOTAL	10,781	11,536	11,761	12,382	13,363

TABLE UD.2.2.

Total undergraduate degrees awarded to female students by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	240	272	302	259	290
BC	160	175	208	184	172
MB	24	30	27	22	29
NB	56	33	45	51	45
NL	39	33	33	28	77
NS	35	63	108	80	101
ON	846	858	876	1,021	1,123
QC	448	472	454	496	518
SK	50	52	76	94	92
TOTAL	1,898	1,988	2,129	2,235	2,447

TABLE UD.2.3.

Total undergraduate degrees awarded to foreign students by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	54	64	90	95	107
BC	93	101	91	110	109
MB	22	38	28	20	14
NB	53	26	38	45	57
NL	6	13	14	4	16
NS	25	19	64	44	65
ON	375	408	411	577	585
QC	273	310	271	327	353
SK	36	30	40	34	63
TOTAL	937	1,009	1,047	1,256	1,369

TABLE UD.2.4.

Total undergraduate degrees awarded by province and discipline: 2013.

DISCIPLINE	AB	BC	MB	NB	NL	NS	ON	QC	SK
Biosystems		22	22	5		6	99	34	6
Chemical	220	53		43		32	718	185	56
Civil	269	236	58	88	64	64	999	906	67
Computer	38	104	9	15	21	8	348	120	23
Electrical	208	232	21	43	22	29	973	570	39
Engineering Physics	18	147					318	53	12
Environmental		18				47	160	17	58
Geological		28		7			65	37	27
Industrial or Manufacturing			1			32	116	179	33
Materials or Metallurgical	40	33				22	91	30	
Mechanical	314	330	77	94	95	77	1,416	792	60
Mining or Mineral	32	34				13	101	40	
Software	24	13		3			200	188	6
Other	119	28		22	68	147	323	51	32
TOTAL	1,282	1,278	188	320	270	477	5,927	3,202	419

TABLE UD.2.5.

Total undergraduate degrees awarded to women by province and discipline: 2013.

DISCIPLINE	AB	BC	MB	NB	NL	NS	ON	QC	SK
Biosystems		9	7	2		3	48	15	3
Chemical	67	15		18		10	239	67	11
Civil	77	33	14	10	28	10	214	204	15
Computer	2	9			3	2	40	10	5
Electrical	38	23	3	2	4	5	139	59	10
Engineering Physics	3	14					62	11	2
Environmental		10				20	62	7	22
Geological		10		1			26	14	7
Industrial or Manufacturing						6	26	38	3
Materials or Metallurgical	11	6				3	18	5	
Mechanical	54	31	5	9	20	9	142	64	10
Mining or Mineral	8	7				1	17	5	
Software	5						24	14	
Other	25	5		3	22	32	66	5	4
TOTAL	290	172	29	45	77	101	1,123	518	92

UD.3. Institutional

TABLE UD.3.1.

Total undergraduate degrees awarded by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Alberta	702	739	836	805	760
BCIT	18	27	36	41	52
Calgary	445	448	462	441	522
Carleton	403	409	395	401	427
Concordia	407	421	350	402	462
Conestoga		10	9	11	11
Dal	266	291	469	397	477
ETS	680	620	724	681	828
Guelph	90	69	95	87	104
Lakehead	257	251	223	282	302
Laurentian	22	35	118	132	249
Laval	258	400	347	327	300
Manitoba	165	223	197	172	188
McGill	439	500	456	513	487
McMaster	504	569	582	583	590
Moncton	32	50	30	45	67
MUN	157	166	151	166	270
Ottawa	317	286	252	254	286
Polytechnique	502	576	583	659	686
Queen's	500	543	507	620	641
Regina	83	99	104	128	123
RMC	74	40	77	72	93
Ryerson	439	402	409	442	514
Saskatchewan	255	252	251	291	296
SFU	81	90	94	112	142
Sherbrooke	305	264	284	291	279
Toronto	836	931	893	962	960
UBC	640	726	723	716	764
UBCO	-	56	103	118	142
UNB	260	206	210	225	253
UNBC	6	8	19	14	14
UOIT	140	225	158	196	228
UQAC	42	37	44	42	65
UQAM	10	7	4	9	9
UQAR	17	17	15	14	16
UQAT	21	27	18	11	7
UQO	6	6	1	35	7
UQTR	93	21	24	59	56
UVic	139	158	151	160	164
Waterloo	785	862	950	990	1,082
Western	247	246	208	232	249
Windsor	103	203	184	222	191
York	35	20	15	22	
TOTAL	10,781	11,536	11,761	12,382	13,363

TABLE UD.3.2.

Total undergraduate degrees awarded to female students by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Alberta	142	158	186	150	159
BCIT	3	2	2	1	1
Calgary	98	114	116	109	131
Carleton	48	58	54	69	74
Concordia	76	71	51	63	88
Conestoga		0	0	1	1
Dal	35	63	108	80	101
ETS	56	50	68	54	90
Guelph	22	17	22	35	30
Lakehead	18	20	22	20	28
Laurentian	2	7	24	27	33
Laval	36	81	60	61	49
Manitoba	24	30	27	22	29
McGill	102	82	91	112	75
McMaster	117	90	98	100	104
Moncton	6	2	0	8	8
MUN	39	33	33	28	77
Ottawa	51	48	44	40	57
Polytechnique	99	128	127	157	148
Queen's	106	129	120	154	170
Regina	10	14	34	29	23
RMC	15	8	14	4	11
Ryerson	77	59	54	80	92
Saskatchewan	40	38	42	65	69
SFU	13	15	14	13	12
Sherbrooke	55	50	51	35	46
Toronto	175	206	175	227	207
UBC	128	124	152	135	128
UBCO	0	9	19	13	11
UNB	50	31	45	43	37
UNBC	2	3	10	7	8
UOIT	15	25	12	21	21
UQAC	7	2	2	6	8
UQAM	1	1	0	0	0
UQAR	2	3	1	1	0
UQAT	3	2	1	1	2
UQO	0	1	0	4	2
UQTR	11	1	2	2	10
UVic	14	22	11	15	12
Waterloo	122	134	162	156	218
Western	50	36	48	49	48
Windsor	25	21	23	33	29
York	3	0	4	5	
TOTAL	1,898	1,988	2,129	2,235	2,447

TABLE UD.3.3.

Total undergraduate degrees awarded by institution and discipline: 2013.

INSTITUTION	BIOSYSTEMS	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING PHYSICS	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL OR MANUFACTURING	MATERIALS OR METALLURGICAL	MECHANICAL	MINING OR MINERAL	SOFTWARE	OTHER
Alberta		125	176	35	119	18				40	172	32		43
BCIT			17		14						21			
Calgary		95	93	3	89						142		24	76
Carleton	13		80	25	102	7	47				56		28	69
Concordia			167	21	62				41		131		40	
Conestoga											11			
Dal	6	32	64	8	29		47		32	22	77	13		147
ETS			272		211				71		205		69	
Guelph	20			13			56				15			
Lakehead		22	122		74						76		8	
Laurentian		34									168	47		
Laval	8	11	105	14	11	27	17	17	1	5	56	8	15	5
Manitoba	22		58	9	21				1		77			
McGill		51	98	18	118					25	132	17	28	
McMaster		90	111	20	118	30				51	134		27	9
Moncton			33		17						17			
MUN			64	21	22						95			68
Ottawa	20	57	83	8	26						66		26	
Polytechnique	26	62	174	35	78	26		14	47		132	15	36	41
Queen's		95	124	15	51	94		44			178	40		
Regina				14			38		33				6	32
RMC		13	27	10	5						19			19
Ryerson	46	50	110	35	109				20		88			56
Saskatchewan	6	56	67	9	39	12	20	27			60			
SFU						93					49			
Sherbrooke		56	62	24	44						93			
Toronto		114	118	101	158	187			74	40	154	14		
UBC	22	53	156	97	150	54	4	28		33	105	34		28
UBCO			63		15						64			
UNB	5	43	55	15	26			7			77		3	22
UNBC							14							
UOIT					47				5		107		17	52
UQAC			28	1	10			6			20			
UQAM					9									
UQAR					2						9			5
UQAT					5						2			
UQO				7										
UQTR		5			20				19		12			
UVic				7	53						91		13	
Waterloo		191	105	118	203		40	21			220		74	110
Western		52	67	3	40						59		20	8
Windsor			52		40		17		17		65			
York				12							7			3
TOTAL	194	1,307	2,751	686	2,137	548	300	164	361	216	3,255	220	434	790

TABLE UD.3.4.

Total undergraduate degrees awarded to women by institution and discipline: 2013.

INSTITUTION	BIOSYSTEMS	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING PHYSICS	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL OR MANUFACTURING	MATERIALS OR METALLURGICAL	MECHANICAL	MINING OR MINERAL	SOFTWARE	OTHER
Alberta		34	45	2	22	3				11	28	8		6
BCIT			1											
Calgary		33	32		16						26		5	19
Carleton	5		8	1	27		17				2		3	11
Concordia			46	1	8				12		14		7	
Conestoga											1			
Dal	3	10	10	2	5		20		6	3	9	1		32
ETS			55		18				3		11		3	
Guelph	11			1			15				3			
Lakehead		5	14		4						4		1	
Laurentian		10									17	6		
Laval	3	4	20	1	1	5	7	4				2	1	1
Manitoba	7		14		3						5			
McGill		14	30		12					5	14			
McMaster		33	23	1	25	2				7	9		4	
Moncton			6		2									
MUN			28	3	4						20			22
Ottawa	13	11	15		2						11		5	
Polytechnique	12	28	36	5	14	6		7	19		11	3	3	4
Queen's		41	38	1	4	23		21			33	9		
Regina				4			12		3					4
RMC		3	3	1	2						2			
Ryerson	19	14	29	4	14				2		4			6
Saskatchewan	3	11	15	1	10	2	10	7			10			
SFU						8					4			
Sherbrooke		19	14	1	3						9			
Toronto		41	34	17	30	37			19	11	16	2		
UBC	9	15	25	9	18	6	2	10		6	16	7		5
UBCO			7								4			
UNB	2	18	4					1			9			3
UNBC							8							
UOIT					3						4		3	11
UQAC			3					3			2			
UQAM														
UQAR														
UQAT					1						1			
UQO				2										
UQTR		2			2				4		2			
UVic					5						7			
Waterloo		65	23	14	23		21	5			22		7	38
Western		16	21		4						6		1	
Windsor			6		1		9		5		8			
York				1							3			1
TOTAL	87	427	605	71	283	92	121	58	73	43	344	38	43	162

A.3. POST GRADUATE STUDENT ENROLMENT

G.1. National

TABLE G.1.1.

Total full-time master's students: 2009 to 2013.

YEAR	2009	2010	2011	2012	2013
Cdn Male	4,698	5,004	5,034	4,818	4,654
Cdn Female	1,362	1,427	1,431	1,385	1,396
Visa Male	2,642	3,303	3,663	4,252	4,454
Visa Female	764	901	1,083	1,298	1,348
TOTAL	9,467	10,635	11,211	11,752	11,852

TABLE G.1.2.

Total full-time doctoral students: 2009 to 2013.

YEAR	2009	2010	2011	2012	2013
Cdn Male	3,161	3,503	3,287	3,390	3,336
Cdn Female	826	905	876	966	1,089
Visa Male	2,289	2,588	2,802	3,227	3,287
Visa Female	537	628	763	894	997
TOTAL	6,813	7,624	7,728	8,477	8,709

TABLE G.1.3.

Total part-time master's students: 2009 to 2013.

YEAR	2009	2010	2011	2012	2013
Cdn Male	1,827	1,930	1,991	1,978	1,790
Cdn Female	477	513	444	554	498
Visa Male	154	108	202	132	204
Visa Female	47	26	42	40	47
TOTAL	2,505	2,577	2,679	2,703	2,539

TABLE G.1.4.

Total part-time doctoral students: 2009 to 2013.

YEAR	2009	2010	2011	2012	2013
Cdn Male	306	306	373	311	285
Cdn Female	61	48	69	51	59
Visa Male	41	23	45	36	39
Visa Female	10	4	6	6	2
Total	419	381	493	404	386

TABLE G.1.5.

Total full-time equivalent master's students by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	409	387	442	382	378
Chemical	835	935	1,082	1,099	1,026
Civil	1,776	1,871	2,068	2,060	1,875
Computer	285	312	337	322	439
Electrical	2,723	2,967	3,014	3,432	3,420
Engineering Physics	145	153	167	202	184
Environmental	226	243	270	268	296
Geological	25	44	20	19	18
Industrial or Manufacturing	278	339	403	392	427
Materials or Metallurgical	230	243	224	246	261
Mechanical	1,748	1,995	1,958	2,083	2,110
Mining or Mineral	121	137	160	160	148
Software	138	164	177	203	284
Other	1,379	1,785	1,805	1,826	1,856
TOTAL	10,319	11,575	12,126	12,694	12,725

TABLE G.1.6.

Total full-time equivalent doctoral students by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	328	359	400	325	429
Chemical	748	822	870	1,076	1,007
Civil	1,094	1,145	1,191	1,282	1,292
Computer	123	142	157	156	145
Electrical	2,079	2,243	2,230	2,445	2,354
Engineering Physics	169	217	174	211	219
Environmental	88	99	97	99	136
Geological	9	13	7	8	11
Industrial or Manufacturing	122	144	224	176	185
Materials or Metallurgical	261	318	273	375	359
Mechanical	1,156	1,340	1,340	1,495	1,631
Mining or Mineral	86	90	102	101	100
Software	18	16	18	18	27
Other	705	812	894	863	958
TOTAL	6,986	7,759	7,979	8,631	8,851

TABLE G.1.7.

Total full-time equivalent female master's students by discipline:
2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	175	164	191	169	152
Chemical	277	309	337	383	358
Civil	446	514	570	543	505
Computer	55	52	62	58	56
Electrical	488	503	539	671	721
Engineering Physics	26	29	41	43	42
Environmental	69	68	91	110	134
Geological	7	14	8	9	7
Industrial or Manufacturing	69	84	103	113	114
Materials or Metallurgical	69	76	74	73	77
Mechanical	248	277	250	267	276
Mining or Mineral	39	40	48	42	35
Software	33	33	28	36	54
Other	301	366	347	370	401
TOTAL	2,303	2,529	2,687	2,888	2,933

TABLE G.1.8.

Total full-time equivalent female doctoral students by discipline:
2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	128	131	153	122	160
Chemical	233	264	278	346	351
Civil	219	230	264	309	317
Computer	29	40	44	42	36
Electrical	304	341	370	407	427
Engineering Physics	26	31	25	41	47
Environmental	27	28	25	34	51
Geological	2	3	2	2	3
Industrial or Manufacturing	20	26	37	39	39
Materials or Metallurgical	65	73	60	99	99
Mechanical	176	211	218	253	347
Mining or Mineral	21	18	26	26	26
Software	5	4	3	2	4
Other	134	150	175	162	204
TOTAL	1,388	1,548	1,680	1,882	2,112

TABLE G.1.9.

Total full-time equivalent visa master's students by discipline:
2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	107	113	125	114	130
Chemical	322	373	446	523	398
Civil	508	545	644	681	701
Computer	116	139	156	164	203
Electrical	1,005	1,340	1,498	1,892	1,904
Engineering Physics	23	38	52	61	67
Environmental	83	85	104	118	132
Geological	4	9	1	3	6
Industrial or Manufacturing	106	146	183	170	218
Materials or Metallurgical	95	106	95	107	124
Mechanical	526	628	635	816	913
Mining or Mineral	48	47	68	71	73
Software	45	55	71	95	184
Other	490	636	747	803	858
TOTAL	3,479	4,261	4,825	5,617	5,912

TABLE G.1.10.

Total full-time equivalent visa doctoral students by discipline:
2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	101	113	124	101	161
Chemical	349	399	444	555	481
Civil	422	440	504	583	613
Computer	44	66	68	74	80
Electrical	807	917	1,030	1,194	1,209
Engineering Physics	49	80	54	83	98
Environmental	24	30	37	46	61
Geological	5	7	3	2	5
Industrial or Manufacturing	39	57	96	86	100
Materials or Metallurgical	129	160	160	219	199
Mechanical	478	584	636	734	786
Mining or Mineral	42	42	51	48	49
Software	6	5	8	7	11
Other	355	324	377	408	450
TOTAL	2,850	3,224	3,591	4,139	4,300

G.2. Provincial

TABLE G.2.1.

Total full-time equivalent master's students by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	1,618	1,861	2,013	1,578	1,307
BC	689	816	892	851	848
MB	155	170	187	214	228
NB	264	202	187	180	171
NL	157	199	231	277	267
NS	191	266	356	335	418
ON	4,063	4,273	4,506	4,814	5,343
QC	2,915	3,439	3,465	4,123	3,799
SK	267	348	290	323	344
TOTAL	10,319	11,575	12,126	12,694	12,725

TABLE G.2.2.

Total full-time equivalent doctoral students by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	1,071	1,144	1,241	1,233	1,141
BC	660	729	818	885	895
MB	169	181	205	213	214
NB	171	123	106	114	111
NL	73	82	86	100	127
NS	82	89	144	91	113
ON	2,694	2,908	2,965	3,103	3,294
QC	1,899	2,298	2,218	2,701	2,751
SK	167	206	197	190	206
TOTAL	6,986	7,759	7,979	8,631	8,851

TABLE G.2.3.

Total full-time equivalent female master's students by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	368	434	439	416	361
BC	187	224	220	196	194
MB	35	39	40	49	57
NB	62	39	35	34	35
NL	41	41	50	69	72
NS	41	42	45	44	61
ON	884	916	1,008	1,077	1,212
QC	613	697	757	910	847
SK	72	97	93	91	95
TOTAL	2,303	2,529	2,687	2,888	2,933

TABLE G.2.4.

Total full-time equivalent female doctoral students by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	205	223	260	269	332
BC	123	140	165	183	188
MB	23	25	34	39	42
NB	34	27	27	31	34
NL	9	13	14	16	23
NS	19	21	28	21	29
ON	550	594	624	674	743
QC	383	459	486	601	667
SK	40	48	42	48	53
TOTAL	1,388	1,548	1,680	1,882	2,112

TABLE G.2.5.

Total full-time equivalent visa master's students by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	722	900	906	801	610
BC	272	321	399	427	459
MB	62	73	88	109	123
NB	107	88	93	88	87
NL	100	132	163	217	205
NS	103	157	225	247	294
ON	926	1,109	1,367	1,759	1,983
QC	1,044	1,288	1,401	1,756	1,916
SK	141	193	183	212	236
TOTAL	3,479	4,261	4,825	5,617	5,912

TABLE G.2.6.

Total full-time equivalent visa doctoral students by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	553	551	620	696	485
BC	363	394	477	522	534
MB	72	84	100	114	123
NB	81	64	65	74	77
NL	41	40	45	56	80
NS	29	37	57	40	48
ON	888	980	1,050	1,163	1,358
QC	739	966	1,061	1,348	1,452
SK	84	109	116	127	143
TOTAL	2,850	3,224	3,591	4,139	4,300

TABLE G.2.7.

Total full-time equivalent postgraduate student enrolment by province and discipline: 2013.

DISCIPLINE	AB	BC	MB	NB	NL	NS	ON	QC	SK	TOTAL
Biosystems	56	181	49	2		51	300	105	64	807
Chemical	596			70		18	911	408	29	2,033
Civil	498	242	90	32	40	65	1,215	988		3,168
Computer	40	23			70		280	139	31	584
Electrical	442	544	174	44	52	86	2,652	1,693	87	5,774
Engineering Physics	59	117				8	91	128		403
Environmental		37			28	12	197	100	59	433
Geological		18					11			30
Industrial or Manufacturing			128			25	67	353	39	612
Materials or Metallurgical	72	107				18	193	230		620
Mechanical	416	385		55	32	39	1,680	1,056	79	3,742
Mining or Mineral	51	76				4	60	58		248
Software		14					63	223	11	311
Other	219			79	172	207	917	1,070	150	2,814

TABLE G.2.8.

Total full-time equivalent female postgraduate student enrolment by province and discipline: 2013.

DISCIPLINE	AB	BC	MB	NB	NL	NS	ON	QC	SK	TOTAL
Biosystems	20	60	17	1		17	117	51	29	312
Chemical	181			30		4	338	148	8	709
Civil	144	64	20	11	11	25	292	257		823
Computer	8	3			13		28	33	7	92
Electrical	101	102	40	9	15	7	521	338	13	1,147
Engineering Physics	12	25				2	17	34		90
Environmental		9			13	4	84	48	27	185
Geological		5					5			10
Industrial or Manufacturing			22			5	11	106	9	153
Materials or Metallurgical	25	39				5	48	59		176
Mechanical	125	52		3	3	5	270	151	13	623
Mining or Mineral	14	20				1	10	17		61
Software		3					11	42	2	59
Other	62			14	41	15	203	230	40	605

G.3. Institutional

TABLE G.3.1.

Total full-time postgraduate students by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Alberta	1,382	1,541	1,541	1,495	1,493
Calgary	1,186	1,333	1,519	1,223	898
Carleton	300	540	572	669	717
Concordia	1,237	1,371	1,517	1,677	1,752
Dal	263	342	491	415	520
ETS	594	737	804	1,161	918
Guelph	115	117	125	132	128
Lakehead	54	51	46	48	41
Laurentian	26	43	38	55	31
Laval	372	520	490	487	531
Manitoba	310	337	378	414	429
McGill	608	739	579	1,081	969
McMaster	565	659	643	581	706
Moncton	17	17	13	15	15
MUN	205	260	290	351	364
Ottawa	384	382	466	608	810
Polytechnique	1,049	1,142	1,259	1,273	1,288
Queen's	415	438	450	433	446
Regina	127	148	173	170	182
RMC	112	119	112	96	88
Ryerson	580	603	582	718	707
Saskatchewan	297	396	300	324	342
SFU	138	196	211	207	190
Sherbrooke	426	473	482	523	492
Toronto	1,286	1,388	1,450	1,549	1,688
UBC	936	1,045	1,072	1,068	1,074
UBCO	37	28	130	140	142
UNB	348	250	226	234	221
UOIT	103	151	151	142	214
UQAC	118	136	134	117	147
UQAR	39	24	16	19	15
UQAT	41	52	47	38	23
UQTR	65	219	92	101	110
UVic	220	231	257	306	324
Waterloo	1,151	1,213	1,244	1,293	1,339
Western	494	525	566	556	574
Windsor	406	451	456	510	628
York ⁸					6
TOTAL	16,006	18,215	18,920	20,228	20,561

TABLE G.3.2.

Total part-time postgraduate students by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Alberta	-	-	-	-	-
Calgary	309	333	274	234	158
Carleton	93	161	171	162	139
Concordia	95	97	104	100	87
Dal	24	30	26	17	12
ETS	222	303	450	331	364
Guelph	32	40	37	35	27
Lakehead	-	-	-	1	1
Laurentian	15	6	8	-	26
Laval	66	52	49	55	41
Manitoba	49	52	49	45	43
McGill	38	32	12	58	-
McMaster	493	388	481	464	453
Moncton	9	9	2	-	-
MUN	51	45	53	58	59
Ottawa	94	84	99	110	101
Polytechnique	-	74	88	109	112
Queen's	46	40	38	58	50
Regina	19	21	28	38	41
RMC	17	18	17	20	17
Ryerson	136	112	107	93	150
Saskatchewan	-	-	-	-	-
SFU	12	14	9	8	14
Sherbrooke	228	202	171	153	145
Toronto	145	156	192	214	201
UBC	46	41	36	33	26
UBCO	-	-	-	-	-
UNB	124	49	51	44	41
UOIT	34	27	32	50	63
UQAC	-	-	-	-	-
UQAR	-	-	-	-	2
UQAT	-	-	-	-	-
UQTR	24	27	21	139	114
UVic	-	-	-	-	-
Waterloo	339	403	397	405	375
Western	48	135	151	55	37
Windsor	23	5	15	19	23
York					2
TOTAL	2,833	2,955	3,167	3,106	2,925

⁸ Absence of numbers between 2009 and 2012 are a result of York University's recent introduction of three new engineering programs.

TABLE G.3.3.

Total full-time female postgraduate students by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Alberta	282	327	359	365	438
Calgary	266	292	303	301	246
Carleton	59	105	110	137	152
Concordia	245	284	321	363	391
Dal	58	61	72	65	88
ETS	92	124	148	223	186
Guelph	29	26	29	29	30
Lakehead	6	7	5	10	4
Laurentian	3	7	7	9	3
Laval	72	92	101	99	116
Manitoba	56	61	71	85	97
McGill	160	152	128	235	206
McMaster	143	153	164	164	194
Moncton	3	3	3	1	2
MUN	48	51	61	80	90
Ottawa	70	69	104	135	203
Polytechnique	262	290	351	361	379
Queen's	83	101	112	97	100
Regina	34	30	40	45	53
RMC	25	23	25	17	17
Ryerson	101	112	99	117	115
Saskatchewan	77	112	92	88	89
SFU	34	41	41	40	41
Sherbrooke	68	86	85	88	83
Toronto	328	339	369	405	440
UBC	225	264	261	256	262
UBCO	5	3	28	30	23
UNB	86	55	52	59	56
UOIT	17	22	22	21	41
UQAC	26	33	33	26	40
UQAR	2	2	2	2	1
UQAT	8	10	5	6	4
UQTR	15	19	18	17	28
UVic	41	38	43	49	53
Waterloo	245	274	284	290	303
Western	95	104	116	137	146
Windsor	70	73	79	89	110
York					1
TOTAL	3,439	3,845	4,143	4,541	4,831

TABLE G.3.4.

Total part-time female postgraduate students by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Alberta	0	0	0	0	0
Calgary	55	99	39	47	24
Carleton	21	24	34	29	24
Concordia	14	13	22	19	13
Dal	4	3	3	1	3
ETS	38	54	77	67	80
Guelph	6	7	6	8	11
Lakehead	0	0	0	0	0
Laurentian	5	2	1	0	4
Laval	17	10	13	14	6
Manitoba	10	12	11	13	8
McGill	12	7	2	12	0
McMaster	107	68	81	77	74
Moncton	2	2	0	0	0
MUN	6	6	6	11	11
Ottawa	16	15	19	18	20
Polytechnique	0	15	20	28	30
Queen's	10	6	8	13	11
Regina	5	3	6	12	10
RMC	5	4	5	4	0
Ryerson	25	14	8	7	19
Saskatchewan	0	0	0	0	0
SFU	2	3	1	1	1
Sherbrooke	46	45	36	31	32
Toronto	37	36	37	47	47
UBC	14	17	11	10	8
UBCO	0	0	0	0	0
UNB	26	6	7	4	10
UOIT	5	3	4	9	12
UQAC	0	0	0	0	0
UQAR	0	0	0	0	1
UQAT	0	0	0	0	0
UQTR	6	4	2	81	64
UVic	0	0	0	0	0
Waterloo	67	80	77	83	70
Western	11	29	21	3	11
Windsor	6	2	2	2	2
York					1
TOTAL	577	591	560	651	607

TABLE G.3.5.

Total full-time postgraduate students by institution and discipline: 2013.

INSTITUTION	BIOSYSTEMS	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING PHYSICS	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL OR MANUFACTURING	MATERIALS OR METALLURGICAL	MECHANICAL	MINING OR MINERAL	SOFTWARE	OTHER
Alberta		290	346	40	274	59				72	261	51		100
Calgary	56	290	138		159						136			119
Carleton			107	13	345		43			8	78			123
Concordia			364		748				68		303		194	75
Dal	49	18	62		84	7	12		24	17	38	4		205
ETS			57		72		27		33		69		11	648
Guelph	23			37			68							
Lakehead					31		10							
Laurentian												31		
Laval		68	102		127		34			55	131	11		3
Manitoba	49		86		169				127					
McGill		92	129		352					149	247			
McMaster	50	77	66	2	159	70			1	65	97		50	69
Moncton														15
MUN			38	69	47		27				28			155
Ottawa	16	99	124		310		39				123			98
Polytechnique	104	151	155	138	163	128			173	26	164	43		44
Queen's		79	94		120	20		11			95	26		
Regina				25			46		34				9	68
RMC		31	14		21						14			8
Ryerson		37	107	195	151						150			67
Saskatchewan	64	29			87		7				79			75
SFU						111					79			
Sherbrooke		65	140		144						126			17
Toronto	209	189	237		464					75	373			142
UBC	180		166		342	1	37	18		107	148	75		
UBCO			71		37						33			
UNB	2	65	23		33						48			50
UOIT					59						94			62
UQAC							34							113
UQAR														15
UQAT														23
UQTR		29			46				34					
UVic				23	162						125		14	
Waterloo		239	197		440						232			232
Western		141	148		130						155			
Windsor			48		289		27		62	37	165			
York				6										
TOTAL	801	1,990	3,020	548	5,564	396	411	29	556	611	3,591	241	279	2,526

TABLE G.3.6.

Total part-time postgraduate students by institution and discipline: 2013.

INSTITUTION	BIOSYSTEMS	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING PHYSICS	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL OR MANUFACTURING	MATERIALS OR METALLURGICAL	MECHANICAL	MINING OR MINERAL	SOFTWARE	OTHER
Alberta														
Calgary	0	37	48		28						44			2
Carleton			27	2	75		6			1	10		1	17
Concordia			17		31				1		8		17	13
Dal	2		2		2	1			1	1	1			2
ETS			48		22		10		12		20		21	230
Guelph	2			7			18							
Lakehead					1									
Laurentian												26		
Laval			13		10		1		2	2	3			10
Manitoba	2		16		20				6					
McGill														
McMaster	3	4	35	2	71	3			3	18	89		38	187
Moncton														
MUN			3	3	11		1				7			34
Ottawa	2	5	20		29		4				13			29
Polytechnique	4	4	20	9	5				45		12			14
Queen's		2	17		10						12	10		
Regina				7			10		10				3	11
RMC		3	3		11									
Ryerson		6	17	64	34						24			5
Saskatchewan														
SFU						14								
Sherbrooke														145
Toronto		14	45		60					3	73			6
UBC	1		15		7			1			1	1		
UBCO														
UNB		5	9		11						7			9
UOIT					13						22			28
UQAC														
UQAR														2
UQAT														
UQTR		6			13				96					
UVic														
Waterloo		24	46		153						62			90
Western		4	12		6				7		8			
Windsor			4		5		1		3	2	10			
York				2										
TOTAL	16	112	416	96	626	18	51	1	185	27	426	37	80	835

TABLE G.3.7.

Total full-time female postgraduate students by institution and discipline: 2013.

INSTITUTION	BIOSYSTEMS	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING PHYSICS	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL OR MANUFACTURING	MATERIALS OR METALLURGICAL	MECHANICAL	MINING OR MINERAL	SOFTWARE	OTHER
Alberta		101	97	8	55	12				25	97	14		29
Calgary	20	78	45		44						26			33
Carleton			13	2	79		26			2	12			18
Concordia			103		182				12		40		38	16
Dal	17	4	25		7	2	4		5	5	5	1		14
ETS			8		10		12		4		5		1	145
Guelph	5			6			19							
Lakehead					1		3							
Laurentian												3		
Laval		23	17		16		17			15	25	3		
Manitoba	17		19		40				22					
McGill		32	38		61					38	37			
McMaster	27	31	16	1	42	15				22	12		10	18
Moncton														2
MUN			10	12	15		13				2			38
Ottawa	6	42	19		64		21				24			27
Polytechnique	51	62	52	33	34	34			59	6	29	13		7
Queen's		25	25		19	2		5			18	6		
Regina				7			20		8				2	16
RMC		8	5		1						1			2
Ryerson		13	30	15	30						17			9
Saskatchewan	29	8			13		3				13			23
SFU						25					16			
Sherbrooke		18	31		20						13			1
Toronto	79	90	70		78					17	83			23
UBC	60		46		66		9	5		39	17	20		
UBCO			16		5						3			
UNB	1	29	8		5						3			11
UOIT					17						11			13
UQAC							16							24
UQAR														1
UQAT														4
UQTR		13			8				7					
UVic				3	31						16		3	
Waterloo		68	50		85						34			65
Western		54	38		25						29			
Windsor			8		61		10		11	5	15			
York				1										
TOTAL	311	698	787	87	1,113	89	175	10	127	174	604	60	54	541

TABLE G.3.8.

Total part-time female postgraduate enrolment by institution and discipline: 2013.

INSTITUTION	BIOSYSTEMS	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING PHYSICS	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL OR MANUFACTURING	MATERIALS OR METALLURGICAL	MECHANICAL	MINING OR MINERAL	SOFTWARE	OTHER
Alberta														
Calgary	0	6	7		6						5			
Carleton			3	1	15		2			1	1			1
Concordia			5		3						1		3	1
Dal	1								0					2
ETS			8		4		5		1		0		3	58
Guelph	1			2			9							
Lakehead														
Laurentian												4		
Laval			3		2					1				
Manitoba			4		3				1					
McGill														
McMaster			7		9	1				4	12		3	38
Moncton														
MUN			1	1	1		1				2			6
Ottawa	1	1	5		5		1							7
Polytechnique	0	2	5	2	1				17		2			1
Queen's		1	4		0						2	4		
Regina				1			5		2				0	2
RMC														
Ryerson		2	4	5	3						3			2
Saskatchewan														
SFU						1								
Sherbrooke														32
Toronto		10	12		6					2	15			2
UBC			7		1									
UBCO														
UNB		2	3		5									
UOIT					2						2			8
UQAC														
UQAR														1
UQAT														
UQTR		0			1				63					
UVic														
Waterloo		5	12		21						7			25
Western		1	6		3						1			
Windsor			0				1		0	0	0			
York				1										
TOTAL	4	29	96	13	91	2	23		84	8	54	8	10	186

A.4. POST GRADUATE DEGREES AWARDED

GD.1. National

TABLE GD.1.1.

Total master's degrees awarded by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	121	125	135	131	186
Chemical	286	319	338	408	424
Civil	682	722	709	891	879
Computer	143	138	140	164	183
Electrical	1,061	1,102	1,143	1,354	1,441
Engineering Physics	64	76	81	76	75
Environmental	75	86	92	134	129
Geological	8	9	11	9	8
Industrial or Manufacturing	107	114	151	172	236
Materials or Metallurgical	90	68	76	97	97
Mechanical	601	754	784	905	834
Mining or Mineral	43	41	33	66	88
Software	43	54	50	65	88
Other	452	503	718	747	828
TOTAL	3,776	4,111	4,461	5,219	5,496

TABLE GD.1.2.

Total doctoral degrees awarded by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	50	33	44	41	60
Chemical	119	137	125	165	169
Civil	151	178	147	170	187
Computer	30	26	17	25	22
Electrical	293	327	311	330	389
Engineering Physics	31	27	33	38	43
Environmental	17	15	11	16	14
Geological	4	3	2	1	0
Industrial or Manufacturing	27	14	15	18	24
Materials or Metallurgical	41	51	45	52	48
Mechanical	166	150	189	191	236
Mining or Mineral	6	12	13	6	29
Software	2	3	3	0	3
Other	90	76	84	109	106
TOTAL	1,027	1,052	1,039	1,162	1,330

TABLE GD.1.3.

Total master's degrees awarded to women by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	56	50	59	63	74
Chemical	88	109	120	131	145
Civil	199	163	201	253	214
Computer	21	23	27	41	31
Electrical	228	213	203	241	305
Engineering Physics	16	12	19	22	16
Environmental	28	23	26	39	48
Geological	3	3	3	6	2
Industrial or Manufacturing	30	23	39	47	104
Materials or Metallurgical	24	20	17	32	30
Mechanical	87	100	111	126	105
Mining or Mineral	13	10	15	18	16
Software	10	12	14	16	15
Other	108	113	140	131	170
TOTAL	911	874	994	1,166	1,275

TABLE GD.1.4.

Total doctoral degrees awarded to women by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	17	16	17	17	25
Chemical	40	40	36	50	39
Civil	28	34	43	39	32
Computer	8	5	6	10	6
Electrical	58	40	40	54	45
Engineering Physics	5	7	5	3	4
Environmental	6	7	6	3	3
Geological	0	2	1	1	0
Industrial or Manufacturing	9	4	2	1	3
Materials or Metallurgical	6	9	9	13	10
Mechanical	31	27	20	18	34
Mining or Mineral	2	0	6	2	5
Software	0	1	2	0	2
Other	16	12	15	28	12
TOTAL	226	204	208	239	220

TABLE GD.1.5.

Total master's degrees awarded to visa students by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	32	32	33	32	61
Chemical	97	104	106	183	156
Civil	120	156	200	320	269
Computer	38	23	40	76	74
Electrical	282	368	482	724	756
Engineering Physics	19	20	22	25	24
Environmental	21	32	34	48	69
Geological	1	1	2	0	2
Industrial or Manufacturing	32	35	70	75	83
Materials or Metallurgical	28	25	35	47	48
Mechanical	141	152	264	325	314
Mining or Mineral	16	14	11	36	38
Software	13	20	19	26	51
Other	112	152	305	340	426
TOTAL	952	1,134	1,623	2,257	2,371

TABLE GD.1.6.

Total doctoral degrees awarded to visa students by discipline: 2009 to 2013.

DISCIPLINE	2009	2010	2011	2012	2013
Biosystems	13	6	3	3	13
Chemical	27	31	42	45	56
Civil	25	39	23	33	35
Computer	9	2	5	7	6
Electrical	36	69	55	89	110
Engineering Physics	4	2	6	9	11
Environmental	4	3	6	3	4
Geological	2	0	0	0	0
Industrial or Manufacturing	7	0	2	6	5
Materials or Metallurgical	8	13	11	14	20
Mechanical	31	33	47	36	60
Mining or Mineral	2	6	3	1	9
Software	0	2	0	0	2
Other	16	15	21	33	31
TOTAL	184	221	224	279	362

GD.2. Provincial**TABLE GD.2.1.**

Total master's degrees awarded by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	418	369	505	644	460
BC	220	259	344	404	340
MB	30	49	45	62	62
NB	52	45	59	65	50
NL	50	47	68	79	103
NS	86	105	114	128	173
ON	1,769	2,106	2,173	2,323	2,652
QC	1,067	1,030	1,053	1,394	1,537
SK	84	101	100	120	119
TOTAL	3,776	4,111	4,461	5,219	5,496

TABLE GD.2.2.

Total doctoral degrees awarded by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	116	120	130	154	203
BC	90	95	106	98	126
MB	17	21	27	39	28
NB	17	11	6	13	18
NL	9	12	10	7	12
NS	30	12	14	11	16
ON	438	471	463	500	552
QC	279	276	259	313	354
SK	31	34	24	27	21
TOTAL	1,027	1,052	1,039	1,162	1,330

TABLE GD.2.3.

Total master's degrees awarded to women by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	84	63	112	159	106
BC	62	62	111	101	87
MB	5	13	11	15	14
NB	14	11	10	9	12
NL	14	17	11	19	28
NS	23	21	16	24	27
ON	449	450	474	496	578
QC	240	223	221	308	389
SK	20	14	28	35	34
TOTAL	911	874	994	1,166	1,275

TABLE GD.2.4.

Total doctoral degrees awarded to women by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	24	13	25	35	31
BC	13	16	18	16	27
MB	4	2	3	4	4
NB	3	3	1	2	3
NL	0	1	2	0	2
NS	16	4	2	1	5
ON	100	108	100	118	90
QC	61	45	54	57	51
SK	5	12	3	6	7
TOTAL	226	204	208	239	220

TABLE GD.2.5.

Total master's degrees awarded to visa students by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	145	144	246	373	215
BC	80	83	161	174	164
MB	10	20	22	23	28
NB	25	31	28	39	31
NL	33	29	56	59	87
NS	40	46	80	84	137
ON	324	429	578	800	946
QC	236	290	386	634	676
SK	59	62	66	71	87
TOTAL	952	1,134	1,623	2,257	2,371

TABLE GD.2.6.

Total doctoral degrees awarded to visa students by province: 2009 to 2013.

PROVINCE	2009	2010	2011	2012	2013
AB	16	24	26	44	66
BC	18	35	32	39	46
MB	3	3	3	8	5
NB	9	8	2	8	12
NL	2	2	4	4	3
NS	19	1	3	2	3
ON	59	71	73	98	106
QC	49	69	73	67	110
SK	9	8	8	9	11
TOTAL	184	221	224	279	362

TABLE GD.2.7.

Total master's degrees awarded by province and discipline: 2013.

DISCIPLINE	AB	BC	MB	NB	NL	NS	ON	QC	SK	TOTAL
Biosystems	12	37	7	3		10	75	33	9	186
Chemical	101			13		3	226	74	7	424
Civil	104	80	15	7	14	15	374	255	15	879
Computer	4	5			22		118	25	9	183
Electrical	65	72	27	7	12	25	795	423	15	1,441
Engineering Physics	8	28					24	15		75
Environmental		22			16	5	70	5	11	129
Geological		6					2			8
Industrial or Manufacturing			13			4	24	180	15	236
Materials or Metallurgical	19	11				1	36	30		97
Mechanical	102	48		5	2	5	452	208	12	834
Mining or Mineral	9	30					40	9		88
Software		1					18	61	8	88
Other	36			15	37	105	398	219	18	828
TOTAL	460	340	62	50	103	173	2,652	1,537	119	5,496

TABLE GD.2.8.

Total doctoral degrees awarded by province and discipline: 2013.

DISCIPLINE	AB	BC	MB	NB	NL	NS	ON	QC	SK	TOTAL
Biosystems	5	24	5	1		1	15	4	5	60
Chemical	47			7			65	50		169
Civil	43	13	3	1	4	7	73	41	2	187
Computer	6				1		2	12	1	22
Electrical	35	46	11	5	2	2	195	91	2	389
Engineering Physics	9	10				2	13	9		43
Environmental							11		3	14
Geological										0
Industrial or Manufacturing			9				2	11	2	24
Materials or Metallurgical	5	8				2	12	21		48
Mechanical	31	21		1	2	2	102	72	5	236
Mining or Mineral		4					23	2		29
Software							3			3
Other	22			3	3		36	41	1	106
TOTAL	203	126	28	18	12	16	552	354	21	1,330

GD.3. Institutional

TABLE GD.3.1.

Total master's degrees awarded by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Alberta	206	206	334	329	281
BCIT	0	0	0	0	0
Calgary	212	163	171	315	179
Carleton	133	148	147	177	193
Concordia	370	373	400	534	572
Conestoga		0	0	0	0
Dal	86	105	114	128	173
ETS	92	153	178	239	259
Guelph	34	34	40	46	44
Lakehead	23	21	20	14	16
Laurentian	7	6	0	0	61
Laval	44	100	76	75	70
Manitoba	30	49	45	62	62
McGill	150	101	35	122	157
McMaster	179	215	250	225	255
Moncton	6	7	8	1	2
MUN	50	47	68	79	103
Ottawa	91	116	128	165	241
Polytechnique	268	237	254	281	281
Queen's	90	74	92	103	113
Regina	27	35	36	49	60
RMC	33	32	0	26	22
Ryerson	237	269	247	231	295
Saskatchewan	57	66	64	71	59
SFU	15	29	40	37	38
Sherbrooke	118	51	86	61	65
Toronto	359	391	401	482	496
UBC	176	192	237	300	251
UBCO	6	12	38	22	20
UNB	46	38	51	64	48
UNBC	0	0	0	0	0
UOIT	21	41	67	47	30
UQAC	11	9	11	22	8
UQAM	0	0	0	0	0
UQAR	3	2	5	7	8
UQAT	0	0	5	13	19
UQO	0	0	0	0	0
UQTR	11	4	3	40	98
UVic	23	26	29	45	31
Waterloo	320	436	452	415	502
Western	113	135	132	175	131
Windsor	129	188	195	217	253
York	0	0	2	0	
TOTAL	3,776	4,111	4,461	5,219	5,496

TABLE GD.3.2.

Total doctoral degrees awarded by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Alberta	72	65	71	78	111
BCIT	0	0	0	0	0
Calgary	44	55	59	76	92
Carleton	37	45	28	23	36
Concordia	45	49	49	70	60
Conestoga		0	0	0	0
Dal	30	12	14	11	16
ETS	27	28	29	41	35
Guelph	6	6	2	4	9
Lakehead	0	0	0	0	0
Laurentian	0	1	0	0	31
Laval	19	46	42	24	33
Manitoba	17	21	27	39	28
McGill	57	54	26	59	100
McMaster	54	64	52	66	40
Moncton	0	0	0	0	0
MUN	9	12	10	7	12
Ottawa	26	22	24	28	21
Polytechnique	88	71	80	80	88
Queen's	47	43	30	35	46
Regina	13	10	7	13	7
RMC	3	3	0	8	4
Ryerson	13	18	21	25	42
Saskatchewan	18	24	17	14	14
SFU	7	6	8	13	12
Sherbrooke	32	22	25	25	27
Toronto	94	101	106	115	106
UBC	74	69	82	67	93
UBCO	0	0	2	1	7
UNB	17	11	6	13	18
UNBC	0	0	0	0	0
UOIT	0	0	2	6	10
UQAC	8	4	8	9	5
UQAM	0	0	0	0	0
UQAR	0	0	0	0	0
UQAT	0	0	0	0	0
UQO	0	0	0	0	0
UQTR	3	2	0	5	6
UVic	9	20	14	17	14
Waterloo	97	94	116	115	134
Western	47	55	55	58	53
Windsor	14	19	27	17	20
York	0	0	0	0	
TOTAL	1,027	1,052	1,039	1,162	1,330

TABLE GD.3.3.

Total master's degrees awarded to women by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Alberta	41	34	66	87	63
BCIT	0	0	0	0	0
Calgary	43	29	46	72	43
Carleton	25	36	36	34	31
Concordia	77	76	88	104	129
Conestoga		0	0	0	0
Dal	23	21	16	24	27
ETS	13	28	29	49	39
Guelph	10	11	10	12	11
Lakehead	6	1	3	3	2
Laurentian	1	1	0	0	8
Laval	9	21	12	17	20
Manitoba	5	13	11	15	14
McGill	42	22	5	23	53
McMaster	43	50	48	56	67
Moncton	4	1	0	0	0
MUN	14	17	11	19	28
Ottawa	21	31	23	28	57
Polytechnique	72	62	68	84	74
Queen's	30	14	20	29	32
Regina	7	4	6	7	13
RMC	4	10	0	6	4
Ryerson	40	47	42	39	39
Saskatchewan	13	10	22	28	21
SFU	5	6	13	9	8
Sherbrooke	22	10	14	12	12
Toronto	98	104	104	107	125
UBC	50	49	83	76	62
UBCO	1	2	6	3	11
UNB	10	10	10	9	12
UNBC	0	0	0	0	0
UOIT	3	7	11	2	5
UQAC	2	2	4	3	0
UQAM	0	0	0	0	0
UQAR	1	1	1	0	0
UQAT	0	0	0	0	3
UQO	0	0	0	0	0
UQTR	2	1	0	16	59
UVic	6	5	9	13	6
Waterloo	105	95	108	108	123
Western	32	17	34	39	30
Windsor	31	26	35	33	44
York	0	0	0	0	
TOTAL	911	874	994	1,166	1,275

TABLE GD.3.4.

Total doctoral degrees awarded to women by institution: 2009 to 2013.

INSTITUTION	2009	2010	2011	2012	2013
Alberta	19	7	16	18	16
BCIT	0	0	0	0	0
Calgary	5	6	9	17	15
Carleton	5	8	7	7	3
Concordia	8	8	7	8	9
Conestoga		0	0	0	0
Dal	16	4	2	1	5
ETS	1	4	5	8	3
Guelph	1	2	1	0	1
Lakehead	0	0	0	0	0
Laurentian	0	0	0	0	3
Laval	6	4	9	5	0
Manitoba	4	2	3	4	4
McGill	17	9	3	12	14
McMaster	7	16	16	20	9
Moncton	0	0	0	0	0
MUN	0	1	2	0	2
Ottawa	6	2	5	10	4
Polytechnique	19	16	20	14	20
Queen's	9	10	7	8	6
Regina	3	4	3	4	3
RMC	1	1	0	1	0
Ryerson	1	4	3	4	8
Saskatchewan	2	8	0	2	4
SFU	1	3	1	1	0
Sherbrooke	8	3	5	6	3
Toronto	20	33	19	31	20
UBC	10	7	16	12	24
UBCO	0	0	0	0	1
UNB	3	3	1	2	3
UNBC	0	0	0	0	0
UOIT	0	0	0	1	0
UQAC	2	0	5	4	1
UQAM	0	0	0	0	0
UQAR	0	0	0	0	0
UQAT	0	0	0	0	0
UQO	0	0	0	0	0
UQTR	0	1	0	0	1
UVic	2	6	1	3	2
Waterloo	33	14	17	26	22
Western	12	13	17	8	8
Windsor	5	5	8	2	6
York	0	0	0	0	
TOTAL	226	204	208	239	220

TABLE GD.3.5.

Total master's degrees awarded by institution and discipline: 2013.

INSTITUTION	BIOSYSTEMS	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING PHYSICS	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL OR MANUFACTURING	MATERIALS OR METALLURGICAL	MECHANICAL	MINING OR MINERAL	SOFTWARE	OTHER
Alberta		48	79	4	27	8				19	60	9		27
BCIT														
Calgary	12	53	25		38						42			9
Carleton	9		41	5	56		19			4	18		2	39
Concordia			117		287				24		69		56	19
Conestoga														
Dal	10	3	15		25		5		4	1	5			105
ETS			41		31				11		29		5	142
Guelph	8			11			25							
Lakehead					15		1							
Laurentian		26										35		
Laval	10	8	18		5		3			6	14	3		3
Manitoba	7		15		27				13					
McGill		23	31		42					22	39			
McMaster	11	18	12	1	69	18				14	26		16	70
Moncton														2
MUN			14	22	12		16				2			37
Ottawa	8	24	40		64		8				34			63
Polytechnique	23	31	33	25	33	15			61	2	35	6		17
Queen's		16	31		28	6		2			25	5		
Regina				9			10		15				8	18
RMC		9	1		7						2			3
Ryerson		7	42	101	61						52			32
Saskatchewan	9	7	15		15		1				12			
SFU						28					10			
Sherbrooke		6	15		17						22			5
Toronto	39	47	91		135					11	129			44
UBC	37		70		53		22	6		11	22	30		
UBCO			10		7						3			
UNB	3	13	7		7						5			13
UNBC														
UOIT					11						9			10
UQAC							2							6
UQAM														
UQAR														8
UQAT														19
UQO														
UQTR		6			8				84					
UVic				5	12						13		1	
Waterloo		51	49		184						81			137
Western		28	50		32						21			
Windsor			17		133		17		24	7	55			
York														
TOTAL	186	424	879	183	1,441	75	129	8	236	97	834	88	88	828

TABLE GD.3.6.

Total doctoral degrees awarded by institution and discipline: 2013.

INSTITUTION	BIOSYSTEMS	CHEMICAL	CIVIL	COMPUTER	ELECTRICAL	ENGINEERING PHYSICS	ENVIRONMENTAL	GEOLOGICAL	INDUSTRIAL OR MANUFACTURING	MATERIALS OR METALLURGICAL	MECHANICAL	MINING OR MINERAL	SOFTWARE	OTHER
Alberta		21	36	6	18	9				5	15			1
BCIT														
Calgary	5	26	7		17						16			21
Carleton			3		21		1				6			5
Concordia			11		27						22			
Conestoga														
Dal	1		7		2	2				2	2			
ETS														35
Guelph				2			7							
Lakehead														
Laurentian		9										22		
Laval		9	6		10					3	4	1		
Manitoba	5		3		11				9					
McGill		15	10		29					13	33			
McMaster	4	2	2		9	9				7	4		3	
Moncton														
MUN			4	1	2						2			3
Ottawa		1	4		13						3			
Polytechnique	4	17	4	12	14	9			11	5	10	1		1
Queen's		6	10		16	4					9	1		
Regina				1			3		2					1
RMC		2			1						1			
Ryerson		4	3		18						9			8
Saskatchewan	5		2		2						5			
SFU						10					2			
Sherbrooke		6	10		8						3			
Toronto	11	10	15		34					2	26			8
UBC	24		10		38					8	9	4		
UBCO			3		2						2			
UNB	1	7	1		5						1			3
UNBC														
UOIT					1						9			
UQAC														5
UQAM														
UQAR														
UQAT														
UQO														
UQTR		3			3									
UVic					6						8			
Waterloo		17	24		59						19			15
Western		14	10		16						13			
Windsor			2		7		3		2	3	3			
TOTAL	60	169	187	22	389	43	14		24	48	236	29	3	106

A.5. FACULTY MEMBERS BY INSTITUTION

F.1. Faculty Composition

TABLE F.1.1.

Faculty members by institution: 2013.

INSTITUTION	MALE PROFESSORS	FEMALE PROFESSORS	MALE ASSOCIATE PROFESSORS	FEMALE ASSOCIATE PROFESSORS	MALE ASSISTANT PROFESSORS	FEMALE ASSISTANT PROFESSORS	MALE INSTRUCTORS/LECTURERS	FEMALE INSTRUCTORS/LECTURERS	TOTAL FULL TIME EQUIVALENT
Acadia	-	-	2	1	1	-	4	-	8
Alberta	89	4	43	4	42	10	-	-	192
BCIT	38	5	-	-	-	-	-	-	43
Calgary	71	6	45	13	12	3	6	5	161
Cape Breton	2	-	-	-	-	-	3	-	5
Carleton	50	4	54	4	23	6	5	1	147
Concordia	69	9	47	10	16	7	10	2	169
Conestoga	9	1	-	-	-	-	-	-	10
Dal	43	1	18	9	6	2	14	1	94
ETS	65	11	81	14	14	4	122	18	329
Guelph	11	2	12	3	7	1	3	2	41
Lakehead	14	-	13	2	10	-	-	-	39
Laurentian	13	1	6	-	3	-	8	-	31
Laval	96	12	26	4	22	2	-	-	162
Manitoba	36	3	19	4	10	2	5	1	80
McGill	42	-	57	9	20	6	-	1	135
McMaster	78	4	45	5	8	8	1	-	148
Moncton	10	-	7	2	2	1	5	1	28
MUN	24	2	25	3	9	4	2	1	70
NSAC	3	-	4	-	4	1	8	-	20
Ottawa	51	6	25	12	13	6	1	7	121
Polytechnique	100	10	51	9	44	9	16	3	242
Queen's	68	15	38	2	12	4	8	1	147
Regina	18	3	10	2	2	1	3	-	39
RMC	17	1	27	2	15	6	16	3	87
Ryerson	65	6	36	7	12	1	27	6	160
Saskatchewan	34	2	22	3	16	3	2	1	83
SFU	19	2	9	3	5	1	7	2	48
Sherbrooke	59	2	19	4	12	1	99	17	213
SMU	2	-	-	-	1	-	1	1	5
StFX	1	-	1	-	1	-	-	-	3
Toronto	112	9	46	17	26	10	16	5	241
UBC	85	6	37	7	10	2	21	12	180
UBCO	3	1	10	2	13	1	3	3	36
UNB	35	7	12	1	6	-	10	-	71
UNBC	3	-	1	-	-	-	0	0	5
UOIT	20	-	22	4	9	5	9	-	69
UPEI	1	-	1	-	1	1	1	1	6
UQAC	10	1	7	2	3	1	8	1	32
UQAM	9	-	-	-	-	-	2	-	11
UQAR	7	-	1	-	1	-	6	1	16
UQAT	4	-	6	-	1	-	14	3	28
UQO	9	1	2	2	1	1	-	-	16
UQTR	18	-	9	1	3	-	-	-	31
UVic	24	1	22	6	3	1	2	-	59
Waterloo	110	15	64	9	42	11	17	4	270
Western	35	3	33	6	9	3	7	-	95
Windsor	34	2	23	4	4	2	-	1	70
York	11	-	11	4	13	-	2	-	41
TOTAL	1,726	156	1,048	195	487	127	491	105	4,334

A.6. CO-OP, INTERNSHIP AND PROFESSIONAL EXPERIENCE PROGRAMS

C.1. Industry Experience Options by Institution

TABLE C.1.

Co-op, Internships and Professional Experience Programs: 2013.

INSTITUTION	TYPE OF PROGRAM	MANDATORY/OPTIONAL
Alberta	Co-op	Optional
Calgary	Internship	Optional
Carleton	Co-op	Optional
Concordia	Co-op & Internship	Optional
Conestoga	Co-op	Mandatory
Dal	Co-op	Optional
ETS	Co-op	Mandatory
Guelph	Co-op	Optional
Laurentian	Co-op	Optional
Laval	Co-op & Internship	Varies
Manitoba	Co-op	Optional
McGill	Co-op & Internship	Varies
McMaster	Co-op	Optional
Moncton	Co-op	Optional
MUN	Co-op	Mandatory
Ottawa	Co-op	Optional
Queen's	Internship	Optional
Regina	Co-op & Internship	Optional
Ryerson	Co-op & Internship	Varies
Saskatchewan	Internship	Optional
SFU	Co-op	Mandatory
Sherbrooke	Co-op	Mandatory
SMU	Co-op	Optional
Toronto	Internship	Optional
UBC	Co-op	Optional
UNB	Co-op	Optional
UQAR	Co-op	Optional
UQTR	Co-op	Optional
UVic	Co-op	Mandatory
Waterloo	Co-op	Mandatory
Western	Co-op & Internship	Optional
Windsor	Co-op & Internship	Optional

Appendix B

ACCREDITED ENGINEERING PROGRAMS BY INSTITUTION

- This listing of accredited programs includes only engineering programs which lead to a bachelor's degree.
- Institutions listed have voluntarily requested that specific engineering programs be evaluated by the Canadian Engineering Accreditation Board. The terminology requested by the institution is shown.
- A single date which follows the name of a program indicates the year of the first graduating class for which accreditation applies. It also applies to subsequent years and is still enforced.
- A double date following the name of a program indicates the period (inclusive of both years) for which the program was accredited. This may occur if the institution has discontinued the program under that specific name or has not requested renewal of accreditation or if the Accreditation Board has denied such renewal.
- The appearance of a third date indicates that accreditation has been renewed from that particular year on, after a time interval.

ALBERTA, UNIVERSITY OF

Edmonton, Alberta

Faculty of Engineering

Agricultural Engineering:	1983-1995
Chemical Engineering:	1965-
Civil Engineering:	1965-
Computer Engineering:	1983-
Electrical Engineering:	1965-
Engineering Physics:	1988-
Materials Engineering:	1999-
Mechanical Engineering:	1965-
Metallurgical Engineering:	1965-2000
Mineral Engineering:	1976-1982
Mineral Process Engineering:	1983-1991
Mining Engineering:	1965-1975, 1983-1978-
Petroleum Engineering:	1978-

BRITISH COLUMBIA INSTITUTE OF TECHNOLOGY

Burnaby, British Columbia

School of Construction and the Environment

Civil Engineering:	2010-
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School of Energy

Electrical Engineering:	2011-
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BRITISH COLUMBIA, THE UNIVERSITY OF

Vancouver, British Columbia

Faculty of Applied Science

Agricultural Engineering:	1965-1978
Bio-Resource Engineering:	1979-2001
Chemical Engineering:	1965-
Chemical and Biological Engineering:	2003-
Civil Engineering:	1965-
Computer Engineering:	2000-
Electrical Engineering:	1965-
Engineering Physics:	1965-
Environmental Engineering (jointly with Northern British Columbia):	2007-
Geological Engineering:	1965-
Integrated Engineering:	2003-
Materials Engineering:	2006-
Mechanical Engineering:	1965-
Metallurgical Engineering:	1965-1987
Metals and Materials Engineering:	1988-2005
Mineral Engineering:	1965-1979
Mining and Mineral Process Engineering:	1980-2005
Mining Engineering:	2004-

BRITISH COLUMBIA-OKANAGAN, THE UNIVERSITY OF

Kelowna, British Columbia

Faculty of Applied Science

Civil Engineering:	2010-
Electrical Engineering:	2010-
Mechanical Engineering:	2010-

CALGARY, THE UNIVERSITY OF

Calgary, Alberta

Schulich School of Engineering

Chemical Engineering:	1969-
Civil Engineering:	1969-
Computer Engineering:	2002-
Electrical Engineering:	1969-
Geomatics Engineering:	1996-
Manufacturing Engineering:	1997-
Mechanical Engineering:	1969-
Oil and Gas Engineering:	2001-
Software Engineering:	2002-
Surveying Engineering:	1982-1997

CARLETON UNIVERSITY

Ottawa, Ontario

Faculty of Engineering and Design

Aerospace Engineering:	1992-
Biomedical and Electrical Engineering:	2010-
Biomedical and Mechanical Engineering:	2012-
Civil Engineering:	1965-
Communications Engineering:	2002-
Computer Systems Engineering:	1984-
Electrical Engineering:	1965-
Engineering Physics:	2003-
Environmental Engineering:	1996-
Mechanical Engineering:	1965-
Software Engineering:	2003-
Sustainable and Renewable Energy Engineering:	2012-

CONCORDIA UNIVERSITY

Montréal, Québec

(formerly Sir George Williams University, 1959-1974)

Faculty of Engineering and Computer Science

Building Engineering:	1982-
Civil Engineering:	1969-
Computer Engineering:	1983-
Electrical Engineering:	1969-
Industrial Engineering:	1995-
Mechanical Engineering:	1969-
Software Engineering:	2002-

CONESTOGA COLLEGE

Kitchener, Ontario

School of Engineering and Information Technology

Mechanical Systems Engineering:	2010-
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DALHOUSIE UNIVERSITY

Halifax, Nova Scotia

(formerly Dal Tech, 1997-2000 and Technical University of Nova Scotia, 1981-1997 and Nova Scotia Technical College, 1907-1980)

Faculty of Engineering

Agricultural Engineering:	1974-2000
Biological Engineering:	1997-
Chemical Engineering:	1965-
Civil Engineering:	1965-
Computer Engineering:	2006-
Electrical Engineering:	1965-
Engineering Physics:	1987-1991
Environmental Engineering:	2006-
Industrial Engineering:	1969-
Materials Engineering:	2005-
Mechanical Engineering:	1965-
Metallurgical Engineering:	1965-1977, 1981-2005
Mineral Resources Engineering:	2007-
Mining Engineering:	1965-2006

ÉCOLE DE TECHNOLOGIE SUPÉRIEURE

Montréal, Québec

(affiliated with l'Université du Québec)

Génie de la construction:	1993-
Génie des opérations et de la logistique:	2008-
Génie des technologies de l'information:	2006-
Génie et gestion de la construction:	1990-1996
Génie électrique:	1990-
Génie logiciel:	2004-
Génie mécanique:	1990-
Génie de la production automatisée:	1990-

GUELPH, UNIVERSITY OF

Guelph, Ontario

School of Engineering

Agricultural Engineering:	1973-1995
Biological Engineering:	1973-
Engineering Systems and Computing:	1994-
Environmental Engineering:	1993-
Food Engineering:	1993-2000
Mechanical Engineering:	2013-
Water Resources Engineering:	1973-

LAKEHEAD UNIVERSITY

Thunder Bay, Ontario

Faculty of Engineering

Chemical Engineering:	1974-
Civil Engineering:	1974-
Electrical Engineering:	1974-
Mechanical Engineering:	1974-
Software Engineering:	2002-

LAURENTIAN UNIVERSITY

Sudbury, Ontario

School of Engineering

Chemical Engineering:	2006-
Extractive Metallurgical Engineering:	1987-2006
Extractive Metallurgy:	1985-1986
Mechanical Engineering:	2011-
Mining Engineering:	1987

LAVAL, UNIVERSITÉ

Québec, Québec

Faculté de foresterie, de géographie et de géomatique

Génie du bois:	2002-
Génie géomatique:	2007-

Faculté des sciences de l'agriculture et de l'alimentation

Génie agroenvironnemental:	2002-
Génie alimentaire:	1997-

Faculté des sciences et de génie

Génie chimique:	1965-
Génie civil:	1965-
Génie des eaux:	2009-
Génie électrique:	1965-
Génie géologique:	1965-
Génie informatique:	1993-
Génie logiciel:	2006-
Génie des matériaux et de la métallurgie:	1990-
Génie mécanique:	1965-
Génie métallurgique:	1965-1990
Génie des mines et de la minéralurgie:	1990-
Génie minier:	1965-1990
Génie physique:	1965-
Génie rural:	1973-2002

MANITOBA, THE UNIVERSITY OF

Winnipeg, Manitoba

Faculty of Engineering

Agricultural Engineering:	1971-1998
Biosystems Engineering:	1996-
Civil Engineering:	1965-
Computer Engineering:	1987-
Electrical Engineering:	1965-
Geological Engineering:	1965-2001
Industrial Engineering:	1987-2005
Manufacturing Engineering:	2003-2013
Mechanical Engineering:	1965-

MCGILL UNIVERSITY

Montréal, Québec

Faculty of Agricultural and Environmental Sciences

Bioresource Engineering:	2005-
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Faculty of Engineering

Agricultural Engineering (Macdonald College):	1971-2006
Chemical Engineering:	1965-
Civil Engineering:	1965-
Computer Engineering:	1993-
Electrical Engineering:	1965-
Materials Engineering:	2005-
Mechanical Engineering:	1965-
Metallurgical Engineering:	1965-2007
Mining Engineering:	1965-
Software Engineering:	2007-

MCMASTER UNIVERSITY*

Hamilton, Ontario

Faculty of Engineering

Ceramic Engineering:	1974-1998
Chemical Engineering:	1965-
Chemical Engineering & Bioengineering:	2006-
Civil Engineering:	1989-
Civil Engineering & Computer Systems:	1992-1995
Civil Engineering & Engineering Mechanics:	1965-1988
Computer Engineering:	1981-
Electrical & Biomedical Engineering:	2006-
Electrical Engineering:	1965-
Engineering Physics:	1974-
Manufacturing Engineering:	1982-2005
Materials Engineering:	1990-
Mechanical Engineering:	1965-
Mechatronics Engineering:	2009-
Metallurgical Engineering:	1965-1997
Software Engineering:	2001-

*Graduates of programs at this institution may have completed additional non-technical studies, such as a management or society option, that will be listed on their transcripts. These transcripts contain wording such as "(Discipline) Engineering and Society" or "(Discipline) Engineering and Management". Only the engineering component of these programs is accredited by the Canadian Engineering Accreditation Board; thus, even though these options meet the accreditation requirements, only the base engineering programs are listed here.

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

St. John's, Newfoundland

Faculty of Engineering and Applied Science

Civil Engineering:	1975-
Computer Engineering:	2002-
Electrical Engineering:	1975-
Mechanical Engineering:	1975-
Naval Architectural Engineering:	1986-1996
Ocean and Naval Architectural Engineering:	1997-
Process Engineering:	2013-
Shipbuilding Engineering:	1982-1985

MONCTON, UNIVERSITÉ DE

Moncton, Nouveau-Brunswick

Faculté d'ingénierie

Génie civil:	1972-
Génie électrique:	1998-
Génie industriel:	1975-2009
Génie mécanique:	1990-

NEW BRUNSWICK, UNIVERSITY OF

Fredericton, New Brunswick

Faculty of Computer Science and Faculty of Engineering

Software Engineering: 2006-

Faculty of Engineering

Chemical Engineering: 1965-
Civil Engineering: 1965-
Computer Engineering: 2001-
Electrical Engineering: 1965-
Forest Engineering: 1972-
Geological Engineering: 1984-
Geomatics Engineering: 1999-
Mechanical Engineering: 1965-
Surveying Engineering: 1972-1999

NORTHERN BRITISH COLUMBIA, UNIVERSITY OF

Prince George, British Columbia

College of Science and Management

Environmental Engineering
(jointly with British Columbia): 2007-

NOVA SCOTIA TECHNICAL COLLEGE

(see Dalhousie University)

NSTC offered accredited engineering programs from 1965 to 1980.

NSTC a offert des programmes de génie agréés de 1965 à 1980.

NOVA SCOTIA, TECHNICAL UNIVERSITY OF

(see Dalhousie University)

TUNS offered accredited engineering programs from 1981 to 1996.

However, students who enrolled prior to April 1, 1997, and graduated after that date can request that their degree be in the name of TUNS.

ONTARIO INSTITUTE OF TECHNOLOGY, UNIVERSITY OF*

Oshawa, Ontario

Faculty of Engineering and Applied Science

Automotive Engineering: 2009-
Electrical Engineering: 2009-
Manufacturing Engineering: 2007-
Mechanical Engineering: 2008-
Software Engineering: 2009-

Faculty of Energy Systems and Nuclear Science

Nuclear Engineering: 2007-

* Graduates of programs at this institution may have completed additional non-technical studies, such as a management option, that will be listed on their degrees and transcripts. These degrees and transcripts contain wording such as "(Discipline) Engineering and Management". Only the engineering component of these programs is accredited by the Canadian Engineering Accreditation Board; thus, even though these options meet the accreditation requirements, only the base engineering programs are listed here.

OTTAWA, UNIVERSITY OF

Ottawa, Ontario

Faculty of Engineering

Biomedical Mechanical Engineering: 2009-
Chemical Engineering: 1965-
Civil Engineering: 1971-
Computer Engineering: 1990-
Electrical Engineering: 1965-
Mechanical Engineering: 1971-
Software Engineering: 2001-

POLYTECHNIQUE, ÉCOLE

Montréal, Québec

(affiliated with l'Université de Montréal)

Génie aérospatial: 2012-
Génie biomédical: 2012-
Génie chimique: 1965-
Génie civil: 1965-
Génie électrique: 1965-
Génie géologique: 1965-
Génie industriel: 1973-
Génie informatique: 1989-
Génie logiciel: 2005-
Génie des matériaux: 1990-2012
Génie mécanique: 1965-
Génie métallurgique: 1965-1989
Génie des mines: 1991-
Génie minier: 1965-1991
Génie physique: 1965-

QUÉBEC EN ABITIBI-TÉMISCAMINGUE, UNIVERSITÉ DU

Rouyn-Noranda, Québec

Unité d'enseignement et de recherche en sciences appliquées

Génie électromécanique: 2000-
Génie mécanique: 2010-

QUÉBEC À CHICOUTIMI, UNIVERSITÉ DU

Chicoutimi, Québec

Département des sciences appliquée

Génie civil: 2012-
Génie électrique: 2004-
Génie géologique: 1983-
Génie informatique: 1992-
Génie mécanique: 2004-
Génie unifié: 1981-2009
Ingénierie de l'aluminium: 2008-2012

QUÉBEC À MONTRÉAL, UNIVERSITÉ DU

Montréal, Québec

Faculté des sciences

Génie microélectronique: 2007-

QUÉBEC EN OUTAOUAIS, UNIVERSITÉ DU

Gatineau, Québec
(formerly Québec à Hull, Université du)

Module de l'ingénierie

Génie informatique: 2002-

QUÉBEC À RIMOUSKI, UNIVERSITÉ DU

Rimouski, Québec

Module de génie

Génie des systèmes électromécaniques: 1998-

Génie électrique : 2009-

Génie mécanique : 2009-

QUÉBEC À TROIS-RIVIÈRES, UNIVERSITÉ DU

Trois-Rivières, Québec

École d'ingénierie

Génie chimique: 1990-

Génie électrique: 1978-

Génie industriel: 1980-

Génie mécanique manufacturier: 1987-1999

Génie mécanique: 2000-

QUEEN'S UNIVERSITY

Kingston, Ontario

Faculty of Applied Science

Chemical Engineering: 1965-

Civil Engineering: 1965-

Computer Engineering: 2002-

Electrical Engineering: 1965-

Engineering Chemistry: 1979-

Engineering Physics: 1965-

Geological Engineering: 1975-

Materials and Metallurgical Engineering: 1992-2002

Mathematics and Engineering: 1974-

Mechanical Engineering: 1965-

Metallurgical Engineering: 1965-1991

Mining Engineering: 1965-

REGINA, UNIVERSITY OF

Regina, Saskatchewan

Faculty of Engineering and Applied Science

Electronic Information Systems Engineering: 1986-1994

Electronic Systems Engineering: 1995-

Environmental Systems Engineering: 1997-

Industrial Systems Engineering: 1984-

Petroleum Systems Engineering: 2003-

Regional Environmental Systems Engineering: 1990-1997

Regional Systems Engineering: 1984-1989

Software Systems Engineering: 2007-

Systems Engineering: 1981-1983

ROYAL MILITARY COLLEGE OF CANADA

Kingston, Ontario

Faculty of Engineering

Aeronautical Engineering: 2009-

Chemical Engineering: 1965-1981, 2001-

Chemical and Materials Engineering: 1992-2001

Civil Engineering: 1965-

Computer Engineering: 1983-

Electrical Engineering: 1965-

Engineering and Management: 1972-1995

Engineering Physics: 1975-1995

Fuels and Materials Engineering: 1982-1991

Mechanical Engineering: 1965-

RYERSON POLYTECHNICAL INSTITUTE

(see Ryerson University)

RPI offered accredited engineering programs in 1992.

RYERSON POLYTECHNIC UNIVERSITY (RPU)

(see Ryerson University)

RPU offered accredited engineering programs from 1992 to 2002.

RYERSON UNIVERSITY

Toronto, Ontario

(formerly Ryerson Polytechnical Institute, 1964-1992, and Ryerson Polytechnic University, 1992-2002)

Faculty of Engineering, Architecture and Science

Aerospace Engineering: 1992-

Biomedical Engineering: 2012-

Chemical Engineering: 1992-

Civil Engineering: 1992-

Computer Engineering: 2006-

Electrical Engineering: 1992-

Industrial Engineering: 1992-

Mechanical Engineering: 1992-

SASKATCHEWAN, UNIVERSITY OF

Saskatoon, Saskatchewan

College of Engineering

Agricultural Engineering: 1965-1992

Agricultural and Bioresource Engineering: 1992-

Chemical Engineering: 1965-

Civil Engineering: 1965-

Computer Engineering: 2009-

Electrical Engineering: 1965-

Engineering Physics: 1965-

Environmental Engineering: 2011-

Geological Engineering: 1965-

Geological Engineering (Geophysics): 1975-1999

Mechanical Engineering: 1965-

Mining Engineering: 1974-1976

SHERBROOKE, UNIVERSITÉ DE

Sherbrooke, Québec

Faculté de génie

Génie biotechnologique:	2008-
Génie chimique:	1973-
Génie civil:	1965-
Génie électrique:	1965-
Génie informatique:	1997-
Génie mécanique:	1965-

SIMON FRASER UNIVERSITY

Burnaby, British Columbia

School of Engineering Science

Engineering Science:	1986-
Mechatronic Systems Engineering:	2011-

SIR GEORGE WILLIAMS UNIVERSITY (SGW)

(see Concordia University)

SGW offered accredited engineering programs from 1969 to 1974.

TORONTO, UNIVERSITY OF

Toronto, Ontario

Faculty of Applied Science and Engineering

Chemical Engineering:	1965-
Civil Engineering:	1965-
Computer Engineering:	1994-
Electrical Engineering:	1965-
Engineering Science:	1965-
Geo-Engineering:	1983-1990
Geological Engineering:	1965-1974
Geological Engineering & Applied Earth Science:	1975-1982
Geological and Mineral Engineering:	1991-1998
Industrial Engineering:	1965-
Materials Engineering:	1996-
Mechanical Engineering:	1965-
Metallurgical Engineering & Materials Science:	1986-1995
Metallurgy & Materials Science:	1965-1985
Mineral Engineering:	1999-

VICTORIA, UNIVERSITY OF

Victoria, British Columbia

Faculty of Engineering

Computer Engineering:	1988-
Electrical Engineering:	1988-
Mechanical Engineering:	1992-
Software Engineering:	2007-

WATERLOO, UNIVERSITY OF

Waterloo, Ontario

Faculty of Engineering

Chemical Engineering:	1965-
Civil Engineering:	1965-
Computer Engineering:	1989-
Electrical Engineering:	1965-
Environmental Engineering:	1999-
Geological Engineering:	1986-
Management Engineering:	2012-
Mechanical Engineering:	1965-
Mechatronics Engineering:	2008-
Nanotechnology Engineering:	2010-
Software Engineering:	2006-
Systems Design Engineering:	1974-

WESTERN ONTARIO, THE UNIVERSITY OF

London, Ontario

Faculty of Engineering

Chemical Engineering:	1965-1971, 2007-
Chemical and Biochemical Engineering:	1972-2006
Civil Engineering:	1965-
Computer Engineering:	2001-
Electrical Engineering:	1965-
Green Process Engineering:	2012-
Integrated Engineering:	2001-
Materials Engineering:	1968-1999
Mechanical Engineering:	1965-
Software Engineering:	2001-

WINDSOR, UNIVERSITY OF

Windsor, Ontario

Faculty of Engineering

Chemical Engineering:	1965-1990
Civil Engineering:	1965-
Electrical Engineering:	1965-
Engineering Materials:	1974-1991
Environmental Engineering:	1991-
Geological Engineering:	1972-1989
Industrial Engineering:	1974-
Mechanical Engineering:	1965-

YORK UNIVERSITY

Toronto, Ontario

Faculty of Science and Engineering

Computer Engineering:	2007-
Geomatics Engineering:	2007-
Space Engineering:	2007-

Appendix C

CANADIAN DISCIPLINE CATEGORIES AS USED IN THIS REPORT

This section provides a comprehensive listing of programs titles, as provided by the universities, which are currently offered at both the undergraduate (accredited) and postgraduate levels in Canada only. The “discipline” listing is the broad category within which a number of similar programs are grouped. While this report does not provide detailed data on individual programs, the information can be obtained by contacting Engineers Canada.

DISCIPLINE PROGRAM

Biosystems

Agricultural Engineering
 Agricultural and Bioresource Engineering
 Agricultural and Biosystems Engineering
 Bio-Resource Engineering
 Biological Engineering
 Biomedical Engineering
 Biomedical and Mechanical Engineering
 Biomedical Mechanical Engineering
 Biomedical: Computer Science
 Biosystems Engineering
 Chemical and Biological Engineering
 Food Engineering
 Forest Engineering
 Génie agroalimentaire
 Génie agroenvironnemental
 Génie alimentaire
 Génie biomédical
 Génie biotechnologique

Chemical

Chemical and Biochemical Engineering
 Chemical and Materials Engineering
 Chemical and Petroleum Engineering
 Chemical Engineering
 Chemical Engineering & Bioengineering
 Fuels and Materials Engineering
 Génie biotechnologique
 Génie chimique
 Nanotechnology Engineering

Civil

Architectural Engineering
 Building Engineering
 Civil Engineering
 Civil and Environmental Engineering
 Engineers Mechanics
 Génie civil
 Génie de la construction
 Génie et gestion de la construction
 Infrastructure Protection Engineering
 International Security Engineering
 Ingénierie/réhabilitation des infrastructures urbaines
 Urban Planning

Computer

Computational Engineering and Science
 Computer Engineering
 Computer Networks Engineering
 Computer Systems Engineering
 Electronic Information Systems Engineering
 Electronic Systems Engineering
 Engineering Systems and Computing
 Génie informatique
 Software Engineering and Game Design

Electrical

Biomedical and Electrical Engineering
 Communications Engineering
 Controls Engineering
 Electrical Engineering
 Electrical and Computer Engineering
 Electrical & Biomedical Engineering
 Energy Systems Engineering
 Electro-mechanical Design
 Electronics Engineering
 Génie des opérations et de la logistique
 Génie des technologies de l'information
 Génie des systèmes électromécaniques
 Génie électrique
 Génie électromécanique
 Génie énergétique
 Génie microélectronique
 Information Systems Security Engineering
 Quality Systems Engineering
 Sustainable Energy Engineering
 Systems and Computer Engineering

Engineering Physics	<ul style="list-style-type: none"> Engineering Chemistry Engineering Mathematics Engineering Physics Engineering Science Génie mathématiques Génie physique Mathematics and Engineering 	Materials or Metallurgical	<ul style="list-style-type: none"> Ceramic Engineering Engineering Materials Extractive Metallurgical Engineering Génie des matériaux et de la métallurgie Génie des matériaux Génie métallurgique Ingénierie de l'aluminium Materials and Metallurgical Engineering Materials Engineering Materials Science Metallurgy Metallurgical Engineering Metallurgical Engineering and Materials Science Metals and Materials Engineering Mining/Materials Engineering
Environmental	<ul style="list-style-type: none"> Clean Energy Engineering Energy and Environment Systems Environmental Engineering Environmental Systems Engineering Génie des eaux Maîtrise en Science de la Terre Sustainable & Renewable Energy Sciences de la terre et de l'atmosphère Génie ressources et systèmes Regional Environmental Systems Engineering Water Resources Engineering 	Mechanical	<ul style="list-style-type: none"> Automotive Engineering Génie mécanique Mechanical Engineering Mechanical/Industrial Engineering Mechanical & Materials Engineering Mechanical & Manufacturing Engineering Mechanical & Mechatronic Engineering Mechanical Systems Engineering Mechatronics Engineering Mechatronic Systems Engineering Radiation Science Engineering Space Engineering
Geological	<ul style="list-style-type: none"> Applied Earth Science Génie géologique Génie des sciences de la Terre Geological and Mineral Engineering Geological Engineering Geological Engineering (Geophysics) 		
Industrial or Manufacturing	<ul style="list-style-type: none"> Advanced Design and Manufacturing Institute Advanced Manufacturing and Process Systems Électronique industrielle Génie de la production automatisée Génie des opérations et de la logistique Génie industriel Génie mécanique manufacturier Génie sécurité et hygiène industrielles Industrial Engineering Industrial Systems Engineering Mechanical Manufacturing Engineering Manufacturing Engineering 	Mining or Mineral	<ul style="list-style-type: none"> Génie des mines Génie des mines et de la minéralurgie Génie minier Génie minéral Génie ressources minérales Maîtrise en génie minéral Mineral Engineering Mineral Process Engineering Mineral Resources Engineering Natural Resources Engineering Mining and Metallurgy Engineering Mining and Mineral Process Engineering Mining Engineering

Software

Génie logiciel
Information Systems Science Engineering
Software Engineering
Software Engineering & Virtual Systems Design
Software Systems Engineering

Other

Aeronautical Engineering
Aerospace Engineering
Civil and Geological Engineering
Engineering Systems and Computing
Engineering Management
Fire Protection Engineering
Génie aérospatial
Génie du bois
Génie géomatique
Génie nucléaire
Génie papetier
Génie rural
Génie sciences des pâtes et papiers
Génie des technologies de l'information
Génie unifié
Geodesy and Geomatics
Geo-engineering
Geomatics Engineering
Green Process Engineering
Ingénierie unifiée
Integrated Engineering
Management Engineering
Management Sciences
Naval Architectural & Marine Engineering
Naval Architectural Engineering
Nuclear Engineering
Ocean and Naval Architectural Engineering
Oil and Gas Engineering
Ocean Engineering
Petroleum Engineering
Petroleum Systems Engineering
Process Engineering
Pulp & Paper Engineering
Regional Systems Engineering
Shipbuilding Engineering
Surveying Engineering
Systems Engineering
Systems Design Engineering
Technologie des systèmes
TIM (Systems)
Technology Management
Telecommunications Technical Management

Year One/Two	Common First and Second Year
Common Year	Engineering Entrance Year One - Common

The discipline Engineering Science (E.Sci.) involves science-intensive studies in engineering physics, engineering bioscience, engineering chemistry and other specializations offered by universities with accredited engineering science programs.

Several universities in Canada have common first-year and, in some cases, second-year programs. Students in these programs do not declare a discipline of study in their first year or, as applicable, second year. The total number of students in common first, second and qualifying year programs have been separated from the "Other" category, beginning with the 1997 data. This subdivision will be continued in future years.

Appendix D

ASSOCIATED UNIVERSITIES EXPLAINED

Dalhousie University, Royal Military College of Canada (RMC), and Associated Universities

The bachelor of engineering degree awarded by Dalhousie University is normally conferred in association with one of several associated universities. The program of studies is divided into two parts: the associated universities offer programs in engineering covering the first part of the requirements for the degree and the Faculty of Engineering at Dalhousie offers courses in several departments of engineering covering the second part. There are other higher educational institutions in Canada that operate under this model. Under the CEAB's regulations for granting credits, a formally documented validation procedure must be in place.

Some of the associated universities include the following:

- Acadia University
- University of Cape Breton
- Dalhousie University
- Mount Allison University (as of 2000, no longer offering engineering programs)
- Nova Scotia Agricultural College
- St. Francis Xavier University
- Saint Mary's University
- University of Prince Edward Island

Prior to 1995, the following two associated universities were included with the accreditation of the engineering programs at RMC. Both institutions have stopped offering engineering.

- Royal Roads Military College (prior to 1995)
- Collège militaire royal de Saint-Jean (prior to 1995)

Appendix E

SURVEY PROCEDURES AND DATA COMPILATION METHODOLOGY

Survey Procedures

Each year, Engineers Canada sends Canadian university faculties of engineering and applied science a questionnaire requesting statistics on full-time and part-time enrolment in their undergraduate and post-graduate programs. The institutions are also asked to provide data on the number of undergraduate and post-graduate degrees that have been awarded for the same calendar year being surveyed. Other information requested includes a gender breakdown for enrolment, as well as the number of foreign (visa) students enrolled in the programs.

Engineers Canada aims to produce a summary of the data by the spring, in order to support such activities as recruitment and planning for the upcoming academic year. The full report on engineering enrolment and degrees awarded is published and distributed several months later.

Compilation and Interpretation of Data

The enrolment and degrees awarded data is compiled into the Engineers Canada database. Prior to the publication of this report, summarized tables of the data are returned to the engineering faculties for verification.

The tabulations, which are found in Section A, list the enrolment and degrees awarded for undergraduate engineering programs that have been accredited by the Canadian Engineering Accreditation Board of Engineers Canada. Master's and doctoral programs that are offered by the universities with accredited undergraduate engineering programs are also included. Further information is provided on faculty composition as well as cooperative, internship and professional experience programs.

The data tabulations are further subdivided to provide national, provincial, and institutional level information on enrolment as well as degrees awarded by engineering discipline, gender, and visa students.

Each year, data is collected on undergraduate enrolment in engineering programs that will be seeking accreditation. These are newer programs that have not produced any graduates as of the year of reporting. The Accreditation Board undertakes accreditation of these programs in the year in which the first students will graduate.

Data Limitations

Because of the variable nature of the titles applied to university engineering programs, the discipline headings are general in nature. Some of the data reporting may represent the “best fit” of a particular program, as defined in Appendix C of this report.

Data Utilization

Information presented in this report can be used for a variety of purposes:

- Enabling engineering students to make informed academic and career choices;
- Allowing employers and governments to determine the availability of qualified professional engineers in traditional and emerging areas of practice;
- Keeping the engineering profession abreast of current and future trends in engineering supply, the development and impact of technology, and the needs of employers to allow the development of appropriate standards for academic programs, entry into the engineering profession, and the maintenance of high practice standards in the interests of public safety and well-being; and,
- Assisting universities in preparing academic curricula and planning engineering programs that reflect advanced academic standards and emerging fields of study.

Further breakdown of the data can be requested by contacting Engineers Canada.



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